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Bricks and Tiles, Heating untempered clay for.....	J. Gregg.....	38, 580
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Brick Machines.....	J. N. Newell.....	39, 061
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Bridges.....	J. C. Briggs.....	38, 653
Bridges, Iron.....	S. S. Post.....	38, 910
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Bronzing Machine.....	J. F. Tapley.....	41, 029
Broom.....	W. N. Bates.....	39, 874
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Buckets, Elevator.....	J. S. Brooks.....	40, 671
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Buckles.....	Q. L. Hopson and H. P. Brooks..	38,482
Buckles.....	F. Douglas.....	39,217
Buckles, Trace and harness.....	H. Hise.....	39,651
Buckles, Tug.....	N. H. Howard.....	39,734
Buckle for waist belt.....	W. U. Bohn.....	37,489
Buckle gag runner.....	J. M. Martin.....	40,636
Buggies, Construction of.....	J. H. Bye.....	40,817
Bulbs, Metallic.....	A. T. Boon.....	40,549
Buildings, Clamps for raising.....	N. Pickard.....	38,501
Buildings, Facing the walls of.....	T. S. Lambert.....	40,844
Building, blocks, cement, tiles, pipes, pavements, &c., Composition for forming.....	L. Marsh, jr., and G. Marsh.....	38,833
Building pieces, Cast-iron.....	R. Wood.....	40,975
Bullet, Cartridge.....	W. H. Dibble.....	40,092
Bullets, Casting.....	J. P. Driver.....	37,389
Bullets, Minie, Patching.....	O. D. Lull.....	40,761
Bullets for fire-arms.....	A. W. Billings.....	40,153
Bumpers and Draw-head Springs for railroad cars.....	J. C. Jackson.....	37,448
Bungs, Bushes for.....	W. Kenyon and A. Menzies.....	38,830
Bungs, Manufacture of.....	L. Gray.....	39,644
Bungs for coal-oil barrels, &c.....	J. S. Loomis and A. Thompson.....	37,722
Bungs and Corks, Cutting.....	J. Leavens.....	37,543
Bureau and Trunk, Combination of.....	A. V. Ryder.....	39,679
Burial cases.....	E. H. Burton.....	38,857
Burial cases.....	E. A. Burton.....	39,758
Burial cases, Metallic.....	A. C. Barstow.....	37,484
Burial cases, Metallic.....	M. H. Crane.....	38,443
Burners, Aerovapor.....	O. F. Morrill.....	40,353
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Burners, Coal-oil.....	E. Trittitt.....	38,070
Burners, Coal-oil.....	S. Frederick.....	38,223
Burners, Coal-oil, for lamps.....	J. T. Vankirk.....	37,920
Burners for coal-oil lamps.....	A. C. Wilhelm.....	39,856
Burners, Gas.....	G. C. Roundey.....	38,417
Burners, Gas.....	J. S. Fancher.....	39,725
Burners, Gas.....	F. Linckenheimer.....	39,820
Burners, Gas, Lamps, or for holding vessels or shades over the flame, Attaching to.....	W. L. Fish.....	40,617
Burners, Hydro-carbon.....	M. L. Callender.....	38,031
Burners, Lamp.....	H. Wright.....	37,540
Burners, Lamp.....	J. Wolsteueholme.....	37,599
Burners, Lamp.....	H. C. Hunt.....	37,600
Burners, Lamp.....	H. Brown.....	37,606
Burners, Lamp.....	J. O. Blythe.....	37,945
Burners, Lamp.....	O. J. Savage and G. P. Hawley.....	38,422
Burners, Lamp.....	A. A. Henderson.....	38,742
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Burners, Lamp.....	J. B. Gray.....	38,960
Burners, Lamp.....	M. B. Wright.....	38,999
Burners, Lamp.....	W. Painter.....	39,102
Burners, Lamp.....	J. J. Marcy.....	39,320
Burners, Lamp.....	J. S. Hull.....	39,399
Burners, Lamp.....	J. S. Hull.....	39,400
Burners, Lamp.....	J. McHenry.....	39,413
Burners, Lamp.....	J. Dodin.....	39,524
Burners, Lamp.....	C. H. Kupfer.....	40,050
Burners, Lamp.....	C. C. Warwick.....	40,439
Burners, Lamp for kerosene.....	T. Raymond.....	38,537
Burners, Lamp, Perforations in.....	W. H. Smith.....	37,845
Burners, Lamp and Lantern.....	C. W. T. Krausch.....	37,868
Burners, Wick tube for lamp.....	C. L. Daboll.....	38,567
Butter Worker.....	M. Sweet.....	37,664
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Buttons.....	A. A. Feldtrappe and R. Duffoy.....	40,254
Buttons, Sleeve.....	W. H. Wilson.....	37,784
Button, Sleeve, and Shirt Studs.....	H. Simon.....	37,777
Buttons or Studs, Fastening for.....	L. M. Bronson.....	39,461
Button Key.....	H. St. John.....	40,714
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Cables, Submarine.....	P. S. Devlian.....	39,896
Cage, Bird.....	C. L. Osburn.....	38,177
Calculators, Arithmetical.....	J. P. Miller.....	39,740
Calculators, Tax.....	C. D. Crane.....	38,374
Calipers.....	D. C. Talbot.....	37,531
Calipers.....	C. A. Fairfield.....	39,281
Camel, Marine.....	S. Woolston.....	38,527
Camera, Photographic.....	J. Stock.....	39,432
Camera Stand.....	J. A. Whipple.....	39,602
Camps, hospitals, &c., Composition for disinfecting and purifying.....	J. L. Kidwell.....	38,748
Canes for weavers' reeds, Shaving.....	J. Church.....	39,523
Cane and seat.....	C. H. Daecomb.....	40,823
Cannons, Constructing.....	C. Perley.....	38,409
Cannons, Firing by electricity.....	G. W. Beardslee.....	39,543
Cannons, Pendulum sight for.....	R. Smith.....	40,288
Cannons, Planing the chambers of.....	A. Alexander.....	40,225
Cannons, Rifling, Machines for.....	A. Bonzano.....	37,898
Cannons and Fire-arms, Construction of.....	N. A. Patterson.....	40,498
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Cans, Fruit, Covers for.....	T. Earle.....	40,996
Cans, Jars, &c., Caps for.....	J. K. Chase.....	38,810
Cans, Jars, &c., Preserve.....	T. Earle.....	40,556
Cans, &c., Lid or covers for.....	J. Bryaut.....	40,552
Cans, Metal, Sheet.....	S. Hunt.....	37,400
Cans, Metal, Sheet, Soldering.....	H. Miller.....	39,616
Cans, Milk.....	H. Preston and J. Mahood.....	37,977
Cans, Oil.....	J. Mayher.....	39,157
Cans, Sheet metal.....	H. Miller.....	38,974
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Cans, Tin, Manufacturing of.....	J. E. Vansant.....	40,372
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Caoutchouc, &c., Cutting into strips and threads.....	L. Hull.....	37,446
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Cap Holder, Percussion.....	T. B. Lamb.....	40,487
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Capstan or windlass.....	I. G. Morgan.....	40,352
Carbonates, Alkaline, Manufacture of.....	L. Chandler.....	39,213
Card Board, Cutting.....	L. Knickerbocker.....	38,750
Carding Engines.....	W. K. Platt.....	39,776
Carding Engine.....	A. Calvert.....	40,018
Carding Machine.....	L. O'Brien.....	40,181
Carding Machine, Wool.....	J. Davis.....	39,381
Carpet Bag Frame.....	S. Lagowitz.....	39,152
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Carriages, Body loop for.....	C. H. Guard.....	39,699
Carriages, Brake mechanism for.....	L. Wilbur.....	37,468
Carriages, &c., Calash or folding top for.....	I. Cogswell, jr.....	37,734

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Carriages, Gun.....	J. B. Lyons.....	38,831
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Carriages, Holdbacks for.....	R. Rolph.....	39,958
Carriages, Metal plate shoes for.....	J. DuBois.....	38,571
Carriages, Railway.....	N. F. Bryant.....	39,545
Carriages, Railway.....	N. F. Bryant.....	40,813
Carriages, Saw mill, Turning logs on.....	W. L. Oliver and A. J. Hancock.....	38,756
Carriages, Thill couplings for.....	T. S. Lambert.....	40,245
Carriages, Wagons, &c., Constructing.....	J. Kirkham.....	40,758
Carriage Bodies, Hanging.....	E. Lane.....	38,751
Carriage Covers.....	J. J. Rankin.....	38,601
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Carriage Poles, Adjustable.....	L. C. Miner.....	39,415
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Cars, Railroad, Devices attached to, for facilitating the passage of trains up steep gradients or inclining planes.....	T. Agudio.....	38,800
Cars, Railroad, Iron.....	H. Merrill.....	38,082
Cars, Railroad, Moving.....	C. W. T. Krausch.....	37,818
Cars, Railroad Platform.....	H. Holcroft and C. S. Smith.....	38,743
Cars, Railroad, Signal bell and brake attachments for.....	D. Harrigan.....	39,097
Cars, Railroad, Stopping and starting.....	J. Steger.....	39,999
Cars, Railroad, Ventilating.....	C. D. Gibson.....	39,140
Cars, Railroad, Ventilating.....	T. S. Lambert.....	40,843
Cars, Railway dumping.....	A. Welch.....	40,134
Cars, Railway, Safety guard for.....	T. Gillen.....	39,011
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Cars to railroad trucks of different grades, Applying.....	C. D. Tisdale.....	37,889
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Car and Truck Connexions.....	J. J. Sherman.....	38,182
Car Replacers for railroads.....	B. Harper.....	40,928
Car Seat Locks.....	R. B. More.....	39,303
Cartridges.....	C. K. Alsop.....	37,481
Cartridges.....	W. H. Horstmann and H. J. Behrens.....	39,923
Cartridges.....	E. Maynard.....	40,111
Cartridges, Metal, for cannon.....	W. E. Moore.....	38,322
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Cartridges, Metallic.....	A. Hall.....	39,915
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Cartridges, Metallic, Shot.....	E. K. Root.....	38,414
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Cartridge Box.....	A. A. Bennett.....	37,485
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Casks, drums, kegs, &c., Manufacture of.....	D. Cope.....	38,217
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Cat-Block for freeing a ship's anchor.....	G. W. Duncan.....	38,356
Caustic Alkalies, Putting up.....	E. A. Thomas.....	39,080
Cement, Asphaltic.....	A. Straub.....	40,649
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Cement, tiles, pipes, pavements, building blocks, &c., Composition for forming.....	I. Marsh, jr., and G. Marsh.....	38,833
Cement and Metallic Pipes, Combination.....	H. Knight.....	38,112
Cement Pipes, &c., Making.....	D. S. Ogden.....	38,695
Chains, or Belts, Driving.....	W. Clissold.....	40,910
Chains, &c., Ornamental.....	E. S. Richards.....	38,842
Chains, Ox, Hooks for.....	F. G. Johnson.....	38,490
Chains, &c., Watch, Swivel hoop for.....	L. Bornemann.....	40,790
Chain Hooks.....	G. H. Draper.....	38,532
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Chair.....	C. O. Limberg.....	40,175
Chair, Arm, Folding.....	H. S. Golightly and C. S. Twichell.....	40,210
Chair, Folding.....	J. A. W. T., and I. N. Dann.....	37,277
Chair, Folding.....	J. D. Merriam.....	37,324
Chair, Folding.....	H. S. Golightly and C. S. Twichell.....	37,864
Chair, Folding.....	E. W. Vail.....	38,132
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Chair, Folding and reclining.....	G. Hunzinger.....	39,995
Chairs for invalids.....	G. A. Mansfield.....	39,663
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Chair, Nursery.....	A. B. Anderson, jr.....	37,026
Chairs, Railroad.....	J. Armstrong.....	37,668
Chairs, Railroad.....	B. F. Gossin.....	38,159
Chairs, Railroad.....	E. St. John.....	38,612
Chairs, Railroad.....	S. Brisack.....	38,944
Chairs, Railroad.....	B. F. Gossin.....	40,748
Chairs, Railroad, Combined splice piece and, Securing.....	M. W. Knox.....	40,567
Chairs and Cross-ties, Iron railway.....	L. G. Marshall.....	40,541
Chair or Lounge, Folding.....	J. Sutton.....	40,512
Chair or Stool, Camp.....	A. D. Whitmore.....	40,002
Chair Backs, Dressing.....	S. L. Fitts.....	39,220
Channelling Tool.....	J. B. Johnson.....	39,366
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Checks, Baggage.....	W. D. Richardson.....	40,186
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Cheese Turning Apparatus.....	A. Mears.....	40,214
Cheese Vats.....	H. A. Roe.....	37,524
Chenille, Manufacturing.....	G. Comings and L. Mensing.....	37,385
Chenille, Manufacturing.....	W. Canter.....	37,415
Cherry Stoner.....	T. Van Kannel.....	38,434
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Chests or Safes, Fire-proof.....	E. N. Horstford.....	39,920
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Chimneys, Lamp.....	H. Booth, jr.....	38,881
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Chimneys, Lamp.....	L. J. Atwood.....	40,228
Chimneys, Lamp.....	A. Albertson.....	40,890
Chimneys, Lamp, Adjuster.....	J. R. Fogg.....	38,628
Chimneys, Lamp, Elevating.....	J. G. Leffingwell.....	37,917
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Chimneys for lamps, Mica.....	B. J. C. Howe.....	37, 506
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Chimney Caps.....	J. Tomlinson.....	39, 846
Chimney Fastener.....	R. W. Hawkins.....	38, 388
Chimney Tops.....	G. Elbro.....	37, 683
Choke, Gas, for breech-loading fire-arms.	J. C. Symmes.....	39, 844
Chrome Compound.....	A. K. Eaton.....	28, 297
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Churns.....	J. Houston.....	40, 623
Churns.....	S. F. Emerson.....	40, 997
Churns, Device for operating.....	O. W. Seely.....	38, 013
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Cloth, Measuring.....	C. M. Swany.....	40, 962
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Clothes Dryer.....	G. W. Newell.....	37, 724
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Cultivators.....	P. B. & L. C. Reynolds.....	37, 789
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Cultivators.....	P. Coonrods.....	38,884
Cultivators.....	T. R. Coonick.....	39,276
Cultivators.....	J. Burns.....	39,337
Cultivators.....	A. S. Markham.....	39,412
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Cultivators.....	C. W. S. Heaton.....	39,528
Cultivators.....	S. Cowan.....	39,553
Cultivators.....	J. P. Tostevin.....	39,597
Cultivators.....	N. E. Smith.....	39,686
Cultivators.....	S. Rockafellow.....	39,703
Cultivators.....	G. A. Erickson.....	39,724
Cultivators.....	H. B. Smith.....	39,760
Cultivators.....	G. H. Schanck.....	39,837
Cultivators.....	B. F. Field.....	40,005
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Cultivators.....	R. H. Springstead.....	40,367
Cultivators.....	S. H. Mitchell.....	40,766
Cultivators.....	I. & S. Stout.....	40,776
Cultivators.....	M. H. Skiff.....	40,859
Cultivators.....	M. M. Clark.....	40,909
Cultivators.....	J. R. Davis.....	40,915
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Curtain Fixture.....	E. M. Judd.....	40,381
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Curtain Fixture, Self-holding Clamp for.....	F. C. Payne.....	39,949
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Dies for forming bars of soap.....	T. Worsley and G. W. Dorsey.....	39,784
Dies for forming hats.....	R. T. Wilde and S. H. Lyon.....	37,993
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Evaporating apparatus, Fire arches	S. Berry	40, 599
Evaporating, Condensing and cooling, Apparatus for	J. J. Miller	40, 662
Evaporating, Saccharine liquids	G. Evans	38, 300
Evaporator for saccharine liquids	F. D. Drake	37, 339
Evaporator for saccharine liquids	J. H. Hartwell	37, 911
Evaporator for saccharine liquids	J. C. Chesney	40, 908

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Evaporator for sorghum juice	D. S. Stewart	40, 862
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Fire-Arms, Breech-loading	C. Perley	37,764
Fire-Arms, Breech-loading	R. F. Cook	37,854
Fire-Arms, Breech-loading	C. Jackson and T. Goodson	37,937
Fire-Arms, Breech-loading	J. Hartshorn	38,042
Fire-Arms, Breech-loading	C. C. Brand	38,280
Fire-Arms, Breech-loading	L. Albright	38,366
Fire-Arms, Breech-loading	W. Addrich	38,455
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Fire-Arms, Breech-loading	E. H. Ashcroft	38,645
Fire-Arms, Breech-loading	H. Underwood	38,772
Fire-Arms, Breech-loading	O. D. Lull	38,903
Fire-Arms, Breech-loading	C. C. Brand	38,943
Fire-Arms, Breech-loading	J. W. Cochran	39,120
Fire-Arms, Breech-loading	W. H. Elliott	39,136
Fire-Arms, Breech-loading	J. Davis	39,198
Fire-Arms, Breech-loading	C. W. Howard	39,232
Fire-Arms, Breech-loading	W. Richards	39,246
Fire-Arms, Breech-loading	G. R. Bacon	39,270
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Fire-Arms, Breech-loading	J. S. Adams	39,455
Fire-Arms, Breech-loading	H. Gross	39,479
Fire-Arms, Breech-loading	J. Percy	39,494
Fire-Arms, Breech-loading	H. Gross	39,646
Fire-Arms, Breech-loading	C. E. Sneider	39,707
Fire-Arms, Breech-loading	J. H. Wichman	40,151
Fire-Arms, Breech-loading	W. Morgenstern and E. Morwitz	40,572
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Fire-Arms, Breech-loading	J. W. Cochran	40,992
Fire-Arms, Breech-loading	W. Palmer	41,017
Fire-Arms, Breech-loading, Gas choke for	J. C. Symmes	39,844
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Fire-Arms, Revolving	H. Smith and D. B. Wesson	38,921
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Fire-Arms, Revolving	W. C. Ellis and J. N. White	39,318
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Fire-Arms, Revolving	B. F. Joslyn	39,406
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Fire-Arms, Revolving	M. F. Geraghty	39,642
Fire-Arms, Revolving	H. Gross	39,645
Fire-Arms, Revolving	C. W. Harris	39,771
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Fire-Arms, Revolving	J. W. Cochran	40,553
Fire-Arms, Revolving, Cartridge case for	J. H. Vickers	39,869
Fire-Arms, Revolving, Double-barrelled	H. D. Ward	39,850
Fire-Arms, Revolving, Pike and	J. C. Campbell	39,032
Fire-Arms, Revolving, Rammer connexion for	F. Beals	37,329
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Fire-Arms, Safety nipple guards for	J. Oliphant	37,404
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Fire-Arms, Sights for	J. Warner	37,782
Fire-Arms, Sights for	W. McKibbin	39,941
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Fire-Arms and Cannon, Construction of	N. A. Patterson	40,498
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Fire Escapes	T. Thompson	39,505
Fire Extinguishers	A. Crane	37,610
Fire Extinguishers	W. Kitson	40,243
Fireplaces	E. A. Skeele	38,991
Fireplaces	D. A. Ross	39,836
Fireplaces	A. C. Bacon and J. G. Jennings	40,989
Fire Pots, Tinsmith's	W. Yapp	39,521
Fishing Tackle for deep-sea fishing	W. Woodbury	39,192
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Floor Clamp	D. K. Peoples	40,727
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Floor Cloths, &c., Printing	J. Marchbank	37,298
Floor Warmers	C. Britain	37,851
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Flour, Reels for drying	W. H. Dole and D. R. Fraser	38,816
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Flour Packers	J. Leall	38,546
Flue Walls for salt blocks	T. R. Porter and G. H. Cook	38,332
Fluid, Burning, Composition for	C. N. Tyler	38,015
Fluid, Embalming	F. A. Hutton	38,747
Fluid, Washing	P. R. Cross	40,914
Fluids for the generation of steam, &c., Apparatus for burning	T. Shaw	38,791
Fly-expanding Fan	W. R. Fowler	40,746
Food, Cooked vegetable	E. C. Frost	38,039
Foot Rest	E. Wilkins	38,619
Foot Rest	F. M. Watson and H. H. Clough	38,718
Forage Ration	M. Fletcher	40,922
Forge Fire	J. Evans	37,958
Fork, Grain	H. M. and W. W. Burson	39,464
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Forks, Hay, Elevating	G. C. Howard and I. N. Wilfong	37,965
Forks, Hay, Elevating	L. Rundell	38,129

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Forks, Hay, Elevating	E. W. Seymour and G. W. Gregory	38, 872
Forks, Hay, Elevating	R. J. Stanley	40, 860
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Furnaces for Desulphurizing Ores	L. G. Marshall	39, 786
Furnaces or Fire-arches of evaporating apparatus.	S. Berry	40, 599
Furnaces for grain dryers	M. C. Cogswell and A. G. Williams	40, 090
Furnaces for heating fires	O. M. Brown	38, 029
Furnaces to locomotives, Application of blow-ers to the.	F. B. Blanchard	40, 014
Furnaces for making malleable iron	M. S. Salter	40, 710
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Furnaces for reducing and smelting ores	L. G. Marshall	38, 906
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Fuses, Percussion, for shells	A. H. Emery	40, 827
Fuses, Percussion, for shells	W. F. Patterson	40, 885
Fuses, Tape	J. E. Chase and J. Toy	39, 033
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Fuse for Explosive Shells	J. McIntyre	40, 350
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Fuse for Shells, Concussion	J. P. Tice	38, 994
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Gaiters	G. W. Ludlow	38, 235
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Garments, Spring Hook Fastening for	D. M. Smith	38, 920
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Gas, Carburetting, Apparatus for	J. A. Bassett	39, 541
Gasses, Coking coal and generating	W. G. Valentin	37, 412
Gas, Composition for purifying	J. C. G. Howitz	37, 815
Gas, Illuminating	W. H. Gwynne	37, 289
Gas, Illuminating	S. L. Wiegand	39, 605
Gas, Illuminating	S. L. Wiegand	39, 606
Gas, Illuminating, Manufacture of	W. H. Gwynne	39, 227
Gas, Illuminating, Manufacture of	W. P. McConnell	39, 350
Gas, Illuminating, Manufacture of	W. Elmer	39, 905
Gas, Illuminating, Manufacturing	S. L. Weigand	38, 438
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Gas Apparatus for domestic use	W. Mills and O. H. Burdett	39, 159
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Gas Heating Apparatus	S. L. Wiegand	40, 591
Gas Regulators	R. Cornelius	38, 561
Gas Regulators	F. W. Brocksieper	40, 602
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Gases, Mixing	W. D. Parrish	38, 499
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Gates	J. M. Peirce	38, 331
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Gates, Automatic	J. W. Foster	38, 304
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Gate Catches.....	W. W. Robinson.....	40, 187
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Gauge, Water, for steam boilers.....	G. Mann, jr.....	40, 272
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Glass, Porcelain, &c., by the silico-silicates, Manufacture of.....	T. Cobley and J. C. Combe.....	38, 286
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Glass, Substitute for.....	C. Süssegger.....	39, 265
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Iron, Bronzing or Coloring.....	H. Tucker.....	40,964
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Iron, Cast, Purifying.....	S. W. Kirk.....	38,003
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Iron, Cutting and Punching, Machine for.....	A. Shogren.....	39,757
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Iron, Manufacture of.....	A. L. Fleury.....	39,991
Iron, Operating Rolls for Rolling.....	W. Stark.....	38,248
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Irons, Sad.....	O. W. Preston, jr., and C. Barry.....	39,171
Irons, Sad.....	N. Waterman.....	39,250
Irons, Sad.....	O. F. Morrill.....	40,768
Irons, Shearing.....	A. Hardy.....	40,034
Irons, Sheet, Hollow-ware, Manufacture of.....	J. and J. D. Grey.....	40,034
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Irons, Smoothing.....	R. Kuhls.....	38,613
Iron from Corrosion, Preventing.....	G. W. Holley.....	39,494
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J.		
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Jacks, Lever.....	T. M. Kane.....	40,981
Jacks, Lifting.....	W. F. Kundell.....	37,707
Jacks, Lifting.....	J. Cook.....	38,654
Jacks, Lifting.....	W. Thurber.....	40,867
Jacks, Lifting, Hydraulic.....	J. Tange.....	38,187
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Jars, Cans, &c., Caps for.....	J. K. Chase.....	38,810
Jars, Cans, &c., Preserve.....	T. Earle.....	40,556
Jars, Fruit.....	W. Hicks.....	37,962
Jars, &c., Fruit, Caps for.....	N. P. Whittelsey.....	38,617
Jars, Fruit, Caps for.....	R. Gray and R. Henningray.....	38,820
Jars, Fruit, Closing.....	C. Newman.....	38,536
Jars, Fruit or preserve.....	J. S. and T. B. Atterbury.....	39,027
Jars, Fruit and other vessels, Closing.....	J. Harbster.....	39,441
Jars, Preserve.....	C. F. Spencer.....	37,647
Jars, Preserve.....	P. W. Reid.....	39,327
Jars, Preserve, Clasp for closing.....	J. A. Cowles.....	38,288
Jars, Preserve, Composition for sealing.....	J. Beckley.....	39,111
Jars, Stopper for Fruit.....	T. T. Prosser.....	38,600
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Jewelry, Setting for.....	S. J. Smith.....	38,184
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Journal Boxes.....	J. P. Kenyon.....	39,932
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Journal Boxes for Car Wheels.....	R. J. Hamilton.....	37,814
Journal Boxes, Railroad.....	O. Beecher and R. E. Rogers.....	40,810
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Journals and Axles, Lubricating.....	J. B. G. M. Peret.....	38,760
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Kags, Casks, Drums, &c., Manufacture of.....	D. Cope.....	38,217
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Kettles, Evaporating, Setting.....	W. S. Worthiton.....	39,859
Kettles, Tea.....	B. H. Menke.....	38,972
Kettles, Tea.....	W. H. Lazelle.....	39,368
Kettles, Tea.....	W. C. Davis.....	39,554
Kettles, Tea, Cast-iron Bottoms for.....	L. J. Worden.....	38,780
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Keys for Electric Telegraphs.....	A. Bain.....	38,530
Kilns for Drying Grain.....	A. Greenleaf, jr., and T. C. Vice.....	38,332
Kitchens, Travelling.....	M. Pinner.....	39,170
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Knapack, Tent, and Litter, combined.....	L. Joubert.....	39,180
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Knife, Carrier's.....	G. Featherston.....	37,285
Knife Cleaner.....	T. M. Tell.....	38,786
Knife Cleaning Machine.....	G. Weeden.....	37,537
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Ladders, Fruit.....	J. Hannan.....	40, 926
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Lamps, Coal-oil.....	A. Judson.....	38, 263
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Lamps, Coal-oil, without Chimneys.....	S. W. Schreiber.....	37, 983
Lamps, Combination of Globe and Chimney for.....	E. B. Requa.....	37, 773
Lamps, Feeders for.....	T. Mayhew.....	37, 404
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Lamps, Vapor.....	T. Drake.....	37, 811
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Lamps, Wick Tubes for.....	H. W. Hayden.....	38, 079
Lamps for railroad cars.....	F. S. Williams and P. S. Page.....	38, 620
Lamps for vessels, Head.....	H. Sangster.....	38, 664
Lamps for vulcanizing, Dentists'.....	G. E. Hayes.....	40, 750
Lamps or gas-burners for holding vessels or shades over the flame, Attachment to.....	W. L. Fish.....	40, 617
Lamps and Lanterns, Combination of Chamber Lamp Cones.....	C. H. Peters.....	38, 500
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Lamp Stands, &c., Ornamenting.....	C. Reichmann.....	40, 361
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Lance, Bomb.....	J. Pomeroy.....	38, 933
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Lathes for turning billiard balls.....	L. A. Johnson.....	39, 817
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Lathes for turning irregular forms.....	E. Lumby.....	38, 390
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Leather, Blacking and Polishing, Composition for.....	A. Bond.....	39, 986
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Leather, Composition for preserving and water-proofing.....	R. K. Wright.....	38, 353
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Leather, Paper, &c., Cutting Ornaments in.....	J. D. Mets.....	38, 402
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Magnets, Telegraph	S. F. Van Choate	38, 774
Mail bags, Device for closing	G. M. Rhoades	37, 641
Maize, Brewing with	L. Haacker	40, 836
Malt, &c., Extract of, for making beer, ale, and porter	F. Hawks	37, 578
Malt, grain, &c., Drying	S. Marsh	37, 403
Malt liquors, Cooling	O. Hoepfner and C. Schnepf	40, 262
Mangle	C. C. Converse	40, 022
Mangling, washing, and wringing machine	E. Chipman	40, 159
Mangling, washing, and wringing machine, Combined	T. Farnsworth	37, 439
Manifolds, Arrangement of conducting pipes	C. C. Walworth	38, 433
Manure, Manufacture of	P. Eley	39, 525
Manure, Preparing night-soil for	R. B. Fitts	37, 685
Manure or fertilizer	G. F. Wilson	39, 519
Manure distributors	J. B. Crowell	38, 949
Manure distributor	J. Cadwell	40, 605
Maps, writings, &c., Process of copying	J. Underwood	38, 086
Map case and black board	W. C. Herider	40, 035
Marble, Artificial variegated	A. & I. Straub	40, 650
Marine logs, Registering	A. Gordon	40, 834

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Marine Propulsion, Apparatus for	F. W. Harris	39, 394
Mark or Label for bales of cotton, &c., Incorporable	H. D. Mears	39, 944
Mark Holder for bales, &c.	H. W. Goodrich and E. A. Locke	38, 365
Marking Brands	G. H. Strong	39, 261
Martingales, Rings for	W. M. Welling	37, 941
Masts, Booms to, Means for attaching	M. McLain	40, 273
Matches, Friction	J. R. Dey	38, 096
Matches, Friction, Manufacture of	J. W. Hjerpe	40, 259
Matches, Lucifer, Dipping	S. A. Bell and T. Higgins	38, 878
Match and Looking-glass Holder	D. Cumming, jr.	39, 277
Match Blocks, Splitting	V. R. Powell	38, 911
Match splints for dipping, Framing lucifer	A. & E. B. Beecher	37, 562
Match Stand, Friction	N. Waterman	38, 923
Match Sticks, Manufacture of	S. C. Ellis	40, 027
Mats, Oil press	H. Nutt	39, 671
Mattresses, Pillows, &c., Stuffing for	A. C. Crondal	40, 024
Measuring and weighing, Apparatus for	N. Smith	38, 511
Meat Broilers	G. B. Ranson	37, 360
Medicines, Hog-cholera	F. La Row	38, 169
Medicines, Wagon for transporting	T. M. Perot	39, 951
Medicine for curing foot-rot in horses, &c.	E. W. Wakefield	40, 297
Medicine for Piles	W. Carr	38, 466
Medicine Case	T. M. Perot	39, 952
Merchandise or Freight, Unloading	R. Bragg	38, 725
Mercurial Ointment, Nitrated	C. Learned	37, 697
Mercury and Amalgam from ore pulp, Collecting	Z. Wheeler	39, 251
Metals, Amalgamating precious	E. Coleman	39, 550
Metals, Amalgamating precious	J. B. Atwater	40, 893
Metals, bending, Machines for	C. H. Delamater	39, 382
Metal, Construction of rolls for rolling	D. Reeves	38, 869
Metals, Corrugating	S. J. Seely	37, 593
Metals, Grinding ores and amalgamating precious	J. G. Prandall	40, 501
Metals, Improvement in the quality and ornamentation of	W. Rose	39, 174
Metals, Rolling	J. B. Mignault, A. B. Southwick, C. Spofford, and A. Marshall	37, 601
Metals, Rolling and forging	S. Vanstone	37, 368
Metal, Sheet, Bending corrugated	S. J. Seely	37, 308
Metal, Sheet, Bending corrugated	S. J. Seely	37, 362
Metal, Sheet, Corrugating	T. W. H. Moseley	39, 418
Metal, Sheet, Packing for transportation	D. McDaniel	37, 323
Metal for Horse Hoos, &c.	J. Kennelly	38, 046
Metal Bars, Drawing or Forging	W. Beach	38, 090
Metal Eaves Troughs, Soldering sheet	E. H. Camp	37, 950
Metal Plates, Corrugating	J. Francis	38, 799
Metal Pointing Machine	A. Molts	41, 014
Metal Sheets, Turning Edges of Plates or	J. F. Morgan	38, 115
Metal Surfaces, Uniting	W. B. Barnard	37, 555
Metal Vessels, Pressing and Polishing	J. Neumann	37, 822
Metallic Buhrs	A. T. Boon	40, 549
Metallic Surfaces, Finishing	G. Cowing	38, 565
Meters, Gas	J. S. Elliott	39, 904
Meters, Gas	H. H. & J. Kromschroedor	40, 266
Meters, Gas, Dry	C. C. Lloyd	38, 448
Meters, Gas, Dry	D. Alcorn	39, 266
Meters, Gas, Dry	J. E. Fisk	39, 907
Meters, Fluid	J. Sheffield	40, 504
Meters, Water	J. Percy	37, 588
Meters, Water	H. Burt	37, 658
Meters, Water	F. G. Johnson	40, 485
Mica Lamp Chimneys	W. P. Ware	37, 837
Milk Racks	R. Cruikshank	38, 625
Mills, &c., Apple	S. Keler	37, 510

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Mills, Boring, Apparatus for adjusting ord- nance in.	S. D. Dean	40,824
Mill, Cane	D. M. Cook	39,467
Mills, Cider	S. A. Hebard	39,731
Mills, Cider	J. Bowen	40,237
Mills, Cider	T. Sharp	40,711
Mills, Cider, Cornshellers, and Fodder Cutters, Combining.	J. P. Adams	39,620
Mill, Coffee and Spice	C. W. Pierce	37,358
Mill, Fanning	H. Kelly and W. Franklin	40,937
Mills, Fulling	T. J. Mayall	40,700
Mills, Grinding	E. Brisson	37,605
Mills, Grinding	A. H. Searfoss	37,793
Mills, Grinding	A. H. Wagner	37,796
Mills, Grinding	A. H. Wagner	38,795
Mills, Grinding	G. Eberius and F. A. Heinig	39,558
Mills, Grinding	B. Kenoyer	39,735
Mills, Grinding	C. Bollinger	39,793
Mills, Grinding	S. S. Honard	40,078
Mills, Grinding	J. A. Forsman	40,467
Mills, Grinding, Regulator for	A. B. Hamaker	39,648
Mills, Quartz, or Crushers	T. M. Randell	40,554
Mills, Rolling	T. F. Rumbold	39,900
Mills, Saw	A. Cushing	37,335
Mills, Saw	D. C. Gibbs	38,477
Mills, Saw	H. Caslow	39,338
Mill, Saw, Carriages, Turning logs on	W. L. Oliver and A. J. Hancock	38,756
Mills, Saw, Feeding device	N. H. Buschmann	40,816
Mills, Saw, Head Block for	G. Hagenmeyer	39,647
Mills, Saw, Head Block for	M. W. Danks	40,248
Mills, Saw, Head Block for	E. B. Requa	40,502
Mills, Saw, Scroll	W. H. Doan	38,471
Mills, Smut	B. T. Trimmer	39,508
Mills, Smut	D. Pease	40,000
Mills, Smut	L. D. Broad	40,235
Mill, Sugar-cane crushing	I. Straub	39,182
Mills, Tramp and Level for	J. M. Seldomridge	38,508
Mills for crushing sugar-cane	G. H. Laut	40,938
Mills for grinding fruit, grain, &c	W. N. Whiteley, J. Fassler, and O. S. Keeley	40,987
Mill Pick	L. M. Osborn	40,183
Mill Stands, &c., Rolling	W. F. Burden	37,274
Millstones	D. Drawbaugh	38,296
Millstones, Balancing and Ventilating	S. N. Page	39,167
Millstones, Elevating	A. M. Bruckart	37,732
Millstones, Levelling the face of	D. Drawbaugh	38,472
Millstones, Stopping	A. Reeder	38,761
Millstone Bush	J. F. McKray	38,971
Mirrors, Pictures, &c., Manufacture of wooden mouldings or strips for the frames of.	R. J. Marcher	38,314
Missiles, Means of checking and resisting	A. C. Twining	39,363
Mitre Dovetailing, Machine for	F. A. Gleason	37,910
Mittens for drivers, Water-proof	F. J. Merryman	39,665
Mop	R. H. Ewing	38,734
Mop, Tar	J. W. Midwinter	40,420
Mop Head	E. D. Murphy	39,346
Mop Head	J. S. Harris	39,730
Mortising Machine	H. C. Smith	39,502
Mortising Machine, Power	G. W. Gould	38,598
Mosquito Bar	A. L. Carrier	39,116
Mosquito Canopy	S. Roebuck	38,339
Mosquito Frames	L. S. Thompson	37,779
Mosquito Netting, Stretching and folding	J. A. and L. Van Riper	39,808
Motion, Changing	R. G. Turner and H. Stone	40,905
Motion, Converting	P. Dickson	37,953
Motion, Device for converting	R. H. Bishop	37,806

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Motion, Mode of converting	S. C. Ketchum	38,311
Motion, Mode of directing	A. Buchanan	40,075
Motion Treadle	A. W. Harris	38,107
Motion for drawing heads, Stop	B. O. Paige	37,823
Mould, Drain tile	J. J. Alvord	39,621
Moulds, Filling with vulcanizable gums	J. C. Howell	39,481
Moulds, Sand, Applying wash to	D. Robinson	39,589
Moulds, Sugar	A. Mayer	37,514
Moulds for castings	J. R. Davis	37,857
Moulds for casting chilled rollers	A. Hammond	40,167
Mould for casting horseshoes	J. Kennelly	38,047
Moulds for casting printing types	R. W. & D. Davis	40,076
Moulds for casting shells	A. J. Eddy	37,388
Moulds for vulcanizing rubber soles for boots and shoes.	C. McBurney	38,688
Mouldings, &c., Applying metal leaf to	R. J. Marcher	40,055
Mouldings, Gilt, Manufacture of imitation	H. W. Ladd	38,588
Mouldings, Planing oval	F. Brandon	38,461
Moulding Machines	H. A. Lee	40,269
Moulding Machines	H. J. Seymour	40,286
Moulding Machine, Wood	J. Stock	40,511
Moulding Machine Feed	L. Gould	39,226
Movements, Mechanical	R. B. Davidson	39,891
Mowing Machines	J. D. Wilber	37,656
Mowing Machines	J. E. Wood	37,932
Mowing Machines	J. P. Greeley and L. W. Buxton	39,286
Mowing Machines, Hand	H. Fisher	38,381
Music, Keyed instruments of	F. Peabody	40,573
Musical Instrument	W. Davis	40,333
Musical Instruments, Device for carrying off water from.	G. F. Dallou	38,218
N.		
Nails, Arranging, for use in machines for nail- ing shoes.	O. Gilmore	37,909
Nails, bolts, and rivets, Attaching the heads of	G. B. Brayton	38,652
Nails, Cutting	W. A. Sweet	40,514
Nails, Horseshoe and others, Making	B. W. Pierce	37,640
Nails, &c., in picture or other frames, Device for driving.	W. Bascom	39,985
Nails, Shoe, Making	W. H. Field	37,340
Nails for horseshoes, Making	W. C. Grimes	39,287
Nail or tack, Carpet	W. P. Patton	38,598
Nail Machines	W. H. Field	38,605
Nail Machines, Grinding dies for	G. B. Wiggin and J. W. Hoard	37,657
Nail Machines, Grinding the upper cutter of	G. B. Wiggin and J. W. Hoard	38,439
Nail Plate Feeders	J. S. Fisk	39,105
Naphtha, petroleum, &c., Deodorizing	R. N. Warfield	40,068
Needles	A. J. Ambler	37,996
Needles, Crochet	J. M. Hoadley	39,572
Needles, Knitting, Machine	T. Sands	38,988
Needles, Knitting, Making	T. Sands	38,987
Needles, Sewing Machine	J. Madden	37,585
Needles, Threading	J. O'Kane	37,587
Needles for sewing machines	F. H. Brown	38,282
Needle Wrappers	O. H. Blood and F. C. Treadwell, jr.	40,305
Nets, Fishing, Adjustment of	W. Randolph	39,676
Netting, Mosquito, Stretching and folding	J. A. and L. Van Riper	39,868
News Distributor	J. H. Pratt	37,590
Newspapers, &c., Printing the addresses on	J. A. Campbell	37,432
Newspapers, &c., Printing the addresses on	D. Fuller	39,913
Newspaper File	J. H. Atwater	40,545
Nickel, copper, and cobalt, Separating	A. Monnier	40,116
Night-soil, Treating, for agricultural purposes	R. B. Fitts	39,472
Nippers and pincers, Combined	D. Sweetman	40,291

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Nozzles	C. Oyston	39, 674
Nozzles, Hose	C. F. Macy and S. Martin	40, 847
Nozzles, Hose, Attaching revolving tips to	H. B. Morrison	39, 700
Numeral Frames	J. H. R. Reffelt	37, 825
Nuts, Bolts, &c., Manufacturing	J. Marsden	38, 116
Nuts, Making	P. Koch	38, 397
Nuts, Making	W. Chisholm	40, 606
Nuts, Making	O. C. Burdick	40, 815
Nuts and Washers, Making	I. Scoville	39, 590
Nut Cracker	T. Earle	40, 825
Nut Machine	L. Thomas	39, 506
O.		
Oat Separator	L. Patric	38, 630
Observatories and Signal Towers, Portable	E. Tanner	39, 689
Oil, &c., Ascertaining the amount of water, &c., in barrels of	G. Tazliabue	38, 427
Oil, &c., Case or Box for holding	S. Selden	39, 071
Oil, Coal, Apparatus for burning, for heating purposes	H. W. Dopp	37, 436
Oils, Coal, Distilling	J. L. Alberger	37, 798
Oils, &c., Drawing off and skimming	J. Peck and W. H. H. Glover	39, 169
Oils and Fats, Rendering	C. E. Gray	39, 565
Oils and Paraffine from peat and other substances, Distilling	S. L. Wiegand	39, 607
Oil and Spirits of Turpentine from pine wood, Producing	S. L. Cole	40, 737
Oil as fuel, Means of using Hydro-carbon	G. B. Hill	39, 918
Oil as a substitute for linseed oil, Preparing	A. Millochan	38, 641
Oil for burning and lubricating, Compound	W. G. Hermance	38, 825
Oil for burning and lubricating, Compound	R. A. Gilman	40, 924
Oil Caps for machinery	T. W. Godwin	40, 032
Oilcloth, Coating	M. Sawyer	40, 364
Oilcloth, Composition	R. Hoskin	40, 411
Oil Press Mats	H. Nutt	39, 671
Oil Stills	J. D. Smeadley	37, 709
Oil Stills	J. Reese	38, 602
Oil Stills	C. A. Hardy	40, 168
Oil Vapor, Condensing	J. W. Wetmore	39, 978
Oil Vessels	G. W. Banker	40, 230
Ointment, Mercurial, Nitrated	C. Learned	37, 697
Ordnance	J. C. C. Holensshade	38, 110
Ordnance, Adjustable porthole for directing	P. G. Peltz	38, 407
Ordnance, Breech-loading	J. Lee	38, 638
Ordnance, Breech-loading	A. B. Smith	39, 559
Ordnance, Breech-loading	E. A. Sutcliffe	39, 506
Ordnance, Breech-loading	R. B. Reynolds	40, 121
Ordnance, Breech-loading	G. I. Washburn	40, 205
Ordnance, Breech-loading	F. F. S. Von Cannstatt	40, 205
Ordnance, Chambered Trunnions for disabling	P. B. Lawson and A. Burney	37, 870
Ordnance, Construction of	N. Wiard	38, 709
Ordnance, Construction of	N. Wiard	39, 604
Ordnance, Discharging	W. Johnson	38, 683
Ordnance, Field, Mounting	W. F. Godwin	39, 914
Ordnance, Implements for disabling	A. Bonzano	37, 946
Ordnance, Mounting	B. H. Bartol	38, 089
Ordnance, Mounting	M. Stoddard	39, 687
Ordnance, Mounting and operating	J. Taggart	38, 266
Ordnance, Operating	E. A. Stevens	37, 334
Ordnance, Operating	M. L. Callender and N. W. Nor-	37, 935
Ordnance, Operating	thrup	
Ordnance, Operating	M. Wappich	40, 067
Ordnance, Operating, on war vessels	W. P. Miller	38, 118
Ordnance, Repeating	E. C. C. Kellogg	40, 540
Ordnance, Riding	T. Steele	37, 924

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Ordnance, Rim Bases of, Finishing	E. F. Howard	40, 039
Ordnance, Serving	S. H. Coon	37, 279
Ordnance, Shield for	P. Andrew	40, 453
Ordnance, Submarine	J. Duffy	39, 801
Ordnance in boring mill, Apparatus for adjusting	S. D. Dean	40, 824
Ores, Concentrating	J. Hepburn	40, 932
Ores, Furnaces for desulphurizing	L. G. Marshall	39, 786
Ores, Heating, for smelting furnaces	A. Royer	38, 419
Ores, Refining	J. L. Constable	39, 257
Ores, Separating and dressing	H. Trumbull	38, 773
Ores, Shaking Machine for separating	A. W. Schell	37, 888
Ores, Sulphur, Pyritous, and other, Treating	M. W. Tinding	39, 684
Ores, Washing	P. Scheuerman	40, 950
Ores and amalgamating precious metals, Machine for grinding	J. G. Prandall	40, 501
Ore Pulp, Collecting amalgam and mercury from	Z. Wheeler	39, 251
Ore Washer	T. Wise	38, 016
Ore-washing Machines	J. Collom	38, 467
Ovens	P. J. Gindre and J. Doerler	39, 042
Ox Bows, Shaping wood for	H. S. Denison	40, 249
Ox-bow Fastenings	E. Renney	38, 395
Oysters, Steaming and shucking	I. Solomon	41, 026
Oyster Dredges, Hoisting	J. Whitecar	38, 436
P.		
Packing for pistons and other rods	J. Johnson	37, 663
Padlocks	C. Liebrich	39, 486
Paint, Composition for	P. Caubet	39, 020
Paint, Composition for	J. Miller	39, 202
Paints, Composition in preparing	E. M. Seabury	39, 204
Paint, Fire-proof	G. W. Powell	40, 429
Paints, Preparing hydro-carbon liquids to serve as vehicle for	A. Meucci	38, 714
Paint for ships' bottoms	J. G. Turr and A. H. Wonsen	40, 515
Paint Composition	E. F. Barnes	39, 000
Paint Oil	A. Millochan	38, 640
Paint Oil from petroleum, Preparing a	A. Millochan	37, 918
Painters' Panels	A. G. Collins	39, 632
Painting, Process for Graining and Ornamental	W. J. Potter	38, 412
Palings, Lathes, &c., Sawing	S. Head	40, 690
Pans, Ash	J. A. Lawson	38, 902
Pans, Baking, Covers for	W. C. Davis	40, 461
Pans, Evaporating, Cellular or tubular boilers for	D. M. Cook	37, 735
Pans, Evaporating, with cellular boilers	D. M. Cook	37, 736
Pans, Evaporating, for sorghum juice, &c.	N. Z. Potter	38, 839
Pans, Evaporating, for sugar juices	D. M. Cook	38, 152
Pans, Evaporating, with tubular boilers	D. M. Cook	37, 737
Pan, Gold Miner's Washing	T. Kendall, sr	37, 758
Pans, Sugar	A. T. Wilder	38, 998
Pans for backing electrotypes	W. A. Leggo	39, 410
Pans for evaporating sugar, &c.	C. B. Darrow	40, 460
Panels, Painters'	A. G. Collins	39, 632
Pantaloon	H. Osler	39, 584
Pantaloon Straps	S. Heller	40, 931
Paper, &c., from the husks of Indian corn, Manufacture of	A. Auer de Welsbach	38, 220
Paper, Cylinder moulds for making	J. T. Jones	38, 684
Paper, Folding	J. North	38, 874
Paper, Folding and Ruling	J. P. Herron	39, 045
Paper, Leather	S. M. Allen	39, 371
Paper, Leather, &c., Cutting ornaments in	J. D. Mets	38, 402
Paper, Planishing	J. F. Schuyler	37, 790

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Paper, Safety	J. P. Olier	38, 835
Paper, Sand, Holding emery or	E. R. Barnes	40, 231
Paper and Paper Boards, Making	J. T. Jones	40, 265
Paper for collars, &c., Manufacture of	S. M. Allen	38, 019
Paper for cutting machines, Device for feeding	J. F. Schuyler	37, 791
Paper from sorghum, Manufacture of	H. Pemberton	38, 059
Paper from wood, Manufacture of	S. M. Allen	38, 020
Paper Bags, Making	J. Wells	40, 001
Paper Bag Machine	J. J. Greenough	37, 573
Paper Bag Machines	C. H. Morgan	37, 726
Paper Bag Machine	J. Wells	38, 253
Paper Bag Machine	S. E. Petlee	38, 452
Paper Cards for hooks and eyes	De Grasse Fowler, jr.	38, 259
Paper Collars and other articles of apparel, Bending and folding	J. F. Schuyler	37, 792
Paper-drying Machines	N. W. Tayler and J. W. Brightman	38, 993
Paper Feeders	E. Allen	39, 872
Paper Files	W. L. Woods	38, 868
Paper Files	S. Thompson	40, 508
Paper-making Machinery	G. E. Rutledge	38, 698
Paper-making Machines, Rag engine of	J. Faw	38, 735
Paper-making Machines, Vacuum box of	J. L. Seaverns	39, 500
Paper Pulp, Boiler for making	M. L. Keen	38, 901
Paper Pulp, Manufacture of	A. H. Tait and W. H. Holbrook	40, 728
Paper Shade Holders, Clasps for	G. Wederkind	37, 990
Paper Shirt Collars	S. S. Gray	38, 160
Paper Shirt Collars	A. A. Evans	38, 664
Paper Stock, Preparing woody fibre for	G. E. Sellers	40, 217
Paper Stock from wood, Manufacture of	P. A. Chadbourne	37, 951
Paraffine and Oils from peat and other sub- stances, Distilling	S. L. Wiegand	29, 607
Parer, Apple	E. L. Pratt	40, 185
Parer, Apple	E. Manley	40, 640
Paste, Dough, &c., Making	E. Stevens	40, 370
Patterns for moulding pipes	G. Ross	37, 981
Pavements, cement, tiles, pipes, building- blocks, &c., Composition for forming	J. Marsh, jr., and G. Marsh	38, 833
Pavements, &c., Composition for	P. Harder	38, 582
Paving or Flag Stone, Asphaltic	A. and I. Straub	40, 651
Pawl and Ratchet	G. G. Taylor	40, 086
Peat and other substances, Distilling oils and paraffine from	S. L. Wiegand	39, 607
Pedomotive, Infants'	E. J. Gorham	39, 392
Pegging boots and shoes, Machines for	J. H. Brown	40, 306
Pegging boots and shoes, Machines for	W. Miller	40, 351
Pegging Machines, Shoe	W. G. Budlong	38, 463
Peg Float	C. H. Odell	41, 015
Pens	A. F. Warren	39, 084
Pen, Fountain	J. Weller	40, 135
Pen and Pencil Case	J. J. Lownds	40, 846
Pen and Pencil Case	J. H. Ranch	40, 855
Pen Rack and Inkstand	S. Walker	37, 313
Pencils, Lead	J. Reckendorfer	37, 360
Pencil, Lead, Cutter head for wood of	F. G. Jenkins	38, 488
Pencils, Lead, Making wooden cases for	A. Weiller	39, 019
Pencil and Pen Case	J. J. Lownds	40, 846
Pencil and Pen Cases	J. H. Ranch	40, 855
Pencil and Sponge Holder for cleaning slates, &c.	J. L. Rowe	39, 704
Pencil Sharpeners, Slate	J. M. Hicks	40, 102
Pessaries	H. V. Scattergood	40, 949
Petroleum, &c., Deodorizing	J. W. W. Tindall	38, 069
Petroleum, Naphtha, &c., Deodorizing	R. N. Warfield	40, 068
Petroleum, &c., Stills for	C. Lockhart and J. Gracie	40, 632
Petroleum and other hydro-carbons, Apparatus for generating gas from	G. W. Thompson and J. Foster	38, 420

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Petroleum and other liquid fuel for the genera- tion of steam and other purposes, Process of burning	D. Dick	38, 732
Petroleum residuum, Preparing a paint oil from the	A. Millochan	37, 918
Photographic Camera	J. Stock	39, 432
Photographic Card Mounts	S. Wing	40, 302
Photographic Gallery, Portable	S. Weaver	40, 970
Photographic Printing Frame	M. Witt	39, 191
Photographs, Coloring	J. F. Brodiker	38, 144
Photographs, &c., Composition for coloring and water-proofing	W. F. Spieler	38, 847
Photographs, &c., Pasting and mounting	M. Ormsbee	39, 166
Photograph Holder	J. E. Treat	38, 849
Piano-fortes	W. Bourne	37, 717
Piano-fortes	D. Decker	38, 731
Piano-fortes	L. Matt	39, 664
Piano-fortes, String bearing for	R. A. Tooker	40, 384
Piano-fortes, Tuning attachment for	R. Beebe	40, 015
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Safes, Fire-proof, Composition for filling	E. N. Horsford	39, 921
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Safes, Fire-proof, Protecting the walls of, from corrosion.	W. K. Marvin	40, 799
Safe, Money, for travellers	J. A. Engelhard	37, 785
Safes or chests, Fire-proof	E. N. Horsford	39, 920
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Saw, Endless	G. Kammerl	40, 757
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Saws, Reciprocating, Table for	C. C. Hinchman	39, 099
Saws, Scroll	A. Beekman	39, 790
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Saw Frames, Wood	E. W. Bates	37, 999
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Sawing bevels, Machine for	H. E. Hughes	37, 816
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Sewing Machines, Loop-check of	J. B. Secor	40, 589
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Shades for lamps, Incombustible paper	G. Wedekind	38, 523
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Shafting, Centring, Device for	F. B. Williams	39, 608
Shafting, Vertical, Bearing for	J. Platt	39, 830
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Shavings for upholsterers, Planing	S. A. & W. H. Post	39, 747
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Shells, Explosive	H. Halverson	40, 538
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Shells, Explosive, Percussion fuze for	J. W. Cochran	37, 275
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Shell and Shot, Grinding and smoothing	J. Williams	40, 386
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Shields or Covers, Cooking-stove	H. W. De Puy	39, 555
Shingles, Barrel Heads, &c., Sawing	J. B. Dougherty	37, 885
Shingle, Jointing, Machine for	J. F. Parks	40, 274
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Shirt Bosoms, Folding the plaits in	F. M. Chandler	37, 952
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Shoes, belts, &c., Clasp for	E. S. Winchester	38, 609
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Shutters for the portholes of iron-clad vessels	B. H. Bartol	38, 088
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Shutter Fastenings	T. J. Townsend	40, 868
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Shutters and Show Windows, Securing	T. Becker	37, 849
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Soap, Dies for forming bars of.....	T. Worsley and G. W. Dorsey.....	39, 784
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Soap, Silicated, Manufacture of.....	D. B. Chapman.....	38, 354
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Soda-water Fountain.....	S. R. Sylvester.....	39, 341
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Soda-water Fountain.....	T. Ogden and J. Hinderyer.....	40, 495
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Soundings, Instruments for taking.....	J. Ericsson.....	40, 025
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Spading Machines, Rotary.....	W. Wadsworth.....	39, 975
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Spectacles.....	J. Jennings.....	38, 262
Spike Machine.....	A. Warth.....	38, 634
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Spikes from guns, Removing.....	A. Lefever.....	40, 051
Spikes and bolts, Drawing.....	J. C. Chapman.....	37, 332
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Spindles of Spinning Machines.....	J. Eaton.....	39, 557
Spinners, Driving Power for.....	M. G. Hubbard and A. J. Smith.....	37, 757
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Spinning Machines, Flyers of.....	O. Pearl.....	37, 702
Spinning Machines, Flyers for.....	D. Hussey.....	40, 069
Spinning Machines, Self-lubricating Bolsters for.....	M. P. Wilmarth.....	39, 190
Spinning Machines, Spindle Bolsters of.....	R. Fethney.....	40, 950
Splints, Surgical.....	T. H. Currie.....	38, 034
Spokes, Machine for Tenoning.....	H. M. Preston.....	37, 842
Spoke Machine.....	E. K. Wisell.....	37, 559
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Sponge and Pencil-holder for Cleaning Slates, &c.....	J. L. Rowo.....	39, 704
Spools or Bobbins.....	B. Saunders.....	39, 681
Spoons, Iron, Tinned.....	R. B. Perkins.....	37, 373
Spouts for Conveying Sap.....	M. Sheldon and W. A. Chase.....	39, 072
Springs, Balls, &c., Manufacture of.....	A. R. Davis.....	38, 813
Springs, Buffer, for Railroad Cars.....	A. H. Rowand.....	40, 122
Spring, Car.....	R. Vose.....	38, 642
Springs, Car.....	G. Douglass.....	38, 661
Springs, Car.....	R. Vose and C. D. Gibson.....	38, 777
Springs, Car.....	J. G. Pugsley.....	39, 422
Springs, Car.....	C. D. Gibson.....	39, 769
Springs, Car.....	J. D. Billings and F. L. Tyler.....	39, 791
Springs, Car.....	G. Douglass.....	39, 901
Springs, Car.....	R. Vose.....	40, 218
Springs, Car.....	T. F. Allen.....	40, 452
Springs, Car, Railroad.....	J. W. Evans.....	37, 283
Springs, Car, Railroad.....	P. G. Gardner.....	37, 862
Springs, Car, Railroad.....	H. Gardiner.....	38, 105
Springs, Car, Railroad.....	J. E. Wootten.....	38, 255
Springs, Car, Railroad.....	C. Russell.....	39, 310
Springs, Car, Railroad.....	R. Vose.....	39, 314
Springs, Carriage.....	C. B. Galentine.....	39, 224
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Springs, Door and Shutter.....	L. Bonner.....	38, 023
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Springs, Vehicle.....	E. C. Brooks.....	40, 603
Springs for Carriages.....	W. Wharton.....	37, 653
Spring for Furniture.....	C. F. and J. W. Tillman.....	40, 963
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Springs for Railroad Cars, Draw.....	R. A. Wilder.....	38, 618
Spring and Fastener, Window.....	G. W. Tillston.....	39, 762
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Stair Rod Fastening.....	E. A. Goodes.....	40, 339
Stalls, Floors for.....	Z. G. Garlick.....	39, 283
Stalls, Releasing animals from.....	W. Kloenne.....	40, 416
Stamp, Hand.....	G. McClemment.....	38, 315
Stamp, Hand.....	G. J. Hill.....	38, 535
Stamps, Hand.....	H. Holt.....	38, 864
Stamps, Hand.....	V. Beaumont.....	40, 074
Stamp, Pie.....	H. Marshall.....	37, 761
Stamp, Postage, Cancelling.....	W. Rayner.....	40, 430
Stamps, Postage, Preserving.....	J. P. Herron.....	39, 147
Stamps, Postage and other, Cancelling.....	S. W. Francis.....	38, 222
Stamps, Post Office.....	M. P. Norton.....	38, 175
Stamp, Self-inking.....	J. D. Billings.....	37, 884
Stamp, Self-inking, Hand.....	S. J. Hoggson.....	38, 043
Stamps, &c., Wetting.....	B. W. Sackett.....	38, 503
Stamp Canceller.....	R. H. Rogers.....	40, 857
Stamp and Currency Box.....	L. L. Tower.....	39, 184
Stamp and Pencil Eraser.....	E. Faber.....	38, 892
Stamping and Drilling, Machine for.....	J. W. Towle.....	39, 768
Starch, Manufacture of.....	T. Kingsford.....	40, 693
Staves, Chuck for Turning.....	F. Robbins.....	39, 173
Staves, Jointing.....	P. Welch.....	40, 784
Stave Cutting Machine.....	P. Welch.....	40, 783

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Stave Dressing Machine.....	E. Holmes.....	37,720
Stave Dressing Machine.....	L. D., L. C., and A. M. Benson.....	39,711
Stave Machine.....	T. Hanvey.....	39,649
Stave Making Machines.....	Alvy T., John B., and S. Barnes.....	40,596
Staves and Shingles, Sawing.....	G. H. Parsons.....	38,932
Stay and Jib Connexion.....	J. E. Seavey.....	37,476
Steam, Exhaust, Method of Utilizing.....	T. T. Prosser.....	40,083
Steam for heating purposes, Method of using exhaust.....	B. T. Babbitt.....	38,021
Steam-Engine.....	J. B. Root.....	39,957
Steam and hydro-carbons, Carburetting gas from.....	W. H. Gwynne.....	39,342
Steam and Water power, Combination of.....	A. Huffer.....	37,344
Steamers, Culinary.....	L. F. Noe.....	38,239
Steel, Manufacture of.....	C. Atwood.....	38,140
Steel, Manufacture of.....	J. C. Schernman.....	38,504
Steel, Manufacture of.....	W. Gerhardt.....	40,470
Steel, Manufacture of.....	W. H. Brunt and J. W. McElroy.....	40,732
Steel, Manufacture of Malleable Iron and.....	E. B. Wilson.....	39,364
Steel, Welding, Composition for.....	A. Briggs.....	38,554
Steel and Iron, Process of Uniting Copper, Brass, &c.....	R. Savary.....	39,531
Steel and Iron, Purifying.....	W. Gerhardt.....	40,472
Steel and Iron, Purifying, by means of blasts of air.....	G. W. Sweet.....	39,078
Steering Apparatus.....	S. Gwynn.....	37,503
Steering Apparatus.....	A. Smith.....	37,710
Steering Apparatus.....	C. Perley.....	37,768
Steering Apparatus.....	J. F. Rochon.....	39,752
Steering Apparatus, Propelling.....	R. H. Lecky.....	39,936
Steering Apparatus, Steam.....	C. S. Morrison.....	37,517
Stencil Plates.....	S. C. Sumner.....	37,648
Stereoscopes.....	C. H. Wheeler and J. A. Basin.....	40,798
Stereoscopic Apparatus.....	S. D. Goodale.....	40,794
Stereoscopic Instrument.....	E. G. Chormann.....	38,196
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Still for Burning Earthenware.....	P. Pointon.....	39,356
Stirrups.....	W. H. Towers.....	38,995
Stirrups, Riding, and Hoods.....	R. N. Eagle.....	39,133
Stock for Shearing Sheep.....	R. Gregg.....	39,506
Stockings.....	E. Harmon.....	39,509
Stockings.....	E. Harmon.....	39,570
Stocking-heel Protector.....	J. N. C. Savels.....	38,134
Stocking Supporters.....	E. F. Putnam.....	38,639
Stone, Artificial, Manufacture of.....	F. M. Ruschaupt.....	40,984
Stone, Cement, Wood, &c., Indurating and Preserving.....	J. C. Combe.....	38,287
Stone, Dressing and Working.....	J. T. Gilmore.....	38,670
Stone for Filtering and other purposes, Composition for Porous.....	F. C. Krause.....	37,696
Stone-cutting Machine.....	G. J. Wardwell.....	40,584
Stool, Gardeners'.....	E. Whittlesey.....	40,301
Stool or Chair, Camp.....	A. D. Whitmore.....	40,002
Stool, Portable.....	O. D. Abbott.....	40,208
Stool or Table, Camp.....	J. Cram.....	38,470
Stoppers, Bottle, Self-acting.....	D. A. Draper.....	40,251
Stopper, Port, for vessels-of-war.....	J. Ericsson.....	40,830
Stopper for Jars and Bottles.....	A. Kline.....	40,415
Stoves.....	W. Wheeler.....	37,416
Stoves.....	E. Backus.....	37,847
Stoves.....	J. R. Hyde.....	37,966
Stoves.....	J. Morrison, jr.....	38,174
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Stoves.....	D. H. Metcalf and C. F. Bock.....	38,319
Stoves.....	P. P. Stewart.....	38,361
Stoves.....	A. C. Williams.....	38,636
Stoves.....	W. H. Geowey.....	38,673
Stoves.....	G. G. Hunt.....	38,828
Stoves.....	N. A. Boynton.....	38,942
Stoves.....	J. Shavor.....	38,989
Stoves.....	S. Woods.....	39,088
Stoves.....	W. S. Wright.....	40,073
Stoves.....	J. Hafer.....	40,405
Stoves.....	D. L. Stiles.....	40,663
Stoves, Ash-boxes for.....	C. J. Woolson.....	38,256
Stoves, Camp.....	J. Hope.....	37,399
Stoves, Camp.....	L. H. Smith.....	37,926
Stoves, Coal.....	J. G. Treadwell and W. Hailes.....	39,535
Stoves, Coal.....	D. G. Littlefield.....	39,582
Stoves, Coal.....	G. H. Magersuppe.....	39,939
Stoves, Coal.....	W. B. Treadwell.....	40,132
Stoves, Cooking.....	R. D. Granger.....	37,396
Stoves, Cooking.....	D. D. Stiles.....	37,778
Stoves, Cooking.....	J. H. Shear.....	38,423
Stoves, Cooking.....	G. P. Hopkins.....	38,744
Stoves, Cooking.....	M. Pond.....	38,838
Stoves, Cooking.....	J. Shavor and A. C. Corse.....	38,918
Stoves, Cooking.....	J. A. Lawson.....	38,967
Stoves, Cooking.....	P. P. Stewart.....	39,022
Stoves, Cooking.....	W. S. Deisher.....	39,127
Stoves, Cooking.....	A. E. Chamberlain and W. Caven.....	39,549
Stoves, Cooking.....	J. R. Hyde.....	40,104
Stoves, Cooking.....	T. S. Lambert.....	40,174
Stoves, Cooking.....	J. Van.....	40,201
Stoves, Cooking.....	J. D. Flamsburgh.....	40,465
Stoves, Cooking.....	C. F. Whorf.....	40,527
Stoves, Cooking.....	S. Pierce.....	40,635
Stove, Cooking.....	H. G. Wood.....	40,788
Stoves, Cooking.....	L. E. Sniffert.....	40,863
Stoves, Cooking, Army.....	H. L. Dimcklee.....	39,802
Stove, Cooking, Covers or Shields.....	H. W. DePuy.....	39,555
Stove, Cooking, Vapor.....	O. F. Morrill.....	40,703
Stoves, Cooking, and Ranges.....	W. B. Treadwell.....	39,508
Stoves, Cooking, and Ranges.....	R. E. Deane.....	40,399
Stoves, Fire-doors for.....	J. S. Clark and W. Harris.....	40,326
Stoves, Fireplace.....	J. Schmedinghoff.....	40,503
Stoves, Foot.....	S. Ackley.....	38,271
Stoves, Portable.....	I. C. Bryant.....	39,882
Stoves for Boiling Sap.....	S. B. Spalding.....	37,364
Stove-pipe Thimbles.....	J. S. Brooks.....	38,727
Stoves and Grates, Aprons for.....	W. Hughes.....	38,227
Stoves and Ranges, Cooking.....	D. Stuart.....	38,426
Strap and Hone, Combination of the.....	G. Snyder.....	39,362
Street Crossings, Iron.....	L. Tobert d'Epineuil and J. M. Letts.....	38,568
Street Sweeping Machines.....	J. Critcherson.....	37,611
Stretchers, Army.....	J. J. Smith.....	39,840
Studs.....	T. S. Lambert.....	39,935
Studs or Buttons, Fastening for.....	L. M. Brouson.....	39,461
Stump Extractors.....	T. Bell and L. Kulen.....	37,894
Stump Extractors.....	J. H. Hendee.....	38,011
Stump Extractors.....	W. K. Moody.....	38,975
Stump Extractors.....	J. Benchler.....	39,375
Stump Extractors.....	L. P. Pease.....	39,744
Stump Extractors.....	D. A. Danforth and D. C. Payne.....	40,160
Stump Extractors.....	J. Hicks.....	40,478
Stump Extractors.....	H. Lemm.....	40,940
Stump Pulling Machine.....	A. E. and G. R. Boynton.....	38,092

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Submarine Beds, Apparatus for obtaining profiles of.	C. Van Horn	37,650
Subsoiling Implement	W. D. Strowger	38,066
Sugar, Crushing and forming it into block	G. A. Jasper	40,043
Sugar, Cube, Manufacture of	G. A. Jasper	38,487
Sugar, &c., Cube, Manufacture of	W. H. Witmore	38,854
Sugar, Purifying and Cleansing	G. A. Jasper	37,548
Sugar, Retining	H. G. C. Paulson	37,824
Sugar, &c., in barrels, boxes, &c., Compacting.	G. A. Jasper	38,787
Sugar, &c., in waste liquids, Detecting	G. A. Jasper	41,008
Sugar from Sorghum, Manufacture of	J. C. Garretson	38,958
Sugar-cane, Crushing and Stripping	L. Maney and C. Branger	38,114
Sugar Evaporating Apparatus	E. Tucker	40,870
Sugar Evaporator	J. H. Withey	38,710
Sugar Mould Carriages	T. Bench	40,454
Surgical Splints	C. Whittmann	40,071
Swages for zinc washboards	J. Pool and T. J. Pattin	38,410
Sweat Cloths or Saddle	R. Spencer	40,128
Sweat or Saddle Cloth, Absorbing and Ventilating.	R. Spencer	40,129
Swimming, Teaching the art of	L. Scholfield	38,505
Swimming, Teaching the art of	L. Scholfield	39,341
Swine, Implement for Catching	L. Goldsmith and N. Gregory, jr.	40,476
Switches, Railroad	N. Ames	39,269
Switches, Railroad	C. B. Lashar	40,694
Switches, Railroad, Frogs for	T. Sharp	38,917
Switches for Railroads, Safety	C. H. White	38,435
Switches for Railroads, Signal	H. H. Barnes	40,898
Switches for Telegraphs	J. Lewis	40,346
Switches and Tracks for Street Railways	W. Wharton	37,654
Syringes, Elastic	H. D. Lockwood	39,662
Syringes, Elastic, Bulb Enema	F. B. Richardson	37,522
Syrup, Sorghum, Refining	J. F. Sheldon	40,954
Syrup and Sorghum Juice, Refining	J. F. Sheldon	40,544
Table, Drawing and Camera	J. B. Stackhole	40,647
Tables, Extension, Slide for	J. F. Birchard	40,320
Table, Folding	J. Sutler	40,513
Table for Reciprocating Saws	C. C. Hinchman	39,099
Table and Bedstead, Combined	O. Lafreniere	39,933
Table or Stool, Camp	J. Cram	38,470
Table Furniture, Washing Dishes and the like.	G. Richards and L. Alexander	40,280
Tackle, Fishing, for deep-sea fishing	W. Woodbury	39,192
Tackle or Purchase Blocks	J. J. Doyle	39,130
Tacks, Leathering	L. G. Bradford and C. O. Churchill	37,850
Tack or Nail, Carpet	W. P. Patton	38,598
Tags, Folding	J. B. Clark	40,019
Tags, Making	T. B. DeForest	40,664
Tags, Making	T. B. DeForest	40,827
Tags, Twisting wires for marking	M. Dimock	40,586
Tags or Labels	E. W. Dennison	38,871
Tanks, Oil	S. H. Ingalls	39,446
Tanks, Sheet Metal	A. Edwards	39,470
Tanning, Machine for	V. E. Ruseo	40,575
Tanning, Smoothing out hides, preparatory to	J. F. Flanders	40,650
Tap for Cutting Screw Threads	C. C. Walworth	40,203
Tar Mop	I. W. Midwinter	40,420
Tea and Coffee Pots	J. Bamber	38,545
Teakettles	B. H. Menke	37,423
Teakettles	A. C. Barstow	37,483
Teapots	A. M. Bristol	39,115
Teeth, Artificial	S. S. White	38,072

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Teeth, Artificial	S. S. White	38,073
Teeth, Artificial, Bases for	J. A. Bidwell	38,091
Teeth, Artificial, Base for	D. Steinberg	38,703
Teeth, Artificial, Moulding	J. A. Pelton	40,357
Teeth, Artificial, Moulds for Forming	J. Terrell	40,581
Teeth, Artificial, Mounting	J. C. Fuller	39,476
Teeth, Artificial, Securing to Bases	J. Lund	38,081
Teeth, Artificial, Setting	J. Chapman and W. Z. W. Chapman	37,809
Teeth, Cooling, Apparatus for	E. Oudry	39,673
Teeth, Cultivator	W. H. Kelly	40,414
Teeth, Cultivator	H. T. Hooper	40,935
Teeth, Grain Drill	S. H. Palmer	40,497
Teeth for Threshing Cylinders	R. B. Killin	40,309
Telescopes	W. H. Baker	40,808
Telegraphs, Acoustic	L. H. Everitt	40,616
Telegraphs, Calls for	A. Bain	38,529
Telegraphs, Delineating	Gaetan Bonelli	37,331
Telegraphs, Dial	C. T. Chester	40,324
Telegraphs, Electric	A. Bain	37,997
Telegraphs, Magneto-electric	G. W. Beardslee	39,376
Telegraphic Apparatus	G. Caselli	37,563
Telegraphic Wires	P. H. Stanislas, Count d'Escayrac de Lanture	39,016
Tenons, Machines for Round	I. L. Beckwith	38,877
Tenoning Spokes, Machine for	H. M. Preston	37,842
Tents	N. Cross	39,721
Tent, Knapsack and Litter, Combined	L. Joubert	39,150
Tents, Ventilating Cap for	J. Moakley	39,416
Tents, Ventilating Top-piece for	J. Higgins	38,583
Tent Frames, Folding	R. B. Pullan	39,777
Testicles, Bandage for the	G. Miliano	40,765
Testicle Supporters	S. E. G. Rawson	39,452
Thills of Vehicles, Attaching Breeching to	La Roy N. Leslie and T. Richardson	39,736
Thimble, Clew	W. W. Wilcox	38,192
Thread, Sewing, Semi-liquid Wax for	I. Banister	40,318
Thread in Sewing Machines, Oiling	O. R. Hyde	40,484
Thread of one fibre with another fibre, Coating.	A. Loiseau	37,584
Threshers	J. P. Jager	39,049
Threshers	D. Lippy and J. S. Bradley	40,695
Threshers	T. Harvey and N. J. Becker	41,003
Thresher and Huller, Clover	J. C. Birdsall	37,488
Threshers and Separators	W. W. Dingee and A. B. Farquhar	38,379
Threshing Cylinders, Teeth for	R. B. Killin	40,309
Threshing Machine	E. M. Birdsall	37,895
Threshing Machine	J. Reed	38,179
Threshing Machines	J. A. Woodward	38,779
Threshing Machines	M. Harder, G. W. Douglass, H. Becker, and D. Anthony	38,862
Threshing Machines, Band Cutter for	W. Barber	38,647
Threshing Machines, Shaker Frames for	L. P. Teed	37,367
Thrust Bearings, End	C. Perley	37,765
Tickets, Railroad and other, Dating	J. B. Edmondson and J. Carson	40,462
Tiles, Cement Pipes, Pavements, Building Blocks, &c., Composition for Forming	J. Marsh, jr., and G. Marsh	38,833
Tiles and Bricks, Heating Untempered Clay for	I. Gregg	38,580
Tile Machine	J. Braislin	40,456
Tile Machine, Drain	H. Knight	39,579
Tile Rake and Cut-off	P. L. Sword	40,149
Time-keepers	J. Stephenson	40,508
Time-pieces, Solar	T. R. Timby	40,519
Tin from tin-plate clippings, &c., Utilizing	J. M. Patterson	38,758
Tire, Bending and Setting	I. C. Singer	37,890

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Tires, Casting, Moulds for.....	J. Brooke.....	39, 316
Tires, Upsetting.....	M. P. Larry.....	38, 398
Tires, Upsetting.....	I. D. Card.....	39, 629
Tires, Wagon, Heating.....	S. G. Reed.....	39, 557
Tires, Wheel, Lifting and Removing.....	G. W. Creamer.....	40, 913
Tires on Wheels, Fastening.....	W. C. Whiting and H. F. Edwards.....	38, 524
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Tobacco, Drying.....	W. W. Huse.....	37, 509
Tobacco, Pressing and Cutting.....	W. W. Huse.....	37, 508
Tobacco, Smoking, Putting up.....	E. J. Mallett.....	38, 052
Tobacco Fork.....	S. D. Lilley.....	40, 271
Tobacco Presses or Cases, Fastening for.....	C. E. Rymes.....	40, 948
Tobacco Spinning Machine.....	E. Breul.....	37, 948
Tompson for Fire-arms, Expansible.....	G. R. Wilmot.....	40, 720
Tongs, Pipe.....	H. Getty.....	37, 395
Tool, Channelling.....	J. B. Johnson.....	39, 306
Tool, Clinching and Nipping.....	E. Warren.....	40, 522
Tools, Grinding and Polishing.....	J. A. Hendrick.....	40, 838
Tools, Grinding Edge.....	G. C. Eaton.....	37, 616
Toothpicks.....	B. F. Sturtevant.....	38, 768
Torpedoes, Mines, &c., Exploding.....	S. E. Sanborn.....	40, 362
Torpedoes, Submarine, Detecting and Exploding.....	H. M. Naglee.....	39, 162
Tourniquets.....	F. W. Bond.....	38, 442
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Towers, Operating Guns and Gun.....	J. B. Eads.....	38, 038
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Rings, Halter	L. C. Chase	1,514
Rollers of Drawing Machine, Applying pressure to tap.	N. E. Hall	1,391
Roofing, Belting, &c., Fabric for	American Waterproof Company ..	1,369
Rubber, Apparatus for Vulcanizing	E. A. L. Roberts	1,444
Ruffling, Making	Emma C. Wooster	1,556
S.		
Saccharine juices, Evaporating	L. P. Harris	1,464
Saccharine juices, Evaporating	L. P. Harris	1,465
Saccharine juices, Pans for Evaporating and Clarifying.	C. Jacobs	1,418
Sash Fasteners	J. C. Butterworth	1,440
Saws, Scroll, Guide and Support for	J. Richards	1,527
Saws and Saw Plates, Setting teeth in	N. W. Spaulding	1,456
Saw Frames, Wood	W. H. Livingston	1,452
Saw Frames, Wood	J. Haynes	1,526
Seats and Couches, Car, Railroad	T. T. Woodruff	1,539
Sewing Machines	J. G. Wilson	1,388
Sewing Machines	J. Batchelder	1,543
Sewing Machines	C. Palmer	1,562
Sewing Machines	W. Stanley	1,592
Sewing Machines, Hemming Guides for	A. and L. Davis	1,569
Shades for Billiard Tables	D. Conlan	1,549
Shingle Machine	O. Stoddard	1,407
Shingle Machine	J. R. Hall	1,550
Ship, Side Lights for	E. Hidden	1,533
Shoe Tips, Swaging	American Shoe Tip Company	1,500
Sieves, Wooden, for gas purifiers	N. O. Hawthurst	1,389
Skirts, Ladies, Clasping Hoops to	J. Wilcox	1,518
Skates	W. L. Gregory and G. Landon	1,454
Soap, Silicated	G. E. Vanderburg	1,430
Soda-water, Ice, Sirups, &c., Apparatus for ..	G. D. Dows	1,462
Spike or nail, Yellow metal	S. L. Crocker	1,415
Spoons, Sheet Metal	F. Grosjean	1,509
Springs, Car	R. Vase	1,420
Springs, Car	R. Vase	1,421
Springs, Car	A. B. Davis	1,431
Springs, Car	G. Douglas	1,461
Springs, Car, Railroad	A. B. Davis	1,371
Springs, Car, Railroad	A. B. Davis	1,372
Springs, Door	A. J. and K. E. Storms	1,404
Stands for machines	W. B. Bement	1,370
Staves, Chiming and Jointing	D. R. Bowker and W. P. Bense ..	1,474
Stoppers, Bottle, and Bottles	W. A. Shaw	1,576
Stoppers, Bottle, Securing	T. Pinner	1,584
Stoves	J. G. Treadwell and W. Hailes ..	1,307
Stoves	D. G. Littlefield	1,425
Stoves	D. G. Littlefield	1,426

Invention or Discovery.	Name of Patentee.	No.
Stoves	D. G. Littlefield	1,427
Stoves	D. G. Littlefield	1,478
Stoves	D. G. Littlefield	1,479
Stoves	J. C. Henderson	1,506
Stoves, Coal	G. J. Kingsbury	1,409
Stoves, Coal	D. G. Littlefield	1,594
Stoves, Fire Pots for	D. G. Littlefield	1,516
Straw for Paper Pulp, Preparation of	J. B. Palser and G. Howland	1,590
Sugar-draining Apparatus	G. Finken	1,501
Sugar-mould Carriages	T. Havemeyer	1,542
Sugar-mould Carriages	T. A. Havemeyer	1,561
Swimming, Teaching the Art of	S. Scholfield	1,503
Sirups, Ice, Soda-water, &c., Apparatus for ..	G. D. Dows	1,462
T.		
Tackle Block	I. E. Palmer	1,534
Teeth in Saws and Saw Plates, Setting	N. W. Spaulding	1,456
Traps for Steam Apparatus	T. Sault	1,441
Truck and Car Connexions	J. J. Sherman	1,512
V.		
Valves for Water-closets	G. Stevenson	1,375
Vehicles, Wheeled, Construction of	O. E. Miles	1,508
Vessels, Raising sunken	C. Krogh and M. G. Hogness	1,392
W.		
Washing and Wringing Machine	J. Young	1,384
Washing and Wringing Machine	J. Young	1,385
Water by Steam, Raising and Forcing	A. Brear	1,553
Wheels, Water	J. Temple, W. M. Mills, and A. L. Stout.	1,405
Wheels, Water	N. F. Burnham	1,530
Whip Sockets	W. H. Lyman	1,507
Whistles, Alarm	N. D. Lamb and A. Clark	1,490
Wood, Shaping irregular surfaces in	W. Hale, A. Goodman, L. Hale, and J. W. Goodman.	1,400
Wood, &c., for the manufacture of paper, pulp from.	W. F. Ladd and M. L. Keen	1,448
Wood or other vegetable substance in the manufacture of paper pulp, Process of treating.	W. F. Ladd and M. L. Keen	1,449
Wool, Dyeing	J. A. Locke	1,570
Wringing and Washing Machine	J. Young	1,384
Wringing and Washing Machine	J. Young	1,385
Z.		
Zinc, metallic, Manufacture of	A. Monnier	1,453

EXTENSIONS.

B.		
Baking apparatus	J. P. Hayes	6,063
Barrel machinery	R. Murdock	6,523
Bedstead fastening	D. Stollmeyer	6,483
Boilers, tool for attaching tubes to	T. Prosser	6,360
Brakes for cars, Operating	N. Hodge	6,762
C.		
Carpet, Brussels, Looms for weaving	E. Bigelow	6,153

Invention or Discovery.	Name of Patentee.	No.
Chairs, Railroad, Bending the lips of wrought-iron.	G. P. Cox.....	6,683
Cord, Making.....	W. E. Nicholls.....	6,942
Cut-off, Adjustable.....	J. King.....	6,209
Cut-off and working valves of steam engines.	G. H. Corliss.....	6,162
Cylinders, Burning.....	C. G. Sargent.....	6,778
E.		
Engines, Carding.....	J. Dyson.....	6,135
F.		
Fire-arms, Movable breeches for, and appurtenances for the same.	B. Chambers.....	6,612
Flour from bran, Separating.....	J. Frost and J. Monroe.....	6,143
Flour packers.....	N. Kinman.....	6,830
G.		
Gauges, Pressure.....	E. Bourdon.....	9,163
H.		
Harvesting machines.....	J. Haines.....	6,245
Harvesting machines, forms of teeth in.....	E. B. Forbush.....	6,903
I.		
Iron stairs, construction of.....	B. F. Miller.....	6,810
L.		
Lamps, Camphene.....	E. B. Horn.....	6,103
Looms, Jacquard.....	E. B. Bigelow.....	6,506
Looms for weaving Brussels carpets.....	E. Bigelow.....	6,153
Looms for weaving figured fabrics.....	M. Marshall.....	6,939
Lubricating compound.....	P. S. Devlan.....	6,026
M.		
Mules, Self-acting, Regulators for.....	E. C. Sanger.....	6,570
N.		
Nail or spike, Yellow metal.....	S. Crocker.....	6,354
Needle, Knitting.....	J. Hibbert.....	6,025
P.		
Pulleys, Binder, for belts and brakes.....	M. C. Bryant.....	6,864
Pumps, Rotary, Packing in.....	Caroline Cary, administratrix. (See A. W. Cary.)	6,456
R.		
Ranges, Cooking.....	P. Rollhaus.....	6,715
Register, Hot-air.....	E. A. and W. Tuttle and J. S. Bailey.....	6,027
Regulators for self-acting mules.....	E. C. Sanger.....	6,570
S.		
Saddle and winch, Combination of adjustable.	A. G. Polhamens.....	6,224
Safes, Fire-proof.....	E. and J. L. Hall.....	6,655
Sewing machines.....	J. Bachelder.....	6,430

Invention or Discovery.	Name of Patentee.	No.
Shot, drop, Method of Manufacturing.....	D. Smith.....	6,460
Spoons, Making wire-strengthened.....	W. Mix.....	6,413
Stairs, Iron, Construction of.....	B. F. Miller.....	6,810
Steering apparatus.....	J. Reed.....	6,507
T.		
Teeth, Cutting of bevelled gear.....	G. H. Corliss.....	6,161
Trucks, Railroad.....	J. F. Rogers.....	6,901
Tubes to boilers, Tool for attaching.....	T. Prosser.....	6,360
V.		
Valves in direct-action pumping engines, Method of insuring the action of the.	H. R. Worthington and W. H. Baker.....	6,274
Valves of steam engines, Cut-off and working.	G. H. Corliss.....	6,162
W.		
Wheels, Car, Regulating the contraction of...	Mary Murphy.....	6,633
Windlasses, Fitting the heaving-socket and head of.	C. Perley.....	6,873
Winch, Direct and counter-motion.....	C. Perley.....	6,480
Winch and saddle, Combination of adjustable.	A. G. Polhamens.....	6,224

LETTER
FROM THE
COMMISSIONER OF PATENTS,
TRANSMITTING

His annual report for the year 1863.

MARCH 23, 1864.—Laid on the table and ordered to be printed.

UNITED STATES PATENT OFFICE,
Washington, D. C., January 30, 1864.

SIR: I have the honor herewith to transmit the annual report of this office for the year 1863, to be laid before Congress.

I am, very respectfully, your obedient servant,

D. P. HOLLOWAY,
Commissioner of Patents.

Hon. SCHUYLER COLFAX,
Speaker of the House of Representatives, Washington, D. C.

UNITED STATES PATENT OFFICE,
January 30, 1864.

SIR: In obedience to the requirement of the fourteenth section of the act of March 3, 1837, entitled "An act in addition to an act to promote the progress of science and the useful arts," I have the honor to submit a report of the operations of this office during the year 1863.

The receipts and expenses of the office for the past year, together with the present condition of the patent fund, will be seen by reference to the following statements:

No. 1.

Number of applications made during the year 1863.....	6,014
Number of patents granted, including reissues and designs.....	4,170
Number of caveats filed during the year.....	787
Number of applications for extension of patents.....	40
Number of patents extended.....	48
Number of patents expired 31st December, 1863.....	968

Of the patents granted, there were to—

Citizens of the United States.....	4,048
Subjects of Great Britain.....	58
Subjects of French Empire.....	37
Subjects of other foreign governments.....	27
	<hr/> 4,170

No. 2.

Statement of money received during the year 1863.

On applications for patents, reissues, &c.....	\$178,617 00
For copies and for recording assignments.....	16,976 29
	<hr/> 195,593 29

No. 3.

Statement of expenditures from the patent fund.

For salaries.....	\$89,559 94
For contingent expenses.....	42,715 29
For temporary clerks.....	54,438 41
For withdrawals.....	1,680 00
For refunding money paid by mistake.....	720 50
For judges in appeal cases.....	300 00
	<hr/> 189,414 14

No. 4.

Statement of the patent fund.

Amount to the credit of the patent fund January 1, 1863.....	\$38,361 15
Amount paid in during the year.....	195,593 29
	<hr/>
Total.....	233,954 44
Deduct amount of expenditures during the year.....	189,414 14
	<hr/>
Leaving to the credit of the patent fund January 1, 1864, the sum of	44,540 30

Table exhibiting the business of the office for twenty-seven years, ending December 31, 1863.

Years.	Applications filed.	Caveats filed.	Patents issued.	Cash received.	Cash expended.
1837.....			425	\$29,229 08	\$33,506 98
1838.....			520	42,123 54	37,402 10
1839.....			425	37,260 00	34,543 51
1840.....	765	228	473	38,036 51	39,020 67
1841.....	847	312	495	40,413 01	52,666 87
1842.....	761	291	517	35,505 68	31,241 48
1843.....	819	315	531	35,315 81	30,766 96
1844.....	1,045	380	502	42,509 26	36,344 73
1845.....	1,246	422	502	51,076 14	39,395 65
1846.....	1,272	448	619	50,264 16	46,158 71
1847.....	1,531	553	572	63,111 19	41,878 35
1848.....	1,628	607	600	67,576 69	58,905 84
1849.....	1,955	595	1,070	80,752 78	77,716 44
1850.....	2,193	602	995	86,927 05	80,100 95
1851.....	2,258	760	869	95,738 61	86,916 93
1852.....	2,639	996	1,020	112,056 34	95,916 91
1853.....	2,673	901	958	121,527 45	132,869 83
1854.....	3,324	868	1,902	163,789 84	167,146 32
1855.....	4,435	906	2,024	216,459 35	179,540 33
1856.....	4,960	1,024	2,502	192,588 02	199,931 02
1857.....	4,771	1,010	2,910	196,132 01	211,582 09
1858.....	5,364	943	3,710	203,716 16	193,193 74
1859.....	6,225	1,027	4,538	245,942 15	210,278 41
1860.....	7,653	1,084	4,819	256,352 59	252,820 80
1861.....	4,643	700	3,940	137,354 44	221,491 91
1862.....	5,038	824	3,521	215,754 99	182,810 39
1863.....	6,014	787	4,170	195,593 29	189,414 14

The law requiring the Commissioner of Patents to communicate to Congress an annual report, contemplates that in addition to statistical statements and tables, such as have been above given, he should present his reflections upon the working of the laws he is called upon to administer, and exhibit a view of the progress of the arts of the country, which it is his peculiar privilege to observe. In discharging this duty, I shall take the liberty of departing from the formality of a mere official communication, and address myself through Congress, by whose munificence the reports of this office are so widely disseminated, to the public, for whose benefit they are mainly intended.

The subjects to which I shall call attention are, the policy of any system of protection by patents; the advantages of our own system as compared with those of other leading industrial nations, and particularly Great Britain; the state of the industrial arts in this country as exhibited by the inventions examined in this office within the last one or two years; and the modifications of patent laws which, in my judgment, would give greater efficiency to our present system.

POLICY OF PROTECTION BY PATENTS.

I am aware that to most inventors in this country it would seem not less preposterous to question the right of property, or the fundamental laws of morality, than to inquire into the right and policy of granting patents for inventions; but we cannot shut our eyes to the fact that within the last few years the policy of patent laws has been the subject of grave discussion in Europe. No later than 1862, a distinguished member of the House of Commons in England gave notice of a motion to consider, not the working, but the policy, of the patent law itself; and in a debate which arose in May, 1862, upon a motion of Sir Hugh Cairnes for an address to the crown, praying for the appointment of a commission to inquire into the working of the law relating to patents for inventions, members of Parliament stated that year by year the opinion had grown more general that, practically, patents did more harm than good to inventors. In 1852 a select committee of the House of Lords was appointed to consider a bill pro-

posed to amend the then existing law of patents. The voluminous evidence taken before this committee has been published, and is full of instruction as to the working of the patent laws in Great Britain, and the questions which arose as to the policy of those laws. The character of the questions which were raised as to the policy of any patent system, is exhibited by some of the interrogatories proposed by the committee:

"Do you not think that the fact of a patent being granted is a considerable obstruction to anybody else inventing in that line?"

"You think that in no case where a useful improvement in the course of a manufacture suggests itself to the mind of a man, he would be deterred from making that improvement for fear of being dragged into litigation by reason of his infringing some other patent?"

"Do not you think that the stimulus which a patent gives to a man withdraws a great many ingenious artisans from their usual and more useful work in order to invent things which, when invented, are of no use whatever?"

A question put to Mr. Brunel, an engineer of acknowledged eminence, is, "The result of your evidence is, that you are very decidedly of opinion that the whole patent system should be abolished?"

His answer is, "Yes; I think it would be an immense benefit to that unfortunate class of men whom we call inventors, who are at present ruined and their families ruined, and who I believe are a great injury to society."

"And you think that those consequences, such as ruin to inventors, and evils of that description, would subsist equally, though the patent laws were made simple and effective?"

"Yes, I think they would be very much increased; and if patents are continued, I hope the principle will be carried out thoroughly, and then it will not stand for two years."

"I can see every day that the poorer class of inventors ruin themselves by the attempt to work out some idea for the sake of getting a patent, while, in all probability, if the man had gone to his master and said, 'Well, it strikes me, that by such a means we should be able to get through more work and do something better; what do you think about it?' the chances are that most masters would, if they saw it was a good idea, give the man £1 or a £5 note; and the man the next day would be at work at something else, and you would have out of that man's brains an immensely greater portion of invention, and I believe he would get much better paid for it. I believe he would really make money; whereas, now, everybody acquainted with these men knows that they lose money by it, and that an inventor, a schemer, is a poor man, who is more likely to go to the work-house than anything else."

Mr. J. L. Ricardo, a member of the House of Commons, in his answers to the questions of the committee, forced the free-trade doctrines of his eminent namesake to the utmost verge. He says, "the result of my experience and observation has been a conviction that the whole system of granting patents at all is very injurious to the community generally, and certainly not of any advantage whatever to the inventor. I consider that it is in a great measure a delusion upon the inventor to suppose that the patent privileges which are granted to him render his invention more valuable than it would be, supposing there did not exist any monopoly with regard to it." He regards a monopoly with respect to a particular trade as being in exactly the same situation as a monopoly respecting any particular invention. "The object of a patent is to monopolize a particular trade." He quotes Mr. Say, who considers a patent as a recompense which the government grants to the inventor at the expense of the consumer. He quotes the opinion of Lord Kenyon, in the case of Hornblower against Bolton, in which he says: "I confess I am not one of those who greatly favor patents; for although in many instances, and particularly in this, the public are greatly favored by

them; yet, on striking the balance on the subject, I think that great oppression is practiced on inferior mechanics by those who are more opulent." He does not refer to the views of Lord Mansfield, the great founder of commercial law, who held that "in all work of the mind and of genius, the common law of England ought to be held as giving an absolute property." He refers to Lord Bacon, who, in his advice to Sir George Villiers, says: "Especial care must be taken that monopolies, which are the canker of all trading, be not admitted under the specious pretext of public good." But he makes no mention of the tribute to inventive genius which Lord Bacon proposes in his *Atlantis*, where he says: "Upon every invention of value we erect a statue to the inventor, and give him a liberal and honorable reward."

The objectors to the policy of a system of protection by patents, as appears by the questions propounded by the committee of the House of Lords, and the answers above quoted, may be resolved into three classes:

1. Those who honestly doubt whether the system of patents affects the assumed development of the industrial resources of the nation; 2, those who believe that the progress of a nation is to be secured only through the encouragement and instrumentality of the favored classes; and, 3, those who, carrying the abstract principles of free trade to too great a generalization, deny the policy of any law which savors of a monopoly, or effects even a temporary protection of industry or genius. The objections of the first class I will hereafter attempt to answer in detail. Those of the second class not openly favored under the present political condition of affairs in this country, have found sympathy with a class now, happily, perhaps, removed from us, who always regarded with contempt the poor inventors of the north. It is this spirit which breathes in the language of the eminent engineer, who conceives that the poor inventor would be sufficiently rewarded by receiving a one-pound or five-pound note from his master. It is unnecessary to reply seriously to this class of objectors. They can be found only in a country where the avowed objects of the laws which regulate the descent of property are the concentration of wealth in the hands of the few, and the support of hereditary aristocracy; where the husbandmen on small properties have been driven from the land, in order that 2,000 proprietors may possess among them one-third of the land and the total revenue of the three kingdoms; where the doctrines of political economy prevail that large farms, large machine shops, large cotton mills, and large iron works, can produce cheaper than small ones, and therefore may very properly supersede and obliterate them; and where a theologian no less respected than Dr. Chalmers can be found to affirm of the blessings of a splendid aristocracy, "that from this higher galaxy of rank and fortune there are droppings, as it were, of a bland and benignant influence on the general platform of humanity."

There is, unfortunately, in this country more sympathy with the last class of objectors, who regard, with Mr. Ricardo, a patent obnoxious as a remnant of the old abuse of monopolies, by which an individual obtained from the Crown the exclusive right to exercise some particular trade, and who consider the patent laws as a product of the semi-barbarous age of Queen Elizabeth. During her reign the sole right to buy and provide steel within her realm was granted to a single nobleman. The sale of salt, starch, leather, paper, &c., was restricted to favored persons, who in some cases raised the prices 1,000 per cent. and upwards. It was this class of monopolies against which Lord Bacon inveighed. The evils of this policy increased to such an extent, that it was considered by the Parliament of James I altogether incompatible with the prosperity of the country. This feeling produced, in the 21st of James I, the famous "statute of monopolies"—famous not only for the abolition of the former unjust monopolies of trade, but for establishing the rights of inventors, which date, according to Blackstone and other English jurists, from that law. The statute suppresses monopolies by making void the future grants of all such as do not come under

the following proviso: "Provided also, and be it enacted, that any declaration before mentioned shall not extend to any letters patent and grants of privileges for the term of fourteen years or under, hereafter to be made, of the sole working and making of any manner of new manufacture within the realm, to the true and first inventor or inventors of such manufacture, which others at the time of making such letters patent shall not use, so as also they be not contrary to law, nor mischievous to the State, by raising the prices of commodities at home, or hurtful of trade, or generally inconvenient." Certain patents, more of the character of the ancient monopolies of trading, which paid a yearly rent to the exchequer, were exempted from the operation of the statute. The date of the act was 1624. In 1639, great discontent having arisen in the public mind with respect to the monopolies and privileges which remained, there was issued a proclamation abolishing a great many of the privileges which still existed, and among others "all patents for new inventions not put in practice from the date of their respective grants." There was thus in the general statute abolishing monopolies, and the subsequent proclamation clearing away such as subsisted, a distinct recognition of the claims of *useful* inventions to exemption.

It is a curious fact in the general history of the origin of the patent policy, that the original object in granting patent privileges in France, as stated by M. Wolowski, professor of commercial legislation, in the evidence before the committee of the House of Lords, was to break up the monopoly of the guilds of trade which formerly existed in France, as well as in almost every city in Europe. All the persons practicing any one art or trade in a particular city, such as the tailors, the brewers, the tanners, the goldsmiths, &c., were united into a company, which received from the government the exclusive right to practice their vocation. The competition of the art or trade was thus restricted to those who had been made free of the company; and no person could be made free until he had complied with regulations, often intentionally made numerous and vexatious in order to prevent too many persons entering the business. No member of the guild could work except in conformity with its rules. An inventor of any improvement in the trades practiced by the guild, not a member thereof, could not employ his own invention; a patent gave the inventor the right of working individually, in derogation of the chartered monopoly of the guild. According to M. Wolowski, patents are now granted in Austria for the same object. Thus the dawn of the rights of inventors has been actually coeval with the destruction of monopolies, odious to the common justice of men. And the common sense of mankind has marked a distinction between such monopolies and the exclusive rights conceded to inventors. Their rights under patents are called monopolies only, from the poverty of language, which has failed to express in words a distinction which no less clearly exists.

The odious monopolies, or those properly so called, such as were given in the time of Elizabeth for the sale of salt, starch, paper, steel, &c., were grants simply to aid individuals in amassing wealth, and favored the aggregation of property in a few hands without opening new sources of national wealth, and were thus in derogation of the rights of others without compensatory public benefit, and were therefore positively injurious. Prof. Bowen has shown, in opposition to dogmas of Adam Smith, that individual and national wealth are not identical; that individuals grow rich by the acquisition of wealth previously existing; nations, by the creation of wealth that did not previously exist. "Invention," says Mr. Ray, according to Prof. Bowen, "is the only power on earth that can be said to create. It enters as an essential element into the process of the increase of national wealth, because that process is a creation, and not an acquisition. It does not necessarily enter into the process of the increase of individual wealth, because that may be simply an acquisition, not a creation." "Hence," continues Mr. Bowen, "the most frequent cause of the increase of national wealth is the increase of the skill, dexterity and judgment, and of the mechanical contrivances, with which national labor is applied." In this view, how can a monopoly of a

trade be compared with the exclusive right in an invention? How can the exclusive privilege to sell salt in Elizabeth's time, which added not one bushel to the production, but which enriched the monopolist and robbed the community, as was the fact by raising the price from sixteen pence a bushel to fifteen shillings, and the exclusive right of Whitney to his invention of the cotton gin, which has added hundreds of millions to the products and exports of the country, be both branded, with equal justice, with the odious name of monopoly?

The argument of the distinguished member of Parliament, Mr. Ricardo, against patents, on the ground of their being monopolies, may have less weight when the immediate practical grounds of his objections are considered. It appears from his evidence before the committee that he was chairman of the Electric Telegraph Company—the great company which, under Mr. Wheatstone's patents and a charter from Parliament, exclusively controlled the system of telegraphic communication in England. This company paid for the patent rights under Mr. Wheatstone the sum of £140,000, and that the company had paid nearly £200,000 in buying patents and litigating them; that the company had bought up a very large number of patents which interfered with their exclusive rights, because they had made it a rule, if a man offered reasonable terms, to buy an invention, however bad it might be, sooner than litigate it; and that they paid for one patent—that of Mr. Bains—£8,000 or £9,000, which, although it did not quite come up to the expectation of the company, they found useful in combination with other patents. The obvious question occurs, how, but for the existence of the patent laws which recognized the rights of the company to the exclusive use of Mr. Wheatstone's and Mr. Bains's patents, for which they had paid the inventor a full equivalent, could they have had the means of reimbursing themselves for the vast expenditure for the original and competing patents? What more instructive illustration could be found, except the whole free-trade policy of Great Britain, of the fallacy of political economy founded simply upon the individual interests of men and nations?

It is gratifying to observe that Mr. J. S. Mill, admitted to be the ablest living writer upon political economy, and a strong advocate of free trade, thus frankly admits the reasonableness of granting patent rights: "The condemnation of monopolies," he says, "ought not to extend to patents, by which the originator of a new process is permitted to enjoy, for a limited period, the exclusive privilege of using his own improvement. This is not making the commodity dearer for his benefit, but merely postponing a part of the increased cheapness which the public owe to the inventor, in order to compensate and reward him for the service. That he ought to be both compensated and rewarded for it will not be denied; and also, that if all were at once allowed to avail themselves of his ingenuity, without having shared the labors or the expenses which he had to incur in bringing his idea into a practical shape, either such expenses and labors would be undergone by nobody, except by very opulent and very public-spirited persons, or the state must put a value on the service rendered by the inventor, and make him a public grant. This has been done in some instances, (as when Parliament offered a reward of £20,000 for a method of finding a ship's longitude at sea,) and may be done without inconvenience, in cases of very conspicuous public benefit; but, in general, an exclusive privilege of temporary duration is preferable, because it leaves nothing to any one's discretion; because the reward conferred by it depends upon the invention's being found useful, and the greater the usefulness the greater the reward; and because it is paid by the very persons to whom the service is rendered, the consumers of the commodity."—Political Economy, vol. II, page 497.

I now recur to the first and most important question, whether the patent policy has actually increased the industrial resources of nations.

It is grateful to refer to the testimony upon this point, given before the committee before referred to, by intelligent practical men, thoroughly familiar with the operation of the patent laws and the condition of the arts in Great Britain. Mr. Carpmael, a patent agent of great experience, in reply to the question, "Are you of opinion that the present patent law might be safely repealed altogether, and inventions deprived of all privilege of protection?" replies, "I can only say that I can see no inducement to an inventor to come forward to benefit the manufacturers of the country, unless you give him some reward. Looking through the history of the whole of the manufactures of this country, you will find that all the steps have been founded upon patents, from the earliest date up to the present time. Take any branch, whether it be the cotton manufacture, the steam engine, the manufacture of flax or wool—in the case of every one, if we trace the history of it through, which I should be happy to do if it were necessary, it will be seen that the whole system is based upon patents. Paper-making is the same, and so in every branch that I remember." Being asked, "Can you, without difficulty, point out a certain number of very important inventions, which were preceded by such costly experiments that they could not have been carried out without the patent law?" Mr. Carpmael says: "Watt, in the case of the steam engine, was seven years before he got the first engine to work efficiently. In the case of Arkwright's machine for spinning cotton, he was several years before he got efficiently to work. In the case of Crompton, the same; in the case of Hargraves, the same. Then, in regard to combing wool by machinery, and the first power-loom by Cartwright, he did not succeed in getting practically to work for many years, and he was rewarded by Parliament for what he had done, because he had not been remunerated in the working of his patent. The paper machine was worked out by a series of costly experiments, which never would have been entered upon but for the patent laws of the country. In this manner might I go through all our manufactures; indeed, in no instance has any manufacture grown into importance in this country, except by a series of costly experiments, and costly machinery, carried on for many years, in the hope of deriving benefit through grant of letters patent."

Mr. Webster, the well-known writer on patent laws, stated before the committee: "I am quite sure of this, that if any person who may be disposed to think that patents should be done away with, comes to examine the way in which particular manufactures have been built up by reason of the large amount of capital which has been thrown into them, in reliance upon the action to be obtained by means of the protection given for a short time, he will be very much surprised. In some of the most successful inventions of the present time, it will be found that the first patent effected little; but, in attempting to work this out, further improvements were made, and fresh patents obtained, so that by the protection which has been given to different stages of the invention, and the quantity of capital which has been laid out upon it, the invention has been perfected and introduced, and made useful to the public in a time within which it never could have been done but for the money which has been employed upon it, in reliance upon the protection of the patent. The whole of our experience of cases before the privy council is proof of that, and leads to the conclusion that many inventions would never have been introduced at all without such protection; and no man, so far as my knowledge of manufactures goes, would have ventured upon those experiments had it not been from some such inducement as the reward offered by the patent law."

Mr. Bennett Woodcroft, the accomplished Superintendent of the Great Seal Patent Office in England, under the Commissioners of Patents, to whom more than any other person is due the publication of the specifications and drawings illustrative of all the patents granted in England since 1617—a work which may be justly regarded as one of the proudest monuments of British genius—

has added to the many obligations conferred upon this office by presenting to it, within the last year, a series of engravings executed in the highest style of art. Their subjects can be best described in his own words: "Actuated by a sincere respect for mechanical genius, and a warm admiration of its productions, I have collected all the known portraits, eight in number, of the *ten mechanicians* whose inventions laid the foundation, raised the superstructure, and now secure the continuance of the cotton manufacture, the most marvellous for its extent and effects that ever employed the ingenuity of man."

Mr. Woodcroft, in a memoir which he has published containing brief biographies of these ten inventors of machines for the manufacture of textile fabrics, observes that in looking at the progress and magnitude of the cotton manufacture, surprise is excited at the simple construction of the few machines which have produced such wonderful results, "at the lateness of their revelation and their tardy adoption." And he appositely applies to those works the words of Milton:

Th' invention all admired, and each how he
To be th' inventor missed; so easy it seemed,
Once found, which, yet unfound, most would have thought impossible.

The ten mechanicians to whose inventions the results produced in the cotton manufacture are by Mr. Woodcroft mainly attributed, are—Kay, who was inspired to run the shuttle on pulleys, and impel it by a short lever attached to a string, by which one weaver was enabled to do the work of two or three; Paul, who taught a method of spinning a hundred or more threads at once; Arkwright, who reinvented and revived roller spinning; Hargraves, who invented the jenny, which drew sixty or seventy threads at once; Crompton, who invented the *mule*, (so called because it combined Paul's and Hargraves's inventions;) Radcliffe, the author of the improvement in sizing or dressing the whole of the warp before it was wound upon the beam, thus removing the grand difficulty then existing in the art of weaving; Cartwright, who brought forth a loom which would weave cloth by a mechanical, instead of a manual, motor, and thus quadruple the power of the weaver; Jacquard, who invented the apparatus to which his name is given for selecting the warp threads, which superseded the services of the draw-boy at the loom; Roberts, who made the mule of Crompton automatic, or self-acting; and Heilmann, who, from observing his daughters comb their hair, conceived the machine for combing cotton and wool, ever since in universal adoption.

Mr. Woodcroft thus states the result in Great Britain alone, produced mainly, as he considers, by these ten inventions. In 1760, at the accession of George III, the entire value of cotton goods manufactured in England was about £200,000 a year. In 1772 British calicoes were made to the number of 50,000 pieces. In 1816 upwards of 1,000,000 pieces were manufactured. In 1750 the population engaged in the cotton manufacture was about 20,000. In 1801 the persons engaged were about 80,000. In 1823 there were 10,000 steam-looms in Great Britain. In 1862 their number was 399,992, driven with a power of 294,000 horses, and employing 451,000 work-people in 2,887 factories, containing 30,387,457 spindles. Every one of the ten inventions which have produced these marvellous results was protected by patents; each inventor was stimulated by the reward which this protection opened to his hope, if not his fruition, and, without the prospect of appropriating to himself wealth and honor, would have shrunk from the labors of creating and introducing his invention. Granting, as is quite probable, that the individual importance of these men, in relation to the cotton manufacture, is somewhat exaggerated, and that the credit given to them should be shared with the eight hundred men who have taken out patents for improvements in this manufacture, it is no less true that the whole system of the manufacture of cotton in Great Britain is founded upon patents.

Illustrations, less striking, it may be, but not less convincing, of the beneficial

influences of the protection afforded by patents, can be found in the history of the industrial arts in this country. I will point to a totally different branch of manufacture which had its undoubted origin, and has attained its perfection, in the United States—the manufacture of India-rubber goods. The facts are obtained from records in this office and reports of committees in Congress. India-rubber was introduced into France in 1776. Dr. Priestley says that, in 1791, he saw a specimen of the gum at a stationer's, where it was used to erase pencil-marks—hence its name. In 1823 five hundred pairs of shoes, made by the natives in South America directly from the exudations of the gum-bearing tree, were imported into this country, and sold at Boston. In the years 1832, 1833, 1835, and 1836, several manufactories were established in New England for making India-rubber goods. Upon their introduction into market it was found that the goods became clammy and sticky when exposed to heat, and were stiffened by the cold. They were therefore useless. In consequence of these defects, in 1839 all the companies and individuals engaged in the manufacture were ruined. The manufacture was utterly prostrated.

At this time a simple workman, in Connecticut, named Hayward, who had undertaken to carry on this manufacture by himself, who, to use his own words, hired the shop he worked in, and whose only income from the uncertain profits of his business was about five hundred dollars a year, sought day and night to discover some substance which might be combined with the India-rubber and cure its defects. Absorbed in the search of what to him was the philosopher's stone, "he dreamed at night," as he asserts, that the desired solvent was sulphur. He combined the rubber with sulphur, and, to his delight, discovered that the defects in the goods were almost wholly overcome. He had miraculously, as it were, discovered a substance which combined chemically with the rubber, making, in fact, a sulphuret of rubber—indeed, a new substance, whose structure is fibrous like horn, whereas the structure of rubber alone is granular, or molecular. He obtained a patent for his discovery; but being heavily in debt, and perhaps unable to conceive of the vast consequences which would result from his invention, he sold the right to his invention for a mere pittance to Mr. Goodyear. The latter experimented upon the new compound discovered by Hayward, and discovered the art of vulcanizing it.

This invention is thus described by Mr. Webster, in his great speech at Trenton: "The great peculiarity of this vulcanizing process is this: If you take a compound of sulphur and rubber in a dry state and grind and mix them together, and apply heat, the consequence is, that the substance softens and softens as the degree of heat increases, until it reaches a certain height in the thermometer, say 212° Fahrenheit and along there, a little more or less. Well, anybody," says Mr. Webster, "who ever tried the effect, to see what would be the operation upon this compound, and finding that it ran up to a great degree of heat, softening and rendering it more and more plastic as the degree of heat was augmented, would naturally be of the opinion that if the heat was carried still higher the whole substance would melt. But Mr. Goodyear, as the result of untiring experiment, found out that, although the application of heat produced a melting effect upon this compound, rendering it more and more plastic and soft as the degree of heat augmented, yet when the heat, going on, had got up to a certain much higher degree, its effect was the reverse of what it had been, and then the rubber composition commenced to vulcanize and harden, and in fact to make metallic the vegetable substance." The result of the two inventions is thus stated by Mr. Webster: "It introduces quite a new material into the manufacture of the arts, that material being nothing less than elastic metal. It is hard like metal, and elastic as pure original gum-elastic. Why, this is as great and momentous a phenomenon occurring to men in the progress of their knowledge, as it would be for a man to show that iron and gold could remain iron and gold, and yet become elastic like India-rubber."

Mr. Goodyear obtained a patent for his discovery, and granted licenses to manufacture under his and Hayward's patents. The manufacture at once revived. Twenty years afterwards the yearly sale of goods created by these inventions in the city of Boston alone was set down at \$2,500,000. Thousands of operatives are employed in their manufacture. The uses to which the vulcanized rubber is applied are innumerable, and new uses are discovered every day. Water-proof shoes, clothing, tents, pontoons, blankets for soldiers—invaluable as they have been proved in our service, preventing the loss of thousands of lives, and promoting the health and comfort of the soldier to a degree beyond estimation—buckets, life-preservers, mail bags, car springs, suspenders, pencil cases, combs, boxes, are only a few of the countless articles made, specimens of which may be seen in the beautiful collection deposited by Mr. Goodyear in the saloons of this office. There is probably not a family in the country that does not use these goods, and there is hardly an instance on record in which inventions have within so short a period become so essential to general comfort and convenience.

It is unnecessary to say that this great manufacture was founded upon the stimulus which the patent privilege gave to the inventors, and the protection which the patents have given to the manufacturers.

I have spoken of the great spinners and weavers who have carried the cotton manufacture to its great perfection in Great Britain. An invention in the class of textile manufactures has been made by an American, which equals in ingenuity anything which has been accomplished in Great Britain or France. The history of the invention proves that it would not have been introduced without the protection which the patent afforded, and there is precise evidence on record of the saving in money which it has effected for the consumers of the country. Previous to 1842 all three-ply and ingrain carpets were woven in hand looms, the motive power being furnished by the weaver. Numerous and costly experiments to weave ingrain carpets by power-looms had been made in England, but had proved unsuccessful. Mr. Erastus P. Bigelow, of Massachusetts, in 1842, conceived of a series of devices for making the carpet loom automatic, so that the costly labor of men might be dispensed with, and the whole process of weaving might be conducted by girls and boys. After laying his plans before many manufacturers, without obtaining their approval, he succeeded in engaging the attention of the treasurer of a manufacturing company in Lowell, who had the intelligence to see the importance of the undertaking, and to understand the grounds of its probable success. Through him he made an engagement with "the Lowell Company," which, in consideration of the exclusive right to use all his inventions then or afterwards made, so far as they could be applied to the weaving of ingrain carpets, agreed to pay the expenses of putting a trial loom in operation, and if that proved successful, to build a power-loom mill, and to pay Mr. Bigelow a certain patent rent per yard upon all carpeting woven during the existence of the patents which Mr. Bigelow was to take out for his inventions. The trial loom proved successful, and the company proceeded to erect mills to manufacture carpeting under Mr. Bigelow's patents. The cost of these works was many hundred thousand dollars, the fixed capital of the company in their carpet works being \$978,956. This vast outlay was made, and in fact the whole improvement was based, upon the protection given by the exclusive right under the patents. The invention was of such a character that it could be developed, tested, perfected, and made practically useful only by the expenditure of a vast capital. The only security for this outlay, which no individual could have made, was the protection of the patent. The company were careful to secure the right to all future improvements which the inventor might make. Encouraged by the certain though moderate reward offered by his arrangement with the company, the inventor continued for four years after the first loom was devised to add new improvements, which were protected by five more patents; and it now presents a machine which is admitted to be unsurpassed by anything

which the mechanical genius of man has ever devised. The benefits which this invention has conferred upon the manufacturing company, the inventor, and the public, are precisely shown by records in this office. The "Lowell Company" granted to the "Hartford Carpet Company" a license to use these inventions, the use being confined to these two companies. The profit in the carpet department, in the Lowell Manufacturing Company, from October 31, 1859, to April 30, 1863, was \$687,801 41. The total dividends of the Hartford Carpet Company from January, 1855, to July, 1863, were \$1,009,649 50. The par value of the stock, \$100 per share. The market value, \$155 to \$160 per share. The total receipts of the inventor from his royalty have been \$50,432 12.

The benefit to the public by this invention is, first, the production of superior goods, the texture of the power-loom carpeting being more uniform, the selvege more even, and the matching of the figures more perfect. The actual saving to consumers is thus calculated: Prior to the introduction of the power-loom, the Lowell Manufacturing Company paid, as wages for weaving by the hand-loom the description of carpeting known as two-ply, $11\frac{3}{4}$ cents per yard, and for three-ply 25 cents per yard; whereas, with Bigelow's power-loom, they only pay for weaving the former article $2\frac{5}{100}$ cents per yard, and for the latter $2\frac{5}{100}$ cents per yard; thus showing a saving by the power-loom in wages paid for weaving of $9\frac{13}{100}$ cents per yard for two-ply, and $22\frac{17}{100}$ cents per yard for three-ply, being an average of $15\frac{67}{100}$ cents per yard. But the saving in wages is partly neutralized by the more costly repairs of the power-loom machinery, and interest on the larger investment of capital required therefor, so that the average net saving by the power-loom is estimated at ten cents per yard. Accurate returns from the mills of the Lowell and Hartford companies up to April, 1863, show that the number of yards of carpeting woven upon looms was 25,964,185 yards; thus the saving to the people by this invention has been two million five hundred thousand dollars. That the saving in the price of manufacture of carpets has accrued to the consumers is evident from the fact that at the time Mr. Bigelow's invention was introduced the wholesale price of the best quality of two-ply carpeting was from eighty-five to ninety cents per yard, and of three-ply from one dollar and thirty to one dollar and thirty-three cents per yard; whereas, in 1860, the former description of goods, power-loom wrought, of a better quality than the hand-loom wrought, sold for from seventy to seventy-two and a half cents per yard, and the latter from ninety-five to ninety-seven and a half cents per yard, making an average reduction of over twenty per cent. It is worthy of observation that the ingrain carpets are used not so much by the wealthy as the middle classes. They give comfort and attractiveness to the homes of the people, and thus this invention, originated and introduced by the patent policy, has had a sensible effect in ameliorating and refining society.

Another class of inventions benefit the community, not by diminishing the price of goods for which there is already a public demand, as in the case just cited, but by producing and introducing labor-saving contrivances which the people must be *taught* to appreciate and use. Such are the inventions of labor-saving agricultural implements, which within the last twenty years have aided so materially in developing the resources of the country. The inventors and manufacturers of these machines, although prompted by a selfish but at the same time intelligent interest, have been more truly and effectually the instructors of the people than all the agricultural colleges in the land. The protection which the patent affords, is not only the cause in a majority of instances of an invention being made, but it is positively the cause why it is introduced and received. Losing sight of this practical truth, the government of Canada prohibited Americans from obtaining patents in that province mainly for the reason that they could obtain the benefit of our inventions without paying for them. The result has been, that, as it was for no one's interest to instruct the Canadians in the new mechanical arts of agriculture, they have plodded along with

the old tools, and have been benefited by none of the inventions which have stimulated the agriculture of the neighboring States.

In this country, in consequence of the protection which the patent laws afford, the inventors have found a ready sale of good inventions to capitalists and manufacturers who possessed the capital required to put the inventions into practical form. It is to those manufacturers that the introduction of the seeding, harvesting, and mowing machines, threshers, cultivators, &c., is immediately due. With a single eye to commercial results, they sent their agents through the rich agricultural districts, principally of the west, to exhibit the new machines and teach their operation. The agents convinced the farmers that the saving in the gathering of one year's crop would reimburse the cost of the machines, and readily made sales upon the understanding that the notes given in payment for the purchase should be paid out of the proceeds of the crop gathered by their use. The unparalleled rapidity with which the labor-saving machinery of the farm has been introduced throughout the west, in contrast with the proverbial slowness of the farmers of former times in adopting new improvements, must be attributed to the system I have just described.

We can hardly overestimate the benefit which the country has derived from these inventions, whose origin and introduction can be so clearly traced to the stimulus and protection by patents.

It is stated by Mr. Kennedy, in the census report for 1860, that a threshing machine in Ohio, worked by three men, with some assistance from the farm hands, did the work of seventy flails; and that thirty steam threshers only were required to prepare for market the wheat crop of two counties in Ohio, which would have required the labor of forty thousand men. It is estimated that a single reaping machine effects the saving of the labor of five men. With a good reaping machine ten men will cut, bind, and stack and house from ten to twelve acres per day, or two hundred acres in a single season—a task which would have required, without machines, the labor of fifteen men for its accomplishment. From reliable returns, in possession of this office, it is shown that forty thousand reapers have been manufactured and sold within the last year; and it is estimated by the manufacturers that over ninety thousand will be required to meet the demand for the next year. They will effect the saving of the labor of 450,000 men. The quantity of wheat grown in all the States and Territories in the year 1849 was 100,485,944 bushels. The quantity grown in 1859 was 171,183,381 bushels—an increase of nearly seventy per cent., or about double the increase of population in the same period.

It has been remarked that just before the commencement of the present war there was throughout the whole north, from no apparent cause, but, as it seemed, by an inspiration of Providence, a revival of a military enthusiasm which had slumbered for years. Without any concert, military organizations sprang up in every northern State, and at the sound of the first gun at Sumter, regiments, fully armed and equipped, were ready to rush to the capital. It is no less remarkable that the inventive genius of the nation within the last few years had taken a direction which has prepared the nation for the enormous demands upon her men and treasures. In consequence of this influence, the productive energy of the country has not been slackened, yet a million of men could be spared to fight our battles. And thus to each call from our great leader, the people have been able to respond—

"We are coming, Father Abraham,
Six hundred thousand more!"

The war, instead of checking, has stimulated our creative power in every branch of industry.

Within the last year there have been patented 240 inventions in implements of war, but during that period there have been patented 490 inventions of agricultural implements. And although the happy time foretold by prophecy

has not yet come, when the nation shall know war no more, the sword and the spear still yield to the ploughshare and pruning hook, and the arts of peace hold supremacy over the arts of war.

JUSTIFICATION OF THE UNITED STATES PATENT SYSTEM.

The next question which I propose to discuss, is the comparison of our own system of patents with those of the great industrial nations. Our patent system is founded mainly upon the statute of 1836, framed under the advice of the most experienced lawyers of the period, but carried through by the energy and wisdom of a distinguished senator of Maine, Mr. Ruggles, who deserves the grateful acknowledgments of the country for securing the passage of an act which has proved one of the most beneficial in our legislative history. The characteristic feature of our patent policy is the system of examination as to the novelty of inventions conducted by the Commissioner of Patents through an examining corps, selected for their special accomplishment in the arts which it is their duty to examine. No system of examination like our own exists in Europe, except to a very limited extent. I have before me a synopsis of the patent laws of nearly all the countries in Europe. In Great Britain, France, Austria, Belgium, Spain, the Roman States, Sardinia, and the Sicilies and Saxony, there is no examination as to novelty. In Prussia, Russia, the Netherlands, Hanover, and Bavaria, there is an examination by learned societies and commercial boards, instituted mainly for other purposes, but the whole number of patents granted in the last-named countries in 1858 was only 173; while in the first-named countries, in the same year, there were issued 10,297 patents. So that, considering the number of patents issued, our own peculiar system stands comparatively alone among those of all civilized nations.

Before proceeding to a consideration of our own system, I will state the principal features of the present patent law in Great Britain, which are of more interest to American inventors than those of any other country. These are well stated in a sensible speech made by Sir Hugh Cairnes, in the House of Commons, in May, 1862, whose language I shall use, with some abbreviations. The act of 1852 completely altered the system of patents which had previously prevailed. In the first place, before 1852 there was no means by which a person, who supposed he had arrived at an invention, could obtain temporary protection during the time that he was endeavoring to perfect it by experiments; and while making the experiments, there was the danger of their publication, and thus preventing the obtaining of any patent at all. In 1852 the legislature provided that, upon an inventor lodging a description of his invention, he should have a provisional protection for six months. The second change was in reference to the publication of specifications. Up to 1852 the specifications were kept in writing in certain very obscure offices in London, and were virtually inaccessible to the manufacturers of the kingdom. The act of 1852 provided that all specifications should be printed and sold at a moderate price. A mode of payment entirely novel was originated in 1852. An inventor suing for a patent pays £5 on lodging the provisional specification, and he pays nothing more for six months; at the end of six months, if he wishes to obtain a grant, he pays a sum of £20, and he pays nothing more for three years; during the three years he is able to consider whether the patent is worth any further outlay, and if so, a payment of £50 carries him on for seven years; during the seven years he has the opportunity of considering again whether the patent is worth any further outlay; and if at the end of that time he wishes to be further protected for fourteen years he has to make a final payment of £100; the total payment is, therefore, £175. And it is held that the payment being made by instalments, and increasing only as the profits of the invention might be supposed to increase, it is hardly irksome in any degree to the patentee—a view, I may remark, by no means supported by others in England who have discussed this feature of the

present law. The honorable member inquires what had been the consequence of the change of the law in the increase of the number of patents, and the results of his inquiries remarkably illustrate the benefits of a liberal legislation. Twenty years before the act was passed in 1833 the number of patents was 108. In 1851, the year before the alteration of the laws, the number of patents was 455. In 1852-'53, after the new act came into operation, the number of provisional protections for inventions was 3,260, out of which 2,050 patents were actually sealed.

These changes, although far from realizing the demands of the inventors of Great Britain, were vast improvements upon the laws existing previous to that time. Under the old law the process of an application for a patent, as stated in the London Quarterly Review, was required to pass through no less than nine stages and seven distinct offices situated in different places. Indeed, the object of sending the application through one of these offices was openly stated in the statute of Henry VIII, c. 11, "that the clerks should not by any manner of means be defeated of any part or portion of their fees." If the letters patent were required to extend to Scotland and Ireland, as well as to England, all the proceedings had to be gone through separately in each of the three cases. Thus the same patent may be said to have run the gauntlet of twenty-one offices. So heavy were the fees, applied not to the expenses of the patent offices, but mainly to swell the emoluments of the lord chancellor, attorney general, and other high officers, that the cost of a patent for the United Kingdom could not be estimated at less than £350, while the attendant expenses of preparing the specification, &c., often doubled the amount. It cannot be wondered that Mr. Dickins's poor inventor was forced to complain: "Is it reasonable to make a man feel as if, in inventing an ingenious improvement meant to do good, he has done something wrong? How else can a man feel when he is met with such difficulties at every turn? All inventors taking out a patent *must feel so*. And look at the expense. How hard on me, and how hard on the country, if there is any merit in me, (and my invention is took up now, I am thankful to say, and doing well,) to put me to all that expense before I can move a finger!"

Under the present, as well as the old laws, the only investigation which alleged inventions undergo before patents are granted is conducted by the law officers of the crown. They never inquire into the novelty of the invention. All that they do is to see that the alleged inventor describes in a clear and intelligible manner what he claims as his invention, so that he may not add to or take from it.

The system of granting patents in Great Britain without previous examination as to novelty has led to the granting of a great number of patents for the same thing—an evil which became so great as to lead to the publication of all the specifications, which only partially remedies the evil. Mr. Woodcroft says, "that having found so great an abuse to exist, as to granting patents for the same thing over and over again, he was led to prepare a list of those which related to the origin and progress of steam navigation." "I found," he says, "that no step in the art of steam navigation had been made which was not the subject of a patent. Among 400 patents, I found that a very few heads would comprise the whole of the inventions; for instance, of vertical paddle-wheels there have been a score of patents which are identically the same in mechanical action; for drawing water at the bow of a vessel and pumping it out at the stern, there have been another score or two; then for making the float-boards of paddle-wheels move in various directions on their axes, there have been also as many patents; and for propellers in imitation of ducks' feet, there has been a large number of patents." A striking instance of the evil resulting from this system is taken from Mr. Woodcroft's evidence. He says: "I have known of a patent within the last year upon which a gentleman had spent about £11,000. He

came and consulted me, and wanted me to go and look at a boat he had been constructing. I said it is of no use; I have seen the drawing, and the invention is as old as the hills, and you will never drive the boat six miles an hour; in addition to that, the invention is not yours—it has been patented over and over again." Mr. Hodge, an English patent agent, who had personally witnessed the practical working of our system of examination, and heartily approved of it, speaking of the English practice, says: "Many inventors have been ruined in consequence of taking out patents under our (the English) system; whatever amount the patent may have cost the inventor, it may be assailed the very next hour. I can refer to a case in which a patent was tried before a special jury; upon their decision being given, the patentee went out of court saying he was a ruined man. And if he had not had a few friends to come and support him he would have been ruined." If the government had appointed a board of examiners to examine his patent, and to show him that it was not quite original, and that there was a little infringement upon another patent, he would not have had occasion to go to this great cost."

The evils of this system were many years since pointed out in an able article on patents published in the Edinburgh Encyclopedia, and written by Mr. Simpson, under the direction and sanction of the eminent philosopher, Sir David Brewster, himself a patentee, whose beautiful optical toy, the kaleidoscope, some years ago, used to delight so many thousands of children, and even wise men, with its wonderful changing polychromatic beauties. This writer, after a severe reprobation of the then existing system of patents, observes, "the causes of these aggravated mischiefs are both before our readers, when we say that patents ought not to be granted *of course*, and 'at the hazard' of the patentee, but *causa cognita*, by a sufficient and competent authority." He continues: "The expression is common, that a patent may be got for anything, but very few are found good when they come to the ordeal of a jury. Is not this saying, in so many words, that many that have, ought not to have been granted, and that it is unworthy of this great country to pervert a valuable privilege, and confound the trash of every pretender, whose end is answered by a mere patent mark, with those inventions which illustrate the genius and exalt the character of the people?"

More than thirty years afterwards Sir David Brewster declared that his opinions were clearly expressed in the article above quoted, that the protection of patents ought only to be extended to *new* ideas, and that he would ascertain the novelty of such ideas by means of a board of commissioners composed of scientific persons. It is due to the pervading knowledge that a patent in Great Britain is not even *prima facie* evidence of the originality of an invention, and that it is of little value, except to give the patentee a status in the courts until it has passed a judicial ordeal, that such severe litigation exists in that country in relation to titles to inventions. The costs of such litigation are sometimes frightful. Two startling instances are related by Sir Hugh Cairnes in the speech in the House of Commons, before referred to. A patent had been taken out by an eminent manufacturer in Sheffield for an invention which effected a revolution in the manufacture of steel, by the introduction of a chemical substance, and enabling steel to be produced at a reduction of thirty or forty per cent. on the previous cost. Mr. Heath, the alleged inventor, from the time he obtained the patent, in 1842, till he died, in 1853, spent his life in litigation. The suit was formally carried to the House of Lords, and he obtained a statement which showed that the costs of the defendant were estimated at £7,000, and those of Mr. Heath at £8,000, showing that the two sides had expended in litigation connected with a single patent the sum of £15,000. It appears by the statement of a writer in the London Quarterly Review that this patent was extended in 1853 for the benefit of Mrs. Heath. In August, 1853, Mrs. Heath brought an action against an infringer, and then, for the first time, credible evidence was

given that the invention was not new at the date of the original patent. A patent was taken out in 1850 or 1852 by a Scotch gentleman named Menzies for capsules and tops of bottles. The invention being a very valuable one, litigation in connexion with it was carried on both in chancery and in the courts of common law. After, according to Mr. Montagu Smith, a verdict in favor of the patentee, the case was taken to the Queen's Bench, where the patent was defeated on the ground that an *old patent had been discovered* in the office by which the invention had been anticipated. Finally, the case was carried by appeal to the House of Lords, where, in 1862, it was still pending. Sir Hugh Cairnes stated that the solicitor to the plaintiff informed him that the costs of his client amounted to £14,487, and he estimated those of the defendant at £10,370. So that the total costs of legal proceedings, in connexion with the invention, amounted to not less than £24,857. The legal expenses connected with these two patents, which might have been saved to the unhappy litigants by a system of preliminary examination, was £39,857, or about \$199,285, about \$10,000 more than the total expenses of this office for the last year, viz: \$189,414 14, which, during this period, has made examination of 6,014 applications. Of these applications, 1,844 were refused, principally upon the ground of a want of novelty, while 4,170 patents have been granted. It is not pretended that errors from unsoundness of judgment or insufficiency of investigation may not have occurred in these decisions. But I feel confident that, as the general result of our system, its benefits have accrued no less to the unsuccessful than to the successful applicants; that while the latter have secured patents to which an intrinsic value has been imparted by the scrutiny to which the inventions have been subjected, and by the sanction of the office are comparatively protected from infringement and litigation, the former have been saved from waste of time and labor upon well-known machines, and from the cost and misery of defending in courts of law rights to which they could maintain no title. This view of the benefit of a system of examination in preventing infringement and litigation is fully borne out by observation in Prussia, where there is an admirable plan of examination as to novelty by a board of patent commissioners, each one of whom is selected for his proficiency in some special department of the arts. Mr. Weddinge, a member of the board of trade of Prussia, as well as a member of the patent commission, stated, before the committee of the House of Lords, that in Prussia there are very few infringements of the patent rights of patentees, and that manufacturers generally prefer to get permission of the inventor to use his right under the patent.

It is true that litigation to no inconsiderable extent will always exist in this country, where such vast capital is invested in patent property, and especially in relation to questions of interference, or those where the question of priority arises between two inventors, both of whom may have been original authors of the discovery; but the amount of present litigation is trifling compared with the vast number of patents issued, and the value of property based upon them. I assume merely that litigation is most materially prevented by our system of examination. If even this is true, it is the highest commendation of our system, for, as Lord Langdale, the late master of rolls in England, says, "It is the great object of good legislation to cut off the causes or sources of litigation; that I conceive to be the object of government."

It is the duty of patent agents, who now form so important a class of professional men in this country, not too earnestly to press doubtful applications, and not to demand of the office a liberality in granting patents, which, if carried too far, would destroy the system which is the foundation of their business. It is the duty of the office to conscientiously and rigorously scrutinize every application, and to be sure that no patent is granted for anything which is not absolutely new, and at the same time to see that the applicant shall have the benefit of whatever, whether claimed or not, which is shown by specification, model or

drawing, to be a new invention. That both these objects have been kept in view by the office, at least under its more recent administration, is shown by the fact that more than half of the applications upon which patents are granted are amended by the applicant at the suggestion of the office, so that he may not claim any more than has been found by the office examination to be actually new.

The reasons urged by Lord Stanley and Sir Hugh Cairnes, in the important debate so often referred to, that a patent should be granted after an inquiry little more than nominal and formal, it being understood that it should confer nothing more than a right to sue in a court of law, were, that it would be difficult to find men who were competent to pronounce authoritatively upon the novelty and utility of an invention, and that if scientific men were selected to compose a tribunal to pass judgment upon the novelty and utility of an invention, those inventions which were most original, and which, in the end, would be likely to turn out most valuable, would be most unlikely to receive scientific sanction. It was urged, for example, "Sir Humphrey Davy did not believe in the possibility of lighting houses with gas, and had he been acting as a judge, would have condemned that invention as useless." The last objection applies only to the examination as to utility, upon which with us the office does not pronounce judgment. The readiness with which persons acquainted with any particular branch of invention, and provided with facilities for investigation, can determine questions of novelty, is admitted by Mr. Woodcroft, although opposed to the system of examination. Being asked by the select committee whether, supposing he were professionally employed to determine for parties upon the novelty of their inventions, he thought he could undertake generally to determine that point with a moderate degree of time and expense, he replies, "If I had the whole of the specifications before me, I could do it in a moderate degree of time, and at a moderate expense." The facilities for determining the novelty of inventions demanded by Mr. Woodcroft are most amply provided in this office. It possesses a technological library, unequalled by any in this country.* It has opened relations with nearly all the governments in the

* About 14,000 volumes have already been collected. Few or no libraries in the country are so complete in many of the departments of useful knowledge. The collection of encyclopædias and of scientific and technological journals cannot be surpassed. Of journals it possesses not only the leading ones of this country and Great Britain, but those of France and Germany, and also those in the separate departments of science and arts. For example, in photography there are three American, four English, five French, and three German. The office subscribes to ninety-five periodicals, and receives seventy-five by donation, in addition to the Transactions of learned societies. Of these periodicals sixty-nine are in the English language, twenty-seven published in America, and forty-two in Great Britain, thirty-five in the French language, fifty-seven in the German, two in the Italian, and two in the Dutch. Of these, eleven relate to general science, twenty-six to arts and manufactures, fifteen to photography, seven to civil engineering, seven to horticulture, four to mining, six to chemistry, two to chemistry and physics, two to chemistry and pharmacy, thirty-four to agriculture, eleven to literature, three to bibliography, three to statistics, three to mercantile affairs, two each to acclimatization, manufacture of paper, railroad engineering, entomology, gas lighting, patents, military affairs, and architecture, and one each to fine arts, microscopy, law, electricity, medicine, medicine and surgery, pharmacy, veterinary surgery, horology, coal oil, coach-making, printing, bees, botany, and geology.

During the past eight years the office has sent its reports to all the principal libraries and learned societies of the world, and received in return many valuable works, besides the regular publications of the societies. From the Great Seal Patent Office of England, for example, it has received a complete set of its publications, forming a library in themselves consisting of the specifications of patents of the old law series, issued prior to October, 1852, to be bound in 408 volumes of 8vo letter press, and some 350 volumes of folio plates, 378 volumes of letter press, and 378 volumes of plates of the new law series, 35 volumes of indexes, 10 volumes of the Commissioners' Journal, 25 volumes of abridgments of specifications, 1 volume of appendix, and 1 volume of supplement.

To enumerate the more valuable works in this library would be a long and tedious task, as it is well supplied in all its various branches, embracing in the simple subject of photography, the literature of which is of recent growth, 144 separate and independent works,

world for obtaining information, up to each current month, of the progress of inventions abroad. Its portfolios of drawings, so numerous as to crowd two halls, each nearly one hundred feet in length, and yet so systematically arranged that the hand can at once be laid upon any drawing sought for, and its museum of models, unrivalled by any similar collection in the world, exhibit as in an open book all that has been done in American inventions. It is the fault of the administration, and not of the system, if the plan and facilities for examination are not as perfect as human ingenuity has devised.

Another favorable point of comparison of our own with the English policy is the cheapness with which patents are obtained in this country, the cost being limited to the amount necessary to create a fund for reimbursing the expenses of the Patent Office, while in Great Britain the cost of obtaining a patent is £175—over twenty-two times the cost in this country. From the fund accumulated by these fees in five years there was deducted for stamp duties the enormous sum of £67,060. It was in relation to this great grievance that Lord Stanley said, in a pamphlet published in 1856: "One discovery checked, or even retarded, by exorbitant imposts, may cause a greater diminution of wealth, which would otherwise accrue to the nation, than can be compensated by tenfold the gain actually netted by the treasury." The acknowledged object of subjecting patentees to these enormous charges is the prevention of the multiplication of worthless or frivolous patents, and patents for small improvements on valuable inventions, or combinations thereon.

The objections to the frivolity and multiplicity of patents are so often thoughtlessly made, even in this country, as to be worthy of refutation. Those who have carefully studied the progress of civilization must have observed that the uplifting of society has not been effected by paroxysmal convulsions, such as were supposed by geologists of former times to have upheaved the ancient continents at a single shock, but by causes which have operated as gradually and imperceptibly as those which modern science has shown to have actually raised, within historic periods, vast countries, with the whole burden of their cities and unconscious people. The progress in mechanical improvements and in science has been so gradual that it is difficult to trace it except by the great general results. The fields of invention and practical knowledge have been extended by accretions as insensible as those which have formed the delta of the Mississippi. Every new fact in science, every new conception of ingenuity, no matter how trivial, has added something to their area. The noblest inventions which now astonish the world—the steam-engine, the cotton mill, the railroad—have been truly built up block by block, layer by layer, as the pyramids. More than eight hundred distinct inventions were required to perfect the cotton-spinner. To refer to more recent branches of mechanical industry, we find some of the best harvesting machines protected by no less than twenty patents, each invention consisting of but a trivial improvement, yet the whole being necessary to

not including its periodicals. During the year 1863, 574 volumes and 114 pamphlets have been added to the library. Of these, 308 were by purchase and 380 by donation.

As the business of the office extends and the number of patents is increased, the library will become a more and more important auxiliary. Its use is not confined to the examining corps, but is extended to the inventors of the country and to solicitors and attorneys from the distant cities. To those engaged in the trial of patent cases before the courts it is invaluable, as it is impossible to find so complete a history of the improvement in litigation as upon its shelves.

A liberal spirit ought always to be exercised in the purchase of books, and every means taken to render the library complete, that it may at all times show the condition of the arts. Unfortunately, during the past three years, owing to the decrease of the receipts, it has been necessary to limit the expenditures, but with returning peace large additions ought to be made and improved accommodations be secured. The example of the Great Seal Patent Office, which within a few years has accumulated a library of upwards of 40,000 volumes, may well be followed.

the perfection of the machine. The art of sewing by machinery, which originated no later than 1842, has attained its almost miraculous development in this country through more than six hundred inventions for which patents have been issued. It is by no means asserted that all these inventions have been found practically useful; but perhaps no other art can so well illustrate how, in mechanical contrivances, idea begets idea, and the invention of yesterday gives birth to the invention of to-morrow.

The apparent insignificance of an invention is no measure of its value. Inventions in the meanest of household arts, such as improvements in washing and wringing machines, have not only contributed most materially to domestic comfort, but have given rise to single manufacturing establishments employing over half a million of dollars of capital. Improvements in articles so trivial as hooks and eyes, and pins for infants' clothing, have been the foundation of patents which have produced tens of thousands of dollars.

The application, in a manner to be hereafter described, of a *pencil mark* in submarine blasting, and the explosion of military mines by the electric current, enables the operator to dispense with cumbersome and costly batteries and machinery formerly indispensable. A spring for holding the deflector and chimney upon a coal-oil lamp, consisting simply of a bent strip of brass, has gone into universal use, and through a tariff of a few mills upon each lamp to which the invention is applied, has yielded several hundred thousand dollars to the inventor. The more minutely the arts are studied, the more will the conviction be forced upon the mind that, as the distinction between great and small appears to be unrecognized by Providence, the distinction between important and trivial, and useful and worthless, should never be applied to any original work of human ingenuity.

This is the doctrine of Sir David Brewster, who believed that "patents should be granted for every new idea, whatever that idea might be; that every encouragement should be given to persons to bring forward such ideas; and that instead of throwing difficulties in their way, even when the ideas appear to be frivolous, every facility should be given for their development, because they may contain the germ of future inventions. They may contain ideas which will suggest others more useful and practical; and what is a simple and amusing experiment in one age, may become a great invention in another."

REVIEW OF THE PROGRESS OF THE ARTS.

I proceed next to a review of the progress of the arts in this country within the last one or two years, as exhibited in the different classes of inventions which have been the subjects of examination during this period. For minute information reference must be had to the carefully prepared brief descriptions of all the patented inventions, with the claims of each patent for the present year, and the admirably executed plates of drawings which accompany this report.

I am withheld, for obvious reasons, from giving the names of particular inventors even when they may have exhibited extraordinary merit, and shall attempt only such a general sketch as may indicate the direction, which the industry of the country has taken, and may be suggestive to ingenious minds of the fields of invention in which there is the most promise of reward for exploration and discovery.

Upon assuming the head of this office, I found the classification of inventions, by means of which the work of examination was distributed into distinct departments, and the vast collections of drawings and models arranged for ready reference, defective in philosophical arrangement, while the development of new branches of industry exhibited the need of forming new classes; I therefore prepared a new classification of the subjects of invention, which was published for the guidance of the office, and for facilitating inventors and agents in their reference to drawings and models.

In the sketch which I propose now to present I shall follow the order of classification then adopted. It is needless to remark, that in preparing this review I have availed myself of the talent and industry in the office which the law has placed at my command.

CLASS A.

AGRICULTURE.

DIVISION I.—IMPLEMENTS AND MACHINES FOR WORKING THE SOIL, SOWING AND PLANTING. DIVISION III.—IMPLEMENTS, ETC., FOR PREPARING PRODUCE FOR MARKET.

The most striking fact connected with this class is the rapid increase of applications filed. Notwithstanding half a million of our agriculturists have been withdrawn from the farm to engage in military service, still the number of applications for patents on agricultural implements, (exclusive of reapers, beehives, horse hay-forks, and horse hay-rakes,) has increased from three hundred and fifty in 1861, to five hundred and two in 1863. At first thought such a result would seem an anomaly, but it is this large drain upon the laboring classes which has caused a greater demand than usual for labor-saving machinery. The increased demand for farm products, and their higher price in consequence, have also doubtless helped to increase the number of labor-saving machines: first, by stimulating agriculturists to increase the quantity of their products while they could obtain for them these higher rates; and secondly, by rendering them more able to purchase such machines.

As a general thing, the inventions in this class have consisted in improvements upon existing implements, with the object of rendering them more perfect in their operation and more elegant in appearance; and it is gratifying to notice the degree of perfection attained in the more prominent farm implements of the day. Machines for sowing and planting seed are the most numerous in this class, and they have been brought to such a state of perfection that one can now be supplied with those which will plant everything, from a mustard seed to a potato, either by hand or animal power, and at prices varying from one hundred dollars down to two dollars and fifty cents. In these machines and implements attention has been turned, of late, more to the details, such as inventing improved methods and devices for distributing evenly and without crushing the seed; also in providing machines with indexes for regulating and indicating the quantity sown per acre; in devices for converting them, at pleasure, from drill to broadcast sowers, and *vice versa*; and in improvements by which the tubes or teeth are prevented from being broken or injured by roots, stones, &c.

Much attention has also been given in this class to machines for sowing wheat, oats, &c., which are attached to the body of the operator, worked by a crank, and distributing the seed broadcast by centrifugal force. Next in number and importance are cultivators, which appear to have assumed almost every conceivable form and style. The most noticeable feature in connexion with them is the making of them tall, and so constructing the frame that they may readily pass over corn from four to six feet high, and in so arranging and pivoting the shares that they may be readily controlled in their movements, and enable the operator to adapt their movements to the irregularity of the plants in the row. This feature, as might be expected, emanates from the west, where the hoe is but little used in the culture of this plant.

In ploughs there has been less improvement, the form of the mould-board, which is the main feature, having apparently been brought to a satisfactory condition. Of late more attention has been given to arranging the plough in connexion with a frame mounted on wheels, whereby the ploughman can "both hold and drive" while sitting securely upon his seat; also in arranging two or more ploughs in a gang, whereby one man can operate two ploughs and teams as readily as one, thus saving the time and labor of one man.

In steam ploughs considerable has also been done, mostly, however, in the form of rotating, digging, or spading machines. The demand for increased facilities for raising grain, together with the destruction by war, and consequent scarcity and high price of animals for farm labor, renders this, at present, a most inviting field for inventors.

Machines for threshing and cleaning grain have received a large share of attention, and have been rendered so complete that the grain is now threshed, cleaned, measured and bagged, and the straw stacked, at one operation. Improvements have also been made in the machines by which the dust is taken up and conveyed away, and also by which the bands are cut and the sheaves fed into the thresher. Connected with these is a class of machines of recent origin, by which clover is threshed, separated from the straw, hulled and cleaned, at one operation.

In grain separators great improvements have also been made, whereby oats and fowl stuff are more readily and thoroughly separated from the wheat, thereby furnishing a better article for seed, and adding greatly to the market value of the wheat crop.

Dairy implements, especially for the manufacture of cheese and the working of butter, have been much improved. In churns nothing of special importance has been developed, this class generally exhibiting in its improvements more of ingenuity than of utility.

Considerable improvements have also been made in a large number of miscellaneous implements connected with agriculture, such as manure distributors, fruit-gatherers, cow-milkers, field-rollers, cattle and sheep racks, farm and fruit ladders, egg-hatching machines, and machines for manufacturing cigars and tobacco in all its varieties, potato-diggers, straw and vegetable cutters, stone-gatherers, bog-cutters for smoothing rough meadow land and adapting it to the use of the mower, boxes and baskets for packing and conveying fruit to market, &c., &c. Indeed, throughout this entire class there appears to be an increased activity in the effort to substitute labor-saving machinery for manual labor, and, judging from appearances, with most beneficial results.

DIVISION II.—IMPLEMENTS, ETC., FOR HARVESTING AND SECURING CROPS.

The improvements in this class of machines during the year have been chiefly in details of construction, looking rather to the simplifying and the perfecting of the operation of such as are most approved and in common use, than to any marked change in the principle of construction or operation of such machines.

These improvements in details have been numerous, and are believed, in many instances, to have had the intended effect, as is evidenced by the great increase in the popularity of these machines with the agricultural community throughout the country. The large number of reissues of important patents in this branch also tends to show the increased importance which they have assumed, both in a legal and in a commercial point of view. The number of these machines manufactured during the year, as learned from reliable sources, is upwards of 40,000, while the number in process of manufacture, required for the harvest of 1864, is estimated at over 90,000 machines.

DIVISION IV.—GRINDING MILLS FOR GRAIN, SUGAR, ETC.

During the past year the improvements in flouring mills have been, for the most part, confined to the bolting apparatus, looking particularly to the quality of the flour produced.

Machines for hulling rice have been considerably improved and perfected, so that greater quantities can be hulled now, without breaking the grains, in a given time than formerly.

The attention of agriculturists having been, by a necessity growing out of the war, directed to the production of sugar cane, which has added millions already to our national wealth, there have been various improvements in sugar mills, as well as machines for crushing the cane.

CLASS B.

DIVISION I.—CALORIFICS.

This class embraces the devices used in household economy for heating and cooking, as well as some which, like grain-dryers, have a commercial character.

The progress of invention in the whole class is as positive now as at any other time in the history of the Patent Office, although it has long been the popular belief that the ground for improvement in one branch of it, the cooking stove, was almost covered.

Of the three hundred applications in this class in 1863, thirty-five were for improvements in cooking stoves, and some of them are highly original and add greatly to the effectiveness and economy of its operation.

Gas and petroleum stoves are getting to be prominent subjects of invention.

The demands of commerce have called forth many improvements in grain-dryers, the main object in view being to save time and labor in the process of drying the grain. Twenty-five applications were made in this branch of the class in 1863.

Very decided advances have been made in ventilators for railroad cars, the aim having been to bring in an abundance of fresh air, deprived of its usual load of dust and soot, without building costly and cumbrous additions upon the car.

The exigencies of army life have given rise to many inventions in camp stoves and utensils for cooking in the field. Some of these are ingenious and give promise of becoming permanently useful.

There is constant but not very marked progress in the art of heating buildings by means of hot-air furnaces and steam radiators. It is believed that the best results, in a hygienic view, are obtained thus far by the use of steam as a heating medium.

Within the past five years increased attention has been given, both by the public and by inventors, to that kind of coal stoves called "base-burning" or "reservoir" stoves, in which the fire-pot is kept supplied with fuel from a magazine in the top of the stove. The starting point in this kind of stove was from a patent obtained in this country in 1838 by an Englishman, Thomas Joyce. The genius of American inventors has developed his embryonic attempt at a magazine stove, until it has become a successful and practical automaton so far as fuel-supply goes.

Considering the class as a whole, it is clear that although some of the inventions included in the large variety belonging to it are ingenious rather than simple and practical, yet by far the greater part are direct improvements in both simplicity of construction and the manner of use, and they thus become aids to economy both in money and labor; while of the whole number of applications a larger proportion, year by year, are successful, for the reason, chiefly, that old devices are not so often re-invented as formerly.

DIVISION II.—PHOTICS, LAMPS, INCLUDING LANTERNS, GAS, ETC.

The immense development of petroleum, commonly, but erroneously, called coal oil, beginning practically in August, 1858, in western Pennsylvania, and amounting in the year 1863, in the United States, to 6,000 barrels per day, or 2,190,000 barrels per annum, of which one-half is exported and the remainder consumed at home, has directed American inventors, within the last three years, to the construction of a large number of lamps intended specially for its con-

sumption. This will best be seen by reference to the number of applications presented to this office during the last three years as compared with the number for the three next preceding years.

Patents applied for during the year ending—

March 1st, 1859	44
" 1860	72
" 1861	77
	<hr/> 193
March 1st, 1862	130
" 1863	338
Dec. 30, 1863	155
	<hr/> 623

This oil is rich in carbon and hydrogen, but void of oxygen; and from the excess of carbon evolved, one main object to be attained was to command the oxygen of the atmosphere to effect that degree of combustion most productive of illumination, and thus at once economize oil, obtain a pure white flame, and avoid smoke and unpleasant odor. To this end various devices have, within the last three years, been patented.

1. The deflector previously in use has been materially altered in form, and in some lamps two or three deflectors within each other, used in throwing successive currents of air against the flame above each other.

2. The flat wick has been very generally adopted, being more simple and exposing a larger surface of flame to the air.

3. The glass chimney previously in use, to shield the flame from currents of air and to increase the draught and consequent quantity of oxygen to the flame, has largely maintained its place. In some models the chimney has been extended below the flame, and shortened above it; in others the deflector and chimney have been united; and in others oval chimneys, either of glass or mica, have been made to correspond with the flat flame.

4. The liability of glass chimneys to break from unequal heat, or accident, as well as their expense and general inconvenience, have made it a *desideratum* to construct a good hand-lamp without a chimney, for which purpose many patents have been granted, of very various forms, with more or less success. Some have used numerous very small wicks, others very thin wicks; others have made, in effect invented, metallic chimneys below the flame. To keep the oil in the lamp as cool as possible, so as not to throw off more gas than the flame can consume, various non-conductors have been interposed between the burner and the reservoir, such as porcelain, glass, gypsum, wood, gutta percha, &c. Other inventors have effected the same object by isolating, in a great measure, the burner, by resting it on slight metallic points, &c. In a few examples oxygen has been ingeniously and effectively, but rather expensively, supplied to the flame by a revolving fan-wheel propelled by machinery enclosed within the base of the lamp.

5. Other improvements have been introduced, removing the chimney vertically, horizontally, or obliquely, so as conveniently to turn and light the lamp or supply it with oil; others effecting the same objects without removing the chimney at all. Mica and glass deflectors have been used instead of metallic ones, and glass cylinders surrounding the flame and below it, so as to avoid the shadow around the base of the lamp.

6. The necessities and demands of our great railway system have originated improvements in locomotive *head-lights*, so as to obviate the effect of the motion

of the engine and counteract strong currents of wind; also in *lanterns*, so as to avoid extinguishment by sudden motions, vertically or laterally, and so that the lamp may be easily fastened in or removed from the case and the wick regulated without removal therefrom.

7. Finally, great improvement has been made in the machinery for the manufacture of every part of the lamp, so that for a few cents a good and convenient and even elegant lamp for burning this cheap and highly valuable native oil is now within the reach of every family in the land.

CLASS C.

CARRIAGES AND LAND CONVEYANCE.

Notwithstanding the various improvements heretofore made in land carriages, and the consequent perfection existing in that department, such have been the improvements during the year 1863, that much additional security and comfort have been gained.

Particular attention is given to the matter of propelling carriages by means of steam upon common roads, and a wide field is here opened for the inventive genius of the people; and judging from the present state of this improvement, as well as the progress made in other branches of mechanics, it is not improbable that in a few years the talent now aroused to this important interest will perfect some mechanism by means of which steam will be used upon common roads, as well as it is now upon railways.

While there have been many improvements in the branch of mechanical engineering, comprising horse powers, presses, &c., they have chiefly related to the simplifying and combining of former inventions in order to produce a cheaper and more effective mechanism.

CLASSES D & E.

CHEMICAL PROCESSES, MANUFACTURE AND COMPOSITIONS OF MATTER.

The scarcity of cotton in the northern States has attracted attention to the preparation of fibre from flax, hemp, and other fibre-producing plants. Several patents have been issued for cleaning and separating flax fibres, so as to produce a material to resemble cotton, and which can be spun on the ordinary cotton-spinning machinery. The efforts in this direction, however, have been only partially successful.

The preparation of paper pulp from wood, reeds and straw, has occupied several inventors, and these have attained considerable success, so that the production of paper stock from these materials is now an established manufacture.

The refining of petroleum is now a large and still increasing industry. The inventions in this department relate principally to the construction of stills and condensers. These are now constructed in such a manner as to make the operation of distillation continuous, and so as to separate at one distillation the various products which are derived from petroleum. A new manufacture has grown up during the past year from the waste products or residuum of petroleum. A valuable oil, to be used as a vehicle for paints, has been obtained from what is known as the acid residuum; and a lubricant is made from the tarry residuum of the still. The proper treatment of these residuums is well worth the attention of inventors.

The demands for the different products from petroleum have not kept pace the one with the other. The oil, of medium density, commonly known as illuminating oil, bears the highest price. It is therefore desirable that inventors should direct their attention to the lighter oils, known as carbon spirits, or naphtha, and to the very dense and thick products. To some extent the light

products are now used by varnish makers and others as substitutes for spirits of turpentine. The heavy and thick oils containing paraffine and similar compounds are used as lubricants. But a sufficient demand for these must be created by the efforts of the inventors in finding new applications for them, or new modes of transforming them into more useful products. A valuable application of the heavy oils has been found in their use as a substitute for ordinary tanner's oil for dubbing; thus supplying a much felt want.

A great number of patents has been issued for improvements in apparatus for evaporating the juice of Chinese sugar cane, or sorghum. This kind of apparatus is now brought to a considerable degree of perfection. But heretofore the inventors have aimed only at making a good quality of sirup. This object has been attained, and the attention of inventors is now directed to the making of sugar from the sirup. But very little has yet been accomplished in this direction. In fact, those who have examined the composition of sorghum juice have not satisfied themselves as to its true character. But the indications are that the new sugar plant will be in the future as profitable for the manufacture of sugar as it already has been for making sirup.

The great number of iron-clad ships of war has made a demand for some mode of protecting them from corrosion, and their bottoms from the accumulation of barnacles. Four patents have been issued during the year having this object in view. The first of these depends upon the combination of three different processes, viz: the interior of the hold is lined with zinc plates, the outside is coated with a poisonous paint, and the whole covered with a paint containing metallic zinc in fine particles. The next invention coats the bottom of the vessel with a cheap paint, made by combining copper ore in fine powder, either oxide or pyrites, being used in combination with asphaltum, or the tarry residuum of petroleum, the whole reduced to the proper consistency by light coal oil or petroleum. The other two inventors simply incase the ship or vessel in a vitreous enamel, which may protect the iron from corrosion, but will not prevent the accumulation of barnacles.

The large commerce in petroleum has made a demand for barrels and tanks. The liquid hydrocarbons easily leak through the ordinary wooden casks. To make an oil-tight cask has therefore become a problem of considerable importance, since the leakage from oil casks not only occasions great loss of oil, but makes the danger from fire very great. Fourteen patents have been issued for oil-tight barrels, besides nearly as many more for tanks and cans. Some of those are for metal casks; others for a common wooden cask or tank, with sheet metal lining; but the larger number aims at producing a composition with which to coat or saturate the staves, to make them impenetrable to oil. The difficulty of finding such a composition is increased by the fact that there is generally a small quantity of water diffused through the oil at the time it is put into the barrel, which gradually collects at the bottom, thus making it necessary to have a composition that is impervious to, and insoluble in, both petroleum and water.

CLASS F.—ENGINEERING.

DIVISION L.—CIVIL ENGINEERING.

Under this classification of inventions may be found improvements in architecture, bridges, canals, dams, wharves, roads, &c. For the last year the inventions have in this class been confined in a great degree to the use of iron in its various forms and adaptations to building purposes, such as houses, bridges, &c. The very rapid development of iron mines, the improvements in machinery, and the greater durability of iron structures, seem to have awakened the attention of inventors to the more general application of iron in all structures to which it can be applied. A patent for the construction of domes for public buildings has been issued by the office, in which iron is used exclusively,

giving them a light and airy appearance, and great strength. This invention has been tested upon one of the largest buildings in St. Louis, Missouri, and the principle applied in the construction of turrets for iron-clad vessels.

DIVISION II.—RAILROAD ENGINEERING.

This classification comprises all that is required in the construction and equipment of railroads, exclusive of locomotives, which have become a very useful and important class of invention. As the railroad system of the United States is probably more perfect in its appointments than that of any other country, and has become so necessary in giving that facility of transit to persons and merchandise that our national progress requires, it has received, as it deserves, the attention of practical men, engineers, and inventors. Car-wheels, brakes and couplings, car-springs, chairs, switches, and lubricating journals and bearings of axles, have been the subject of frequent applications for patents under this class. In most instances the invention is confined to specific details and combinations, while in some the most intricate machinery is applied to accomplish the desired results, the expense of which tends to prevent in a great degree their introduction into public use.

Among some of the most novel, as well as important, of inventions under this class, I would notice several, having for their object the change or transfer of cars from the broad to the narrow gauge, or vice versa. The description of these inventions, and the models accompanying them, illustrate the feasibility of the plans devised. They will supply a want hitherto much needed in carrying on the traffic of the country.

CLASS G.

FIBROUS AND TEXTILE MANUFACTURES, INCLUDING LOOMS, SEWING AND KNITTING MACHINES, ETC., ETC.

In looms, improvements have been made by which, in the weaving of tufted or Axminster carpets, the spool frames containing the tufts are automatically taken from the chains on which they are suspended, depressed to the required position, and after a range of tufts has been introduced into the warp and cut off, are returned to the chains; in a mode of holding and combing the tufts when cut off to prevent their becoming entangled; in the means for cutting at one operation a whole range of tufts by a single pair of shears instead of using a pair for each tuft; in the means for preventing the chafing of the warp threads; and in the mode of mounting the warp.

In making fabrics in which warps of India-rubber are introduced, a swinging frame has been added to the loom for the purpose of taking up the slack; also elastic rollers acting on metallic ones to keep the rubber threads in a proper state of tension; also a peculiar mode of driving the shuttles by means of a rack-bar and pinion, and a rack on the shuttles, two sets of shuttles travelling in opposite directions, the rack-bars being connected by cords and pulleys, and thus dispensing with pickers and picker-staves.

Another form of improvement also dispenses with the pickers and staves, as well as the lay and the usual heddle movements, the aim being to avoid the violent concussion, noise and wear consequent upon the motions of these parts, and substitute a progressive weaving operation by means of a system of endless belts which give motion to the several devices used, the heddle being raised and lowered, and the shed opened progressively across the loom, and the shuttle rolled across the warps, and the weft laid up in the shed progressively in harmony with the shuttle movement, the shed opening before and closing after it during its passage.

Within a year or two past looms have also been patented for weaving irregular goods, such as corsets, in which gores are required. The fabric is at the desired stages woven only partially across the warps in a gradually increasing and diminishing series, and the ordinary mode of weaving across the entire warp is resumed when the irregular part is woven; the take-up and let-off rollers being made sectional so as to admit of taking up any portion of the breadth as woven, whether it be at the sides or the middle of the fabric.

The following table shows the annual number of patents for looms for the past ten years:

For the year 1854.....	18
1855.....	32
1856.....	18
1857.....	20
1858.....	17
1859.....	15
1860.....	14
1861.....	22
1862.....	20
1863.....	22

In the class of *sewing machines*, which are justly recognized as one of the proudest triumphs of American ingenuity, the activity and skill of inventors gave decided signs of revival during the past year, notwithstanding the rebellion. The number of patents in 1863 for these machines was fifty-five against thirty-seven in 1862, which was the smallest number for any year since the year 1857.

The aim of inventors has of late been mainly directed to the improvement and simplification of the various styles of machines already patented. These improvements take a wide range, from the most complex machines for sewing button-holes with from two to five threads, to a very unique and simple one-thread machine, formed complete, (inclusive of the feed and looping devices, and needle if desired,) from a single piece of sheet metal, and operated by compressing as a spring a part of the same between the thumb and fingers. The cost of this is a mere trifle, and it seems to mark the furthest extreme of that simplicity and cheapness of structure which are so great a desideratum; and it may yet prove suggestive of something more practical whose price may place the sewing-machine within the reach of the poorest citizen.

Another step in this class is the making of four stitches on the same machine, the changes being made by simply turning a thumb-screw or hand-lever; the same thumb-screw also serving to regulate the length of feed, and to reverse its direction without stopping the machine or removing the fabric.

Several low-priced machines may be mentioned as having revived the mode of automatic sewing with the running or hasting stitch by means of a common hand-sewing needle. The improvements in these relate principally to the feed-rollers, some of which are made smooth instead of corrugated or toothed, to the mode of presenting the cloth so that the needle shall penetrate alternately its opposite sides, and to the mode of discharging the cloth from the needle.

The following shows the annual number of patents for sewing machines, and improvements thereon, since the first patent in 1842, with the total up to 1863, inclusive:

For the year 1842.....	1
1843.....	2
1844.....	1
1846.....	1
1849.....	5
1850.....	6
1851.....	4
1852.....	8
1853.....	6
1854.....	36
1855.....	39
1856.....	27
1857.....	54
1858.....	100
1859.....	85
1860.....	74
1861.....	66
1862.....	37
1863.....	55
Total.....	607

If to these be added the number of unsuccessful applications, which may be approximately stated at over 200, we have between 800 and 900 independent applications mostly within the last ten years, indicating a record which, for an invention that may be said to be still in its infancy, is, perhaps, unparalleled.

In knitting machines improvements have been made which admit of making tubular goods upon two straight parallel rows of needles, and with one thread-carrier which delivers the yarn to both sets of needles, either set being susceptible of being thrown out of operative action for the purpose of knitting a straight piece, as for the heel of a stocking.

Other improvements admit of knitting tubular goods of different sizes or diameters on the same circular machine by so constructing it that a number of needles may, at will, be inserted or removed, and still the continuity of the circle of needles be preserved although the circle itself be increased or diminished: this is effected by placing the needles around a conical base or support, and raising or lowering them all uniformly until their barbed ends occupy a circle of the size desired; the other ordinary devices are made adjustable to conform to these changes of position.

Considerable attention has been given to the construction of the burrs or wheels of circular machines; some being made with removable blades to allow of replacement in case of breakage; others have blades of an open-work or skeleton form, to allow more room for the doubled yarn and permit the use of finer yarns.

Several forms of self-lubricating burrs are also worthy of note, the burr having an enclosed oil-chamber surrounding its hollow axis, and having outlets from this chamber to the spindle on which it revolves, thus containing within its own small compass a reservoir sufficient, it is alleged, to lubricate the spindle for a week without further attention, and with much saving in oil, and greater cleanliness to the machine and its products.

As the product of a knitting machine may be mentioned a knitted cassimere, which upon leaving the knitting-frame compactly knitted is passed through the same processes as woven goods; and thus is produced a fabric resembling on the surface the woven cassimere, but having the elastic quality peculiar to knitted fabrics.

Since 1837, 123 patents have been granted for knitting machines; of which 110 have been since the year 1850, and 36 since 1860. Whilst eleven is the highest number in any given year, it is worthy of remark that during the three years of the rebellion there were patented ten in 1861, nine in 1862, ten in 1863, as against seven in 1860.

The following tabular statement of the number of knitting machines patented in this country may not be uninteresting:

Year 1813.....	1
1814.....	1
1815.....	1
1816.....	1
1837.....	1
1839.....	1
1840.....	1
1842.....	1
1843.....	1
1844.....	2
1845.....	1
1846.....	1
1847.....	1
1848.....	2
1849.....	1
1850.....	1
1851.....	4
1852.....	4
1853.....	5
1854.....	11
1855.....	11
1856.....	11
1857.....	4
1858.....	11
1859.....	11
1860.....	7
1861.....	10
1862.....	9
1863.....	10
<hr/>	
Total.....	126

In cotton gins the seed is, by a lately patented machine, crushed between revolving and reciprocating rollers, which then carry the fibre to a delivering brush-roller on the opposite side of the machine, the fibre in its transit being cleaned of the crushed seed, &c., by the incessant beating of revolving blades. By another mode the cotton passes between an elastic roller and an endless belt forced in close contact therewith by a concave plate, and is thus gripped and pulled through, leaving behind the seeds, which are ejected by reciprocating grooved, toothed cleaning-plate of peculiar construction.

Whilst in spinning, paper, and numerous other machines, in the fibrous and textile class, there has been no dearth in inventions, there does not recur to my mind anything demanding special notice.

The high rates of cotton have drawn much attention to the utilizing of other fibres, and many efforts have been made to adapt flax, &c., to the cotton machines; most of these applications, it is believed, relate to chemical processes.

Machines have been patented for separating the fibres of tropical plants, such

as the Agave Americana, the fleshy portions of which are scraped from the long-stapled fibrous portion by drums mounted with widely-separated combs, and scrapers revolving at high velocity under a closely-fitted stationary case.

CLASS II.

FINE ARTS AND GAMES.

This class includes typography, photography, lithography, engraving, etching, stereotyping, sculpture, printing and painting, type-founding and setting, book-binding, preparation of paper for printing, post office and revenue stamps, bank notes, jewelry, enamelling, japanning, and veneering, designs, music, musical notation, games, and implements for the same, &c., &c.

In this class four hundred and twenty-one applications were received during the year 1862; and in 1863 four hundred and seventy-two were received, showing a slight increase. Of the applications examined in 1862, three hundred and fourteen were passed for issue; and in 1863 three hundred and fifty-three were passed for issue. These included one hundred and eighty-four designs in the former year, and one hundred and eighty-one designs in 1863.

Under the head designs, in this class, there does not appear to be a very clear perception of the law. Section eleven, act approved March 2, 1861, is frequently interpreted by applicants to include the mechanical functions of machines and apparatus, as well as the form or ornamentation, which occasions delay in the issues, and sometimes disappointment. In the higher branches of art there are but few applications for patents, as shown by the issues in 1863; of the one hundred and forty-one patents for designs granted, forty were designs for stove-plates; ninety for carpet and floor oil-cloth patterns; and forty-three were miscellaneous, consisting of statuettes, medallions, and trade-marks.

In photography there has been a steady advance, but no marked improvement in 1863. Of the thirty-three applications, a large proportion were for improvements in known apparatus, or the mounting and treatment of pictures. Three were for the preparation of paper.

The internal revenue laws have called out a number of devices, and apparatus of various kinds, for making and cancelling postage and revenue stamps. Thirty-one applications have been made within the year. Some of the devices are very ingenious.

The applications for improvements in musical instruments have gradually decreased since the rebellion.

In printing, binding, and in the apparatus and machinery connected with literature generally, there has been a steady advance and substantial improvement. Printing in colors has now arrived at a point far in advance of former work of its kind. Several lithographic power-presses have been patented and promise well.

Books are now folded by machinery better than they were formerly folded by hand.

CLASS I.

FIRE-ARMS AND OTHER IMPLEMENTS OF WAR.

It was impossible that the country should pass through a great military crisis without an unusual stimulus being given to invention in the subjects of fire-arms and the munitions of war. This impulse, commencing with the year 1861, appears to have reached its culmination in the following year, 1862, and in the past year to have declined to nearly its condition in the former year, 1861. This

is shown in the following table of the whole number of applications filed in the last four years for improvements in this class of inventions:

	1860.	1861.	1862.	1863.
Cannon.....	12	66	81	52
Projectiles.....	17	106	159	81
Small arms.....	78	113	120	115
Cartridges.....	17	12	25	42
Tents, &c.....	2	48	18	13
Miscellaneous.....	13	21	50	19
Total.....	139	366	453	322

Under the above head of improvements in cannon are embraced various appliances for strengthening the body of the gun, devices and mechanical arrangements for operating gun-carriages and heavy ordnance; some few projects of no very striking novelty for rifling cannon, having reference to either the shape of the grooves or the system of their spiral development; methods of loading ordnance; devices for disabling them in case of emergency by the insertion of expanding and jamming plugs within their bore and otherwise; and several contrivances, more or less complex, for rendering artillery many-loaded, by multiple barrels or repeating, by self-feeding magazines, for the purpose of increasing the rapidity of their fire. Plausible as these latter classes of improvements may be, they do not seem to have practically sustained the anticipation of their contrivers.

A number of the improvements in cannon has reference to methods of rendering them capable of being loaded at the breech. The relative numbers of improvements of this class, and of all other improvements in ordnance, actually patented during the last four years, are as follows:

	1860.	1861.	1862.	1863.
Breech-loading cannon.....	3	14	15	8
Other improvements in cannon.....	4	16	28	31
Total.....	7	30	43	39

There are peculiar obstacles to the application of the breech-loading principle to heavy guns which leave but little encouragement to the hope of any great success in this direction. The fact that the strength of material does not increase in the ratio of size, while the explosive energy of the powder is augmented at least as rapidly as its increase of mass, the necessity of adding considerably to the bulk or weight of a gun when it is divided or pierced at the point of greatest strain, and this in a weapon already too unwieldy, and the difficulty of securing the fitting of any considerable moving parts or surfaces exposed to extreme inequalities of temperature, all appear to stand in the way of any available extension of the system, excepting, possibly, in the lightest artillery.

Amid many minor matters, the system of revolving turrets for the use of ordnance may be mentioned as a subject developed and patented during the present national struggle, though really invented many years ago. This method of for-

tification, or of operating cannon, applicable equally to land and naval defences, presents the two great advantages of a more ready direction to, and control of, an enemy's position, and of a more rapid concentration of fire upon any given point. Several applications of steam to the working or manœuvring of heavy guns have also been patented within the last year or two.

Of the class of projectiles (for ordnance) a large proportion of the applications has presented modifications of the packing for reducing or preventing windage between the shot and the bore of the gun, and insuring the full effect of the rotating grooves of rifled cannon.

Some few modifications of no special promise have been made in what is usually known as the "sub-calibre" shot, or projectile, so jacketed as to fill a larger calibre of gun, and present a diminished diameter or area of resistance in its flight through the air. The particular object in using this well-known form of shot is to impart to it a higher velocity (and consequently increased penetration or range) by discharging it from a larger gun, and with a larger charge of powder than the calibre of the shot would require or allow. Tubular steel shot have occasionally been offered as a variation of the "sub-calibre;" various devices have been presented for more effectually securing the packings or the sabots to their projectiles and preventing their separation; and on the other hand, devices have been proffered for more certainly removing or detaching the packings or the sabots from their shot after leaving the gun; some few improvements in canister and explosive shells, and in incendiary shells, have been made; and considerable ingenuity has been exhibited in adjustments for time fuzes, and for percussion and concussion fuzes, designed either to render such fuzes more certain in their action or less dangerous in their handling.

It is in the class of small arms, as was to have been expected, that the greatest activity has been exhibited. Whatever improvements tend to the perfecting of the weapon of the private soldier must have a great value in warfare, where, as is usually the case, masses of men are marshalled to oppose collected masses.

A large proportion of the patents in this class granted in the past two years will be found to embrace improvements in breech-loading arrangements. In reviewing the large numbers of such arms judged to be sufficiently distinctive in some particular feature or features to be entitled to a patent, it would seem as if every conceivable form and direction of the closure and unclosure of a disjointed breech had been exhausted. The numbers of breech-loading and of other arms patented during the last four years are as follows:

	1860.	1861.	1862.	1863.
Breech-loading arms.....	15	19	34	42
Other small arms.....	32	25	38	39
Total.....	47	44	72	81

It will thus be seen that the number of patents granted for breech-loading small arms has been steadily increasing during the four years, while the number of patents for other improvements in fire-arms has continued nearly the same. It should be remarked that the lower line of the above table does not indicate exclusively muzzle-loading patents, as in this line are included a considerable number of improvements, not only on the incidents of locks, sights, bayonet attachments, &c., applicable alike to either form of arm, but also a large proportion of improvements in revolving fire-arms, which belong essentially to the class of breech-loaders.

Of the numerous improvements in revolving fire-arms patented within the past year a large portion relates to adaptations to special forms of fixed ammunition,

or of primed metallic cartridges. The employment of chambered revolving cylinders has *practically* been almost restricted to pistols; but there does not appear any sufficient reason why a method of rendering arms repeating—found to be so convenient and efficient—should not be much more largely extended to muskets, or arms with long barrels.

In view of the very striking advantages presented by breech-loaders in their greater ease and safety of loading, and their rapidity of firing, as well as in the increased facility of handling the arm in many straitened conditions of ambuscade, &c., there seems to be every reason to expect that this class of weapons must before long come largely into use in modern warfare, and probably ultimately displace entirely the present system of loading at the muzzle.

What particular form or forms among the great variety of breech-loaders are best entitled to the government patronage, or most likely to establish their supremacy, is not so easily indicated.

It not unfrequently occurs that the actual value of such an arm, in practical experience, bears an inverse ratio to the amount of ingenuity, skill, and labor expended on its organization and production; and modifications apparently so slight and simple as scarcely to deserve the protection of a patent will sometimes be found to confer a largely increased practical efficiency. It appears evident that, for the requirements of the military service, an arm must be strong and simple in its construction, having few moving parts, and not liable to be deranged by rough and careless usage.

A large amount of attention has been directed to the subject of cartridges for small arms, embracing a great variety of metallic and other cases, mainly for fixed ammunition, and many devices for priming such cartridges so as to render them independent of external means of ignition. The great objection to the ordinary paper cartridge (with all its simplicity and cheapness) is its liability to deteriorate by the absorption of moisture, and its consequent want of reliability after having been kept any length of time.

Many projects have been tried (with varying success) for rendering cartridges water-proof without impairing their efficiency or sensibility. The applications for patents in this class of improvements have steadily and rapidly increased in number within the last few years, and have probably not yet reached their highest range of competition.

The first year of the war for the maintenance of our national sovereignty produced a remarkable influx of applications for improvements in tents, including folding tent-frames, appliances supposed to add to the comfort of their occupants, indefinite slight modifications of the French "Tente d'Abri" or portable shelter, and a variety of convertible blanket-cloaks, beds, hammocks, litters, &c., designed to be folded up and carried as knapsacks. In attempting too much, many of these inventors have rendered their arrangements quite unavailable for the actual and necessary limitations of the military service, though some of these contrivances have doubtless fulfilled their laudable object of partly relieving the hardships of the patriot soldier.

Among the miscellaneous details of cap-machines, bullet-moulds, cap-holders and feeders, cartridge-boxes, tom-pions, &c., there is nothing presented worthy of any special remark.

If in a cursory survey of the general character of the patented improvements in military implements called forth during the present war no great or striking novelties attract attention or excite admiration, the interval has not been barren in real and valuable advancement in the material arts of offence and defence.

Amid much that is merely fanciful and ingenious, many illustrations are afforded of clear-headed and judicious provision to remedy ascertained evils and defects—perhaps the only direction in which important or satisfactory results are to be expected in the present advanced state of the belligerent arts.

CLASS J.

HOUSEHOLD FURNITURE.

In this class 294 cases have been presented during the year. The inventions were distributed in improvements upon furniture for the bed-chamber, nursery, drawing and dining rooms, kitchen, and laundry. One feature of interest appears: nearly one-quarter of all the improvements are for laundry use, consisting of washing and wringing machines, and among these are many improvements upon the simple washing-board.

These labor-saving machines are passing into general use, and, as I have before remarked, there are large manufacturing establishments for their production.

These statements show the genial and important action of the patent law which protected the individual's rights to his invention; otherwise there would have existed no motive for the action of the skill and ingenuity which, under protection, have brought these valuable labor-saving machines towards their perfection, and this to the great benefit of the public.

CLASS K.

HYDRAULICS AND PNEUMATICS.

In water-wheels, the improvements relate chiefly to modifications of turbines and centre discharge wheels. One of these shows the wheel suspended upon a hollow column, through which the vertical shaft passes, to which shaft a collar is attached, resting upon the upper end of the hollow column. This collar may be elevated and depressed by means of set screws so as to adjust the wheel in position and prevent leakage. In other cases, by means of ball governors, the gates surrounding a vertical wheel are opened and closed, and the flow of water regulated. In one instance a vertical wheel is arranged with an annular space around it. Within the inner wall of this space an elastic diaphragm surrounds the wheel, which consists of three arms, each having a roller at its end held to duty by a spring in the arm. These rollers press the diaphragm out against the wall as they revolve, and the water flows behind them through ports leading from the annular water space without. In centre discharge wheels, the improvements consist generally in various modifications of cams for opening and closing the swinging buckets as they recede from or approach the stationary abutment, and in suspending the wheel from the upper end of the shaft on friction rollers or otherwise. In many of these wheels, however, the chutes that guide the water to the wheels are stationary, and the buckets are fixed in relation to their radius. Another modification of the vertical wheel consists in admitting the water at the bottom and permitting its discharge from the top, the buckets being spiral; and a variation of this consists in placing the wheel some distance below the level of the stream, and conducting the water through it from its base to a distance above the surface of the stream by means of an annular passage placed over the buckets, the object being to take advantage of the momentum of the falling water. In an over-shot wheel the buckets are so formed as to retain a considerable portion of the water until the bottom of each successive bucket is in a perpendicular position under the wheel; and to this end an aperture in the bottom of each bucket permits a portion of its water to fall into the bucket next below rather than fall by overflow directly to the ground.

Improvements in rotary pumps relate chiefly to the adjustment of pistons which slide into interior cylinders against resisting springs by means of cam movements, stationary abutments being placed in the required relation to the induction and eduction ports. In some cases the pistons are held in contact with the inner periphery of the cylinder by means of water in place of the

spring, the aperture for the escape of the water under pressure being adapted to the desired celerity of the movement.

A reciprocating pump of horizontal action operates by forcing down half the water elevated, two pistons on a single horizontal stem being thereby moved in a valve just below, and while forcing water alternately up two pipes, creating a vacuum behind the latter or rear piston, and thus inducing an influx from the well.

A lift pump consists of three cylinders, the outer and the inner stationary, and the intermediate moving between the other two, and carrying a valve piston upon its end, which receives the water from a valve at the base of the outer cylinder and forces it through a valve in the lower end of the inner cylinder, through which it is conveyed by pipes to any desired point.

A horizontal reciprocating pump of double action has a transverse division plate in the centre of its cylinder, and in each division thus formed a piston is moved, both by the same gearing, and in this manner a continuous discharge from a single eduction port is effected.

An engine for raising water consists of a horizontal cylinder, in which a piston moves to give motion to the other working parts. The water, flowing from a source of sufficient elevation, ascends through a pipe and passes to a valve located immediately under the cylinder, which valve controls the amount to be admitted to the ends of the cylinder alternately. The position of the valve is automatically changed at each stroke by the movement of the piston.

In water elevators windlasses are so arranged as to enable the operator to prevent or permit the descent of the bucket by means of friction plates, arranged upon the shaft in such manner that slight pressure upon the crank, in a line parallel to the cylinder, controls the movement of the cylinder.

In lubricators a tube is inserted in the stem, which screws into the cap of the journal box. This tube is so small, that atmospheric pressure prevents the escape of the oil, until affected by the increased temperature of the journal. Another lubricator adapted to the cylinders of steam-engines has a right and left hand screw upon the stem, to which are attached two valves so arranged that a continuous movement in the same direction controls the movement of both valves simultaneously—the upper one opening to permit the oil to flow into the body of the lubricator, and as it closes, the lower one opening to allow the oil to flow upon the cylinder. In another, steam is admitted above the tallow, by which it is melted, and afterward forced into the cylinder of the engine.

In a pipe for conveying water to buildings, a chamber is formed having a perforated diaphragm placed transversely within it to prevent the passage of fish and other matter to the smaller pipes. At each end of this chamber a stop-valve is placed to shut off the flow while the chamber is being cleansed through a lateral port.

CLASS L.

LEATHER AND HARNESS.

Improvements are numerous and progressing in the complicated and diversified machines and machinery for the manufacture of leather into boots and shoes, much ingenuity having been devoted thereto. Though few of the improvements of the past year are anything more than slight improvements upon previous inventions, yet important results arise from slight improvements; so that now effective machines are supplied for performing every operation with leather, of which it is susceptible, in the production of boots and shoes. Much improvement has also been made during the past year in *hand tools* for shoemakers and saddlers, desirable for their simplicity, compactness, and labor-saving facilities. Improvements have also been made in harness, saddles, bridles, spurs, travelling trunks, carpet and mail bags, of a convenient and practical character, uniting economy with better adaptation.

Valuable improvements have been made in buckles, snap-hooks, and other devices of that description. Several styles of skates and skate-fastenings have been patented, some of the latter very ingenious, complicated, and expensive; the inventions principally being improvements for securing the skates to the boots, whereby, when they are properly fitted, they may be attached and detached without unbuckling the straps, at the same time relieving the feet from the pressure and pain attending other modes.

CLASS M.

LUMBER.

This class embraces all the machines and tools for working in wood, the most important of which are sawing-mills, machines for re-sawing lumber, planing machines, turning lathes, and barrel machinery.

During the year 1863 there were two hundred and twenty-four applications for patents in this class.

Saw-mills are the most important, as well as the initiative machine, for manufacturing lumber, and only a few years have elapsed since such mills were disproportionate in their parts, imperfect in their design and operation, and unsightly in their structure; but with the improvements in the machinery now in use by which the sawing is done, we find them comparatively lighter, more compact, and requiring less attention to the operation of sawing, whilst the work is more perfectly done, and a saving is effected by producing more lumber from a given amount of unmanufactured material.

Gearing for saw-mills was once looked upon as a great objection, on account of the loss of power necessary to increase motion; but this opinion has given way to the march of improvement in all labor-saving machines. An "up and down" saw for sawing lumber is now driven over four hundred strokes a minute, whereas in former times one hundred and fifty were considered the maximum speed. Then the saw was one-fourth of an inch in thickness; now one-half that thickness of saw is used, requiring much less power to cut through the log, as well as causing a saving of the difference in the thickness of the kerf at every cut in the lumber.

With the rapid strides of improvement in this direction, the old method of sawing lumber by the "up and down" saw is becoming less used, and the circular saw is supplying its place, a great proportion of the lumber being now cut by means of this saw.

As the forests which have hitherto supplied the choicest kinds of timber begin to fail, invention comes to our aid. By means of improved sawing machines now in use, ship timber can be sawed from crooked or curved logs, which, with the old process, could not be made available except by hand-sawing; and further, we are able to saw not only on a curve, but at any angle desired, with equal facility as straight or square work, and both by the "up and down" and by the circular saw, thus accomplishing a most desirable result.

Planing machines have become indispensable in most of the branches of wood-working; and with the best machines now used the mechanic has his lumber given into his hands with only the *smoothing* wanting, it having been wrought to the right size and shape, or tongued and grooved, or beaded, or a moulding having been cut thereon, more perfect than can be done by hand tools.

Lathes for wood-turning have been much improved, by which we are enabled without additional attention to turn wood in various irregular forms, such as round, oval, nearly square, hexagonal, of any number of sides or angles, and

to almost any desired pattern, and in many lathes this is done nearly automatically. Wagon spokes are formed to shape, with square or round tenons cut upon the ends; screw-threads and spirals are also cut with great facility and exactness; a perfect sphere can be turned without placing the block to be turned between points or centres at all, so perfect is the machinery now in use for these purposes.

Staves and heading for coopers' work, for which the best of timber with the straightest grain was required, are now made from timber regardless of crooks, curves, or twists in the grain, being either *sawed* or *cut* into the desired shape; or if split, the twist in the grain is no objection, as a machine will dress a stave without loss of timber on account of the twist. Heading, after being sawed or cut from the bolt, is planed to the proper thickness, jointed, dowelled, and cut to a given circle and shape ready to be inserted in the barrel, by a single machine. The crozing, bevelling, and jointing of the ends of the staves after being set up into a barrel, are performed by a machine at a single operation. The hoops used on barrels are now made by cutting them from the edge of a plank having the thickness of the width of the hoop, ready pointed or tapered, of equal thickness, or one edge thicker than the other, ready for use, causing a great saving in time and labor over the common method of making such hoops from round poles.

What is said of the few more prominent machines in this class, as to the progress of improvement, can also with equal force be said of most others not specially enumerated here. The machines and tools for the working of wood into various forms, and fashioned to the wants of all, are nowhere else to be found in the same state of perfection as in the United States.

CLASS N.

MATHEMATICAL AND PHILOSOPHICAL INSTRUMENTS, ELECTRICITY, ETC.

In almost every subdivision of this class, inventive genius has been successfully active; and although the subjects are apparently among the most peaceful pursuits of life, yet the present war has elicited some valuable contributions to the progress of improvement in this connexion. Among the patents intended more particularly for army and navy purposes, are telegraphs for the field and for use on ship-board, for steering purposes and communication with the engineers; electric fuzes for cannon and blasting, torpedoes, signals on land and at sea, telescopes for rifles, telescopes for measuring distances, field glasses, mariners' compasses for iron-clad vessels, and others of indirect relation, such as portable scales for weighing and engineering apparatus, designed especially for army and navy uses.

These have all passed in review and received the sanction of letters patent. Conspicuous among them is a magneto-electric telegraph, now in extensive use in the United States army for field purposes, and elsewhere for ordinary telegraphic purposes. This is a signal triumph in electro-mechanics, for by the motive power of a small magneto-electric machine, occupying less than a cubic foot, a dial or index telegraph is operated through great distances, from five to two hundred miles, with the prospect of greater and indefinite extension. It was found with the Atlantic telegraph in 1858, that alternating, or to and fro currents, were indispensable to its operation, and the magneto-electric machine of the telegraph before us has the peculiar movement of normal to and fro currents in rapid succession, without any extra contrivance for their production, this condition growing out of the very arrangement of the magnetic poles and helices. The operators for this telegraph require no training, and any person who can read, can telegraph. For the Morse telegraph, two or three years of training are required. It is not liable to piracy by tapping, as is the Morse tel-

egraph, and may be justly regarded as the inauguration of a new era in telegraphy, by dispensing with the cumbersome, uncleanly, unhealthy, and instant galvanic battery as the motive power, and the introduction of a simple and economical telegraph, adapted with equal facility to domestic and public purposes. It is not too much to say, that the days of telegraphing by the galvanic battery are numbered, and that the magneto-electric machine will ere long take its place for this, as well as for many other purposes.

Another highly interesting development in magneto-electric science is the discovery and application of a new mode of ignition for purposes of blasting with powder. Hitherto torpedoes and other powder blasts, fired by electricity, have depended upon the ignition of a very fine platinum wire. When this had to be done through long circuits or at great distances, very large and expensive galvanic batteries were required, owing to the great diminution of the quantity of electricity. It was proved by experiments made at the Capitol many years since, that 150 pairs of Grove's battery were necessary to ignite powder by the finest of platinum wires placed in the telegraphic circuit between Baltimore and Washington, a distance of forty miles. By means of this new discovery, powder has been fired through the distance of 100 miles by means of a little magneto-electric machine, occupying less than a cubic foot. This astonishing achievement has been accomplished by means so simple that electricians will wonder as much, if not more, than the uninitiated. It is done by a *pencil-mark*. The stroke of a common black-lead pencil on a block of wood is substituted for the platinum wire, and this disintegrated conductor, as it may be called, is so intensely ignited by the magneto-electric current as to set fire to the wood.

The application of this ingenious device within a suitably prepared cartridge will be hailed as one of the most valuable contributions to mining and engineering operations of the present day.

Following upon this discovery was an interesting application to the firing of cannon by magneto-electricity, dispensing with the vent or touch-hole, which, although hitherto a necessity, has been regarded as a weak point in cannon.

Experiments made at the navy yard in this city prove the firing by this method to be wholly successful, one thousand cartridges having been fired by the inventor without a single failure.

A patent has been granted for an electro-magnetic telegraph for steering vessels, and public exhibitions made of the practical operation of the system. By very ingenious mechanism, the orders of the pilot to the engineers and helmsman are given with such promptness and unmistakable precision, that its early introduction, especially in the immense vessels of the present day, may be reasonably looked for.

The electric and magneto-electric lights have also been subjects of examination and of patents, and there can be no material doubt now as to the practicability of the magneto-electric light for light-houses and other purposes of signal lights.

The magneto electric current passing between charcoal points has been used in a light-house at Dungeness, on the English coast, since 1862, and the light is said to possess more power of penetration than any other light.

From these and other cursory observations of the recent developments of magneto-electricity, flattering promises rise up in the contemplation of its future.

The steam-engine is hardly eighty years old, and the magneto-electric machine hardly thirty. It is only about forty years since the steam-engine was fairly appreciated, and hardly a decade since the magneto-electric machine was duly recognized in the family of practical mechanics, and if its future career should be commensurate with its past, it will take high rank among the great engines of human progress.

Some ingenious contrivances have been made with a view to prevent the local influence of iron in ships on the mariner's compass, and especially for use in

iron-clad ships. These are in connexion with the water compasses, in which the needle swings in a liquid, and the box so elevated above the mass of iron in the ship as to be beyond its influence, while the deviations of the needle may be observed from below.

In one instance it is asserted that a peculiar arrangement of wires, conveying an electric current, operates so as to completely intercept local influences and not interfere with that of the earth, or produce any local effect of its own. The office has had no verification of this improvement.

CLASS O.

MEDICAL AND SURGICAL INSTRUMENTS.

The most fruitful subject under this class is that of artificial limbs, more applications having been examined in the year than in all previous years combined. Some excellent improvements have been developed, the painful experience of the war affording the inventor ample opportunities for studying all the requirements for artificial limbs, and adapting their construction to all the varieties of amputation.

Crutches have also been much improved, and several patents granted for new contrivances, tending chiefly to give them strength and lightness, and facilitate the manufacture.

Numerous improvements in hospital beds, ambulances, stretchers, apparatus for treating fractured and bruised limbs and wounds by a constant drip of cold water, coffins and burial cases, all bear melancholy testimony to the horrors of war.

CLASS P.

METALLURGIC MANUFACTURES.

In this class the applications for patents made during the past year have exceeded in number by only about six per cent. those of the year previous. It is worthy of remark, however, that while there has been a slight falling off even in the number of inventions of a miscellaneous character, and those least conducive to the progress of the industrial arts, a more than corresponding increase is observed in that class specially required by machinists; such as machines for forging, rolling, bending, drilling, planing, boring, turning, and the like. Improvements in this class were found to be necessary to meet the demands created by the war, and, as in everything else, northern genius and northern hands have met the emergencies as they arose. Thus the improvements made in our navy—the substitution for wooden ships of those clad in metallic armor, and otherwise constructed to be, as nearly as possible, proof against the shot and shell of the enemy—not only added greatly to the amount of work which the machinists of the country were suddenly called upon to furnish, but made new and improved machinery therefor indispensable.

Improvements in the construction of ordnance, fire-arms, and projectiles, were also made, which have given rise to new methods of founding, and improved machinery for constructing and finishing. But, while many of the most important inventions may be said to owe their origin to the war, very many others of a different class, but of little less importance, such as machines for making nails, bolts, nuts, screws, horseshoes, sheet-metal ware, as well as a great variety of tools and implements for working in metals, which can claim no such special impulse, may very properly be attributed directly to wants growing out of, and increasing with, the general advancement of the nation.

CLASS Q.

METALLURGY.

The inventions in this class relate to processes and apparatus for roasting and smelting ores; refining iron and making steel; the making of new alloys; the washing and separating of ores; and for amalgamating and collecting the precious metals. About fifty patents have been allowed during this year in this class, some of them for very valuable improvements.

In roasting ores an important improvement has been made, which consists in passing the ore in fine powder through flame, or the hot gases from combustion. By this process each minute particle of ore is roasted by itself, and the result is that the roasted ore is in fine powder instead of being in an agglomerate mass, as it is when the ore is roasted in a heap. It is well known that but a small part of the gold in pyritous ores is obtained by the ordinary modes of working. If not roasted, the gold is encased in the sulphurets so as not to be reached by the mercury. If the ore has been roasted in the common mode, the incrusting slag or earthy oxides still protect the gold, to a great extent, from the action of the mercury. By the new mode of roasting, it is believed that the precious metals will be found diffused through the fine powder in globules of easy access to the mercury.

The powdered ore may either be blown through the flame from a reverberatory furnace, or it may be allowed to fall through a shaft, and then be acted upon while falling by flame and hot vapors or gases. Immediately after the ore leaves the flame it is thrown or falls into water, whereby the earthy matters in it are further disintegrated.

The production of iron and steel has been greatly advanced during the year. The principal aim of inventors has been to produce the better qualities of iron, and, especially, to make iron possessing many of the qualities of steel. The large demand for the best kind of iron for war and naval purposes, and for the production of a better class of agricultural implements, has greatly stimulated this branch of industry.

It has long been an object with inventors to make malleable iron on a large scale directly from the ore, instead of making first pig iron, or cast metal, and then burning out the carbon in it by puddling or other means. Several patents have been issued for accomplishing this. These are on the principle, not now new, of reducing the ore by the hot products of combustion, yet keeping the temperature so low as not to fuse the mass of ore. When reduced, the metal is raised to a welding heat, and at once formed into blooms, one fire serving both for the welding and the reducing processes.

Several minor improvements have been patented on what is commonly known as the Bessemer process.

Three patents have been issued for making steel, by combining in different modes cast and wrought iron, the novelty consisting only in the mode of effecting the result. One of these processes consists in heating in a crucible the wrought iron to a white heat, and then letting into the crucible pig or cast iron directly from a blast furnace or cupola. Another inventor makes a kind of steely iron, by melting together, in proper proportions, particular kinds of cast iron and bar iron. The third process consists in treating the cast iron on the puddling hearth until it becomes granular and spongy, then throwing it into water, and reducing it to powder. This powder is then enclosed in a wrought-iron box, which is subjected to a welding heat, and the box and its contents placed under the hammer.

Two patents have been issued for new alloys of the metal aluminum. By one of these very close imitations of gold are obtained. The other is for an improved gun-metal.

About twenty patents have been issued for improvements in gold-washers, ore-separators, and apparatus for collecting gold and silver by the process of

amalgamating them with mercury. Compared with former years, this shows increased interest in mining for the precious metals. Several of these improvements are for the new mining fields of Nevada and Colorado Territories.

It is scarcely possible to classify the inventions in this department.

For a while most of the devices consisted in making different parts of the machines of amalgamated plates.

For grinding and amalgamating at the same time, all the known machines have received improvements. The ordinary tub and corrugated muller is more used in California, but not to the exclusion of the *arastra* and German barrel. In washers and separators the gig-mill seems now to be the favorite, though the old-fashioned ripple and sluice machines have received considerable attention.

CLASS R.

NAVIGATION.

The improvements upon the construction and equipment of vessels-of-war are numerous, and relatively of the greater interest; nevertheless, because the attention of inventors is fixed on the navy, the number of the applications of the usual character, presenting improvements upon steering and propelling apparatus, sails and rigging, and the like, have increased, these improvements being applicable both to the commercial marine and to the vessels-of-war. Thus the number of cases of this class acted upon has increased, amounting to 127 cases for the year.

Much ingenuity has been applied to the defensive metallic armor for "iron-clad" vessels. The improvements in this range relate to the kind of plates, to plates solid as one mass, and as divided into strata or laminæ, to the fastening of the armor to elastic cushions or intermediates between the plates, and to elastic *backing* of the armor.

In one case the invention places a stratum of wood exteriorly in front of the metallic defence, in order that a part of the force or momentum of the shot may be absorbed by its action on the wood before it comes in contact with the interior iron plates; it is also proposed that plating in laminæ be used, the strata of which are to be held somewhat apart by angle iron; this, on the ground that the greater action of the shot on the exterior plate, and upon plate after plate, will dispose of more of the momentum of the shot than if the plates were rigidly connected in one mass.

There has been invented a combination of plating elastic intermediates, backing and elastic washers for the bolts; this to provide for a slight but general yielding of the armor upon being struck by the shot.

A defensive armor has been invented with openings in it. These recesses are angular and funnel-shaped, and are intended to receive, and, in connexion with hollow beams, to convey the shot harmlessly across the ship; fusible metal is proposed to be cast between two separated plates upon the ship's side. Compound plates have been invented, such as a mass composed of fusible metal cast between a network of wrought-iron bars diagonally crossing each other.

These instances show a wide range in the action of the inventive mind; and it is by such essays, changes, and improvements, that an approach to the perfect will be attained.

Attention has been given to the *Eriessou* or "monitor turret." The improvements in this respect propose no change of general principle or mode of structure; they have reference to the perfecting of the details of construction, to additional or different supports, to facilities of rotation, and to greater conveniences in working the guns. Port-hole stoppers have received much attention, and, apparently, with valuable results.

There are cases of improvement upon the *steam ram*, to be used in penetrating and sinking the enemy's vessels. These relate to the strength of the beak, or striking part, and are intended to give, at its supporting parts, additional strength of construction. There has been attention to the use of the oscillating

ram, so arranged as to strike repeated blows. There are also inventions for grappling with the enemy's ships, and for boring holes into their hulls under water; and inventions for conveying torpedoes under the enemy's ship, and so on.

The ingenuity which has been exercised upon submarine batteries appears to possess interest. These batteries are guns arranged to be discharged under and through the water, in order that the shot may penetrate the enemy's ship below her line of flotation. It was, and is now, generally believed that a gun fired with muzzle under water would burst. In one case the improvement consists in filling the bore of the gun, beyond its loading, with an air-tight metallic case or cylinder; on firing the gun the metallic case is sent out, and, collapsing, its contained air lightens up or gives elasticity to the water; this not only permits guns to be fired safely through the water, but it is said that an experimental shot from the gun thus used passed through twenty-five feet of water, and thence through both of the sides of the bottom of an old hull of a vessel devoted to experimental practice.

Another inventor proposed to accomplish the result by the extension of air-tight sliding, or telescopic tubes, from the gun towards the object of attack.

An examination of this class shows that a patent was issued to Thomas Gregg, of Connellsville, Pennsylvania, at the early date of March 19, 1814, for a metallic-plate-protected vessel, having angular sides, in order to deflect an enemy's shot upward or downward, as it should strike above or below the apex of the angle of the sides of the vessel. This not only presents the first invention of metallic defence for vessels, but also Mr. Gregg's angular structure by far anticipates Captain Jones's angulated system of ship-building, "patented in England as late as the year 1859."

To depart, in this instance, from the rule of not introducing names from the high character of the parties and their former relations with our government, the patented improvements of the Messrs. Stevens, pertaining to their steam battery, evince the extreme of skill and surpassing inventive genius. These improvements are so numerous, and so closely bound together into a system, that the necessarily short expositions of this report can do no justice to them. It may not be generally known that their experiments resulting in these improvements were commenced as early as the year 1816. Mr. Stevens, the elder, and his son are regarded in Europe as the *fathers* of the art of the application of metallic defensive armor to vessels.

The investigation of the office, in this class, has brought to light certain facts to which it may be well to refer.

A committee composed of a rear-admiral and four post-captains of the British navy, in the report on harbor defence, recommend, as the principal expedient, the obstruction of *harbors* by sinking in their channels vessels laden with stone, thus recognizing this expedient as an accorded right of warfare. An Englishman has invented a shell, which, on exploding, is to throw out *suffocating and poisonous flames*.

These propositions had been entertained in Great Britain, and yet British sympathizers with the southern rebels had the presumption to express indignation because vessels laden with stone were sunk in Charleston harbor, and because Greek fire was used in shelling that city. A sound philanthropy rejoices in the successful use of all expedients known in warfare to secure the great object, the preservation of the integrity of this nation, and the permanence of its form of government.

CLASS S.

STEAM AND AIR ENGINES.

The progress of improvement in steam, air, and gas engines has been regular and important throughout the year, not only in the minor features of existing apparatus, but in some instances in radical characteristics.

A new engine, composed of an oblong cylinder, has two pistons of like form,

working one within and at right angles to the other. Both pistons are connected to the crank-shaft in such a manner that, when one is passing the dead point, the other is exerting its maximum force. A very ingenious valve is so applied as to act as an induction and eduction valve to both pistons. This valve is capable of reversing the motion of the engine by a simple change of its position.

Many improvements have been made in balanced slide valves, and in pistons.

An apparatus for preventing the priming of steam boilers consists of a series of pipes attached at intervals to the steam space of the boiler from the front to the rear end, and leading to the main steam pipes, placed on both sides of the boilers which pipes convey the steam to the engine. The object of this arrangement is to take the steam from where it is generated in the boiler, and thus prevent the rush of steam over the surface of the water to its eduction port.

In a device for governing the speed of engines by the velocity with which the steam enters an enlargement of the steam pipe, containing a piston and valve, the piston is so connected with a jointed portion of the valve rod that the eccentric will open the valve to admit steam to the engine, a greater or less distance in proportion to the velocity of the steam pressing upon the piston, in the enlargement of the pipe.

A marine engine has an additional eduction valve placed at the centre of the cylinder for the purpose of allowing a portion of the steam to be withdrawn at that point of the stroke of the piston to heat the feed-water, instead of being allowed to remain in the cylinder to urge the piston to the completion of the stroke.

A modification of this device is simply to make an aperture through the cylinder at the same point, in which to insert the eduction pipe, which is provided with a valve to prevent the reflux of steam; the object in this case being to condense the steam discharged from the cylinder of the engine by the first eduction by delivering it into the hot well of the engine. The arrangement of the parts, and not the general idea, is the subject patented.

An improvement on Stevens's cut-off consists in placing upon the rock-shaft movable tappets, and an arm carrying a screw with sliding nuts attached, which nuts bear upon projections from the tappets, and thus enable the engineer to change the position of the tappets, by which means steam is cut off at any desired portion of the stroke.

Various improvements have been made in surface and other condensers; some being placed outside the vessel, and below the water-line, and some inside and below that line, so that the motion of the vessel causes a current of water to pass through or around the condenser, as the case may be. A peculiar device consists of two or more narrow, deep tanks, placed one on each side of the condenser, and connected with it by pipes in such manner as that the water circulates through the condenser from the tanks, and thus the water in the tanks is used again and again. At one end, and near the top of the condenser, is attached another pipe, the opposite end of which is connected with the tank some distance above the point of attachment of the previously mentioned pipe. About midway of this pipe (the one attached near the condenser) is attached still another pipe, which communicates with an ordinary fan-blower, designed to force a current of air through these pipes and into the tank, where it mingles freely with the water, and thus serves to cool the water in the tank, and to condense any steam that may arise from the surface of the water.

The improvements relating to boilers, furnaces, and flues have reference principally to economy of fuel, and consist in devices for the admission of atmospheric air, and its thorough admixture with the gases evolved from the burning fuel in such manner as to insure better combustion of these gases. Combustion chambers are placed between the fire-box and the flues, into which pipes are inserted connecting with the water space of the fire-box at the top on one side, and at

the bottom on the other. Inside these pipes are placed others communicating with the external atmosphere through perforations, in which pipes the air is admitted to and commingled with the gases in the combustion chamber.

Another economic arrangement consists in corrugating that portion of the shell of a steam boiler which is exposed to the fire, and so applying a corrugated jacket thereto as to form a flue space enclosing the corrugated portion of the boiler shell, this flue space communicating with the principal internal flues of the boiler, which, also, are corrugated; the object being, in the whole arrangement, to increase by corrugation the surface of the boiler and of the jacket exposed to the heat, the parts exposed to radiation being preserved plain in the usual manner.

In air engines the improvements relate principally to the construction of the piston, which is formed in such manner that all the air to be heated is made to pass through the piston for the purpose of preventing too great a temperature. The air, after being heated, is conveyed through an outlet pipe, directly to the reservoir, from which it is taken to propel the engine. The air is forced through this piston by means of air pumps placed immediately over the cylinder of the engine, which pumps are actuated directly by the piston of the engine itself. The communication is kept up by means of a bent pipe having a telescope joint.

In the devices for raising water by steam the improvements relate to various modifications of the Giffard principle. A simple device of this class consists in the use of a T piece, with the induction steam pipe secured to one end and passing horizontally through the T piece, and over the induction opening for water. A pipe is then secured to the opposite end of the T piece for the purpose of conveying the water to the desired point. The induction steam pipe is provided with a valve for regulating the influx of the steam. The steam being discharged into the eduction pipe causes a vacuum to be created in the T piece, into which water from the well rushes and is carried forward by the steam.

CLASS T.

GLASS, STONE AND CLAY.

Inventions in this class have displayed much ingenuity, although no very important results can be referred to. In the manufacture of glass, one object sought for has been the substitution of machinery for hand labor in polishing, dressing and ornamenting glass. Improvements in this direction have so far succeeded that several articles, such as globes, vases, goblets, &c., may be operated upon simultaneously by a single workman. Great perfection in the execution of the work has been attained by the use of the new machinery. The most elaborate designs, tracery or lettering, previously delineated on paper, are reproduced upon the surface of the glass by machine work. The particular form of the glass is immaterial for the successful operation, the designs being executed with equal facility upon flat, cylindrical or angular forms.

In machinery for drilling rocks there are improved devices for holding and rotating the drill and adjusting it in a more or less inclined position. By another device the drill is made to act upon the rock by uniform blows throughout the entire depth of the hole to be drilled, the drill being rotated and fed to its work by automatic machinery.

CLASS U.

WEARING APPAREL.

Improvements affecting wearing apparel are usually made in the production of the materials of which the various articles are fabricated, and in the sewing machines employed in the production of such articles; yet, minute as they may appear to many minds, the succession of improvements called forth from year to year in the direct manufacture of clothing must always constitute an in-

interesting feature in the inventions of the time, contributing alike to the promotion of the convenience and comfort of the people and to the gratification of the general taste.

During the present year many of the inventions in this class have had reference to economy of material. Thus a shirt has a plain bosom, which, when opened out in lappels, reveals a fanciful lining and another bosom within, of finer texture and more comely appearance, of which the outer lappels are, when closed, the efficient protectors. Shirt collars of paper are formed by dies with embossed counterfeit stitching. Water-proof enamelled collars and bosoms are distended and preserved in shape by elastic metallic forms. The toes and heels of stockings are made in separate pieces, to replace the worn-out portions of stockings in use. Ruffles and dress borders of many patterns are made with great exactness and at very small cost, by slight adaptations of the ordinary sewing machines. Hats are pressed into form by steam or other fluid, acting upon flexible diaphragms; and the brims of soft hats are distended and curved by narrow springs in their peripheries, which admit of folding so that the hat may be carried in the coat pocket. Hat blocks are made expansible by the action of cams, so that a bell shape presents no obstacle to the insertion or removal of the form. The extensive use of clasps in connecting the tapes and wires of hoop skirts, and of eyelets in corsets and other articles of apparel, has led to the construction of ingenious automatic apparatus for conducting the clasp to the anvil and affixing them to the cloth, and for punching the cloth and conducting the eyelet and securing it therein.

PROPOSED MODIFICATIONS.

The last subject which I have proposed to consider is the question of the modification of the existing patent laws. I have endeavored to show that our system may be favorably regarded in comparison with any other existing. This view involves the opinion that no laws materially affecting our present system are expedient. The decision of the courts, and the practice of agents and inventors, are conformed to the present laws. It is therefore desirable that there should be no legislation in relation to the subject of patents except to perfect and carry out the theory and principle of the present system. It is in this view that the recommendations for modifications of existing laws are now made. By the act of March 3, 1863, it was provided that a fee of fifteen dollars should be paid upon the filing of an application for a patent, and that an additional fee of twenty dollars should be paid upon the ordering of the patent to issue. The office having been embarrassed by the delay of many inventors in paying the final fee, a provision was made by law, that if the final fee for a patent be not paid within six months from the time at which it was passed and allowed, and notice sent to the applicant or agent, the patent should be withheld, and the invention therein described should become public property as against the applicant therefor. Some cases of great hardship have occurred under the operation of this law. Applicants have been absent from the country, have been ignorant of the existence of the law, or have failed, by accident, to transmit the final fee within six months. I respectfully recommend that the present law be so modified as to confine the forfeiture to the pending application, leaving it optional with such applicants to renew their applications for the same inventions, and any modifications they may choose to introduce, or not, as they may elect; and that this modification be also extended to such inventions as may have already been forfeited under the act of 3d March, 1863.

A modification of the existing laws has been suggested by patent solicitors of great experience, which commends itself to my approbation. It has been repeatedly decided by the courts that the application of what is old, to a new

purpose, is not patentable. The records of the office show that hundreds of patents have been granted in defiance of these decisions, while an examination of the rejected department will bring to light as many applications which have been refused upon reference to these decisions. It is difficult to conceive of any sound reason why the application of what is old, to a new purpose, should not be the subject of a patent.

The attention of an expert bridge-builder is directed to iron bars of a peculiar sectional form. He perceives that these bars can be applied with useful effect to the construction of a truss frame bridge. He makes a stronger, lighter, and cheaper bridge than had before been made. He applies for a patent, and must be refused upon the principle of these decisions, because bars of the form he uses had been known before and used for other purposes, and, therefore, he has done nothing more than apply what is old to a new purpose. There seems to be no reason in principle why the sound judgment and inventive faculty which led the bridge-builder to apply these bars to a new purpose should not be rewarded. I respectfully submit a draught of a bill designed to remedy this defect in our law and practice.

CONCLUSION.

In concluding this report, I am impelled to present in prominent relief the important fact that, although the country has been engaged in a war which would have seemed to tax to the utmost all its energies, the applications for patents for the last year have been equalled in only two former years; and yet one-half of our territory, shrouded in the cloud of rebellion, has contributed nothing to invention or human improvement.

The institution which has blighted that portion of the republic has long since recorded in this office its adverse influence to the arts and civilization. It appears that in the year 1857 there were granted to citizens of Massachusetts 421 patents, being a proportion of one to a population of 2,362. In the same year there were granted to citizens of Virginia 58 patents, a proportion of one to 24,511; to North Carolina 14 patents, a proportion of one to 62,064; and to South Carolina 12, a proportion of one to 55,708.

Labor being degraded in these States, there was no stimulus to mechanical activity; and as labor-saving machines were supposed to have the effect of supplanting and diminishing the value of slaves, improvements were regarded as injurious to the paramount interest of the State. It was only by unparalleled efforts that a northern inventor succeeded in introducing into the cotton States the gin, which added a hundred-fold to their productiveness and value. This invention is an example of the benefit which the South will derive from new arts to be applied to her peculiar climate and products.*

*In an interesting work lately published, entitled "In the Tropics, by a settler in Santo Domingo," the author says:

"Those who say the treasures of the tropics are to be best won by the brute force of ignorant labor, cannot have studied with sufficient patience the march of invention.

"Intelligent laborers; men who know how to make wood and iron perform the severest part, to the sparing of human sinews; men who can work steam in harness, these are what is wanted here.

"Under the warm sun of the south intelligent men and machinery will yet open the grandest field of civilization ever realized.

"Even in such a small matter as hoeing a corn field this is illustrated. Without violent labor I do as much clearing in a short forenoon with my little donkey cultivator as three good field hands in a whole day, and do the work much more effectually. Rating the donkey and myself as equal to a pair of Dominicans, the cultivator, which neither eats, sulks, nor runs away, (to which as a class they are subject,) counts for four common hands, which are subject to all those defects. The cultivator, I repeat, counts for four laborers, and asks no wages."

The imagination fails to conceive of the happy future in store for this country when its fairest portion shall be regenerated by the adoption of a just system of labor, and conquered by free industry; when its land, by this change, shall, according to the remarkable estimates of Mr. Walker, have an increased value of over six billions of dollars; and when a whole race shall be taught to think, contrive, and create. The richest field of invention, with its fruits of wealth and prosperity, will then be opened that ever occupied the faculties of man. The visions of Virgil and Milton will be realized, and—

"Time will run back and fetch the age of gold."

D. P. HOLLOWAY,
Commissioner.

ALPHABETICAL LIST OF PERSONS WHOSE PATENTS FOR INVENTIONS AND DISCOVERIES HAVE EXPIRED DURING THE YEAR 1863.

No.	Patentee.	Invention or discovery.	Date.	Class.
6461	Abbott, Theodore T.	Speeder flers.	May 22, 1849	III.
6375	Abernethy, John	Buckles, attaching to suspenders, &c.	July 3, 1849	XXI.
6381	Adams, Joseph and Levi, and Luther Henry Moore	Felloes, machine for cutting out	June 12, 1849	X.
6391	Adams, Nathaniel	Brick presses.	April 17, 1849	XV.
6394	Akin, Samuel W.	Cultivators, cotton.	Mar. 30, 1849	I.
6409	Aldrich, James H.	Boring machines.	Nov. 27, 1849	XIV.
6433	Allen, Andrew, assignor to Charles J. Gardner.	Looms, apparatus for operating shuttle-boxes for	Sept. 4, 1849	III.
6407	Allen, Edwin.	Education tables.	May 1, 1849	XVIII.
6809	Allen, Enoch G.	Planing machines.	Oct. 23, 1849	XIV.
6365	Allen, Enoch G.	Planing machines.	Oct. 23, 1849	XIV.
6492	Allen, Horatio.	Cut-off adjustable lever with secondary toe, No. 1	April 17, 1849	VI.
6493	Allen, Horatio.	Cut-off adjustable lever with secondary toe, No. 2	Feb. 6, 1849	VI.
6254	Allen, Thomas W., and Charles W. Noyes.	Tires, iron wheel, machinery for making	Feb. 6, 1849	X.
6265	Alley, Joseph, and Henry W. Poole.	Musical instruments, keyed.	April 3, 1849	XVIII.
6728	Alvord, Joseph D.	Cars, couplings for.	Sept. 13, 1849	III.
6860	Anderson, James	Hemp machines.	Nov. 13, 1849	V.
6107	Anderson, Thomas K.	Heating apparatus for, by vapor of alcohol.	Feb. 13, 1849	VII.
6246	Andrews, Joseph E., assignor to Edwin Allyn.	Capstan, variable power	April 24, 1849	XX.
6861	Andrews, Josiah B.	Presaries	Nov. 13, 1849	IV.
6333	Andrews, Solomon, and Job F. Halsey	Soda water, apparatus for making	April 17, 1849	XIII.
6821	Arnold, Benjamin	Gearing	Oct. 30, 1849	III.
6138	Arnold, William E.	Fastener, stopper, such	Mar. 27, 1849	III.
6028	Ascraft, Thomas	Presses, cotton.	Mar. 6, 1849	XII.
6745	Atwood, Charles	Hooks and eyes, securing to tape and dresses	Aug. 7, 1849	XXI.
6038	Augur, Huzekiah	Hooks and eyes, attaching, to cards.	Sept. 25, 1849	XXI.
6455	Augur, Lebbeus, and James L. Lord.	Carving machines	Jan. 23, 1849	XIV.
6243	Austin, Charles	Stops for carpenters benches	May 29, 1849	XIV.
6299	Avery, Wyley	Melodeons	June 19, 1849	XVIII.
6201	Babbitt, B. T., S. C. Higbee, and P. W. Plantz.	Vegetable cutters.	July 17, 1849	I.
6292	Babcock, Fitch R.	Pumps and fire-engines	Oct. 7, 1849	XI.
6302	Babcock, Herman B.	Sloves, cooking	April 10, 1849	V.
6304	Bachelder, J., and Simon D. Dyer, assignor to Bachelder.	Alloys, metallic.	June 5, 1849	III.
6223	Bachotner, Henry	Types, casting.	June 5, 1849	III.
6348	Bacon, Henry	Looms	Oct. 30, 1849	III.
6279	Bailey, Joshua	Ploughs, corn, subsoil	June 5, 1849	I.
6276	Baker, William	Waste, machinery for picking	July 3, 1849	III.
6024	Baker, Edward B.	Window-blind hinges and fastenings	Sept. 17, 1849	II.
6298	Baker, F. Henry	Wheels, cast-iron car	Jan. 9, 1849	X.
6424	Baker, Lyman	Churns	April 10, 1849	I.
6292	Baker, Samuel	Rake-teeth, spring	May 8, 1849	I.
6739	Baldwin, Matthias W.	Vessels, machine for paying the seams of	April 3, 1849	VII.
6725	Baldwin, Stephen K.	Engines, locomotive, steam, manner of constructing, by which they adapt themselves to the curves and undulations of the road.	Aug. 25, 1849	VI.
6335	Ball, William	Shoe-pegs, machine for cutting	July 16, 1849	XIV.
		Gold washer.	June 19, 1849	II.

Persons whose patents for inventions have expired, &c.—Continued.

No.	Patentee.	Invention or discovery.	Date.	Class.
6010	Baicker, Adrian, and Charles F. Alvord.	Hats, manufacture of.	Jan. 9, 1849.	XXI.
6011	Bancroft, Edward.	Mill shafting.	May 22, 1849.	XXII.
6012	Bancroft, Edward.	Mill, hanging shafts in.	Oct. 9, 1849.	XXIII.
6013	Bantz, Sidney A., and William Andrew.	Hark, mills for grinding.	Dec. 4, 1849.	XXIV.
6014	Barnard, Frederick S.	Skate.	April 17, 1849.	XXV.
6015	Barnes, James.	Valves, self-adjusting, for regulating the admission of air to fan-blowers.	Oct. 23, 1849.	XXVI.
6016	Barnes, William T.	Bridges, elliptical or oval truss-frame for.	Mar. 27, 1849.	XXVII.
6017	Barnes, William T.	Water, apparatus for raising.	Mar. 20, 1849.	XXVIII.
6018	Barnes, William T.	Belows.	April 24, 1849.	XXIX.
6019	Barnes, William T.	Auger-stock.	April 3, 1849.	XXX.
6020	Barnes, William T.	Window-sash, method of counterbalancing.	Dec. 4, 1849.	XXXI.
6021	Barnum, Daniel, and Thos. J. Wells, Wells ass'r to Barnum.	Planing machine.	Mar. 13, 1849.	XXXII.
6022	Barr, Oliver.	Harvesting machine.	Jan. 16, 1849.	XXXIII.
6023	Bartholomew, Frederick H., and Solumun Merrick.	Screw-wrench for grasping cylindrical forms.	Jan. 2, 1849.	XXXIV.
6024	Bartie, Warren S.	Boilers, steam, method of regulating the supply of water to.	Feb. 6, 1849.	XXXV.
6025	Bartlett, Albert G., Otis D. Ballou, administrator of.	Drills, grain.	Mar. 10, 1849.	XXXVI.
6026	Beach, Levi.	Time-piece, mode of applying springs in.	Sept. 25, 1849.	XXXVII.
6027	Beach, William.	Curry-combs.	Mar. 13, 1849.	XXXVIII.
6028	Beardsley, Charles S., and Simeon Wood.	Planes, bench.	Mar. 27, 1849.	XXXIX.
6029	Beardsley, Jonathan.	Spikes, hook bending, by one motion, machine for.	May 22, 1849.	XL.
6030	Beckers, Alexander.	Daguerrotypa plates, blocks for holding.	Oct. 23, 1849.	XLI.
6031	Bell, James.	Frames for doors, porcelain, method of mounting.	April 3, 1849.	XLII.
6032	Bell, James, assignor to Alfred D. Baldwin.	Fastener, combined sash and inside shutter.	Aug. 21, 1849.	XLIII.
6033	Bennett, Isaac L.	Lamps, self-lighting.	Mar. 27, 1849.	XLIV.
6034	Benson, Hosea and Lorenzo D.	Valves, piston, enclosed in the steam-cylinder.	Feb. 6, 1849.	XLV.
6035	Berney, Michael.	Staves, machinery for joining.	Sept. 25, 1849.	XLVI.
6036	Berry, William, ass'r to James D. Sparkman and Melville Kelsey.	Cars for dumping earth, &c.	Sept. 11, 1849.	XLVII.
6037	Bier, Charles C.	Surfacing floor oil-cloth.	Oct. 23, 1849.	XLVIII.
6038	Bigelow, Alfred, and Justus Butler.	Water-closets, portable.	Nov. 13, 1849.	XLIX.
6039	Bigelow, Erasmus B.	Looms.	Jan. 17, 1849.	XLX.
6040	Billings, Sylvester.	Looms for weaving Brussels carpeting, &c.	Mar. 13, 1849.	LI.
6041	Bishop, C. S.	Hat-brims, blocks for setting.	Aug. 7, 1849.	LII.
6042	Blake, L. W. and S. W.	Street-sweeping machines.	Sept. 4, 1849.	LIII.
6043	Bleeker, Henry.	Wagon-wheels.	April 21, 1849.	LIV.
6044	Bleeker, Henry and William E., and Samuel D. Vose.	Stoves, cooking, flues for.	Sept. 18, 1849.	LV.
6045	Bleeker, William E., and H., and Samuel D. Vose.	Cuttings, thin iron, process of making.	Dec. 25, 1849.	LVI.
6046	Bloodet, B. T., and H. B. Horton.	Stoves, cooking.	Mar. 27, 1849.	LVII.
6047	Bloodet, Sherburne C., and John A. Lerow.	Stoves, cooking.	July 3, 1849.	LVIII.
6048	Bloom, Abram.	Musical instruments, reed.	June 19, 1849.	LIX.
6049	Blunt, Edmund.	Sewing machines.	Oct. 2, 1849.	LI.
6050	Blunt, Orison.	Threshing machines.	Aug. 28, 1849.	LII.
6051	Blvs, William H.	Filters, arrangement of, for steam-boilers.	Aug. 14, 1849.	LIII.
6052		Lock for three-arms.	Dec. 25, 1849.	LIV.
6053		Planes for hovel-edge.	April 10, 1849.	LX.

6054	Boarman, Horace.	Boiler, steam, and furnace therefor, arrangement of.	Aug. 14, 1849.	VI.
6055	Boggs, William N.	Tables for ships' cabins.	May 1, 1849.	VII.
6056	Bolles, Jesse S., and Henry G. Knight.	Drilling machines, rock, method of turning the drill in.	May 1, 1841.	VIII.
6057	Bond, Alexander.	Propeller, sculling.	June 19, 1841.	IX.
6058	Bonnell, David P.	Flouring, process of.	Aug. 14, 1841.	X.
6059	Boone, Thomas G.	Carding machines.	Mar. 20, 1841.	XI.
6060	Boone, Thomas G., assignor to William C. Noyes.	Twine, manufacture of.	April 10, 1841.	XII.
6061	Bowditch, Edwin F.	Stoves, heating, construction of.	April 6, 1842.	XIII.
6062	Bourdon, Eugene.	Pressure-gauges.	Aug. 25, 1849.	XIV.
6063	Bourne, Edward.	Forceps, dentists.	Nov. 13, 1849.	XV.
6064	Bowditch, Edwin F.	Wheels, cast-iron car.	Mar. 20, 1849.	XVI.
6065	Boyden, Seth.	Bedsteads, sofa.	July 24, 1849.	XVII.
6066	Boyd, Amos H.	Looms, delivery and take-up, motion of.	Mar. 13, 1849.	XVIII.
6067	Boydton, Abram D.	Furnace for smelting zinc.	May 8, 1849.	XIX.
6068	Brewer, William, and John Smith.	Boots and shoes, machinery for cutting soles of.	Mar. 4, 1851; antedated Feb. 12, '49.	XX.
6069	Brierly, Edward.	Paper moulds.	Dec. 11, 1849.	XXI.
6070	Briggs, Henry F.	Dyeing, apparatus for.	April 17, 1849.	XXII.
6071	Briggs, Joseph W.	Shoulder-braces.	May 22, 1849.	XXIII.
6072	Briggs, Joseph W.	Hames.	June 12, 1849.	XXIV.
6073	Broad, Asa.	Saddles, harness.	June 5, 1849.	XXV.
6074	Brooke, James.	Cockeys for harness.	Dec. 18, 1849.	XXVI.
6075	Broquette, Charles A.	Staves, machinery for dressing.	May 15, 1849.	XXVII.
6076	Brown, Andrew L.	Bedstead fastenings.	April 13, 1851; antedated April 1, '49.	XXVIII.
6077	Brown, Edward R.	Material for transferring colors in calico printing.	Oct. 2, 1849.	XXIX.
6078	Brown, George W.	Candles, mould, apparatus for making.	June 5, 1849.	XXX.
6079	Brown, George W.	Stoves, parlor cooking.	June 5, 1849.	XXXI.
6080	Brown, George W.	Cultivators.	June 5, 1849.	XXXII.
6081	Brown, George W.	Bolts, flour.	Nov. 27, 1849.	XXXIII.
6082	Brown, George W.	Weather strips, roller.	Jan. 30, 1849.	XXXIV.
6083	Brown, Israel F.	Saws, circular, machinery for filing.	Oct. 2, 1849.	XXXV.
6084	Brown, John T., and Moses Fuller.	Brick-presses.	Dec. 11, 1849.	XXXVI.
6085	Brown, Lewis.	Robbins, &c., cutting out cylinders for.	April 24, 1849.	XXXVII.
6086	Brown, Tarlton W.	Tan vats.	April 17, 1849.	XXXVIII.
6087	Bryant, Henry.	Canvases, frames for stretching.	Sept. 25, 1849.	XXXIX.
6088	Bryant, Patrick.	Splices, instruments for drawing.	April 10, 1849.	XL.
6089	Bryant, Patrick, assignor to Elkanah Kling, jr., and Thos. Kling.	Hoops, cheese, &c., machines for cutting and slitting.	May 15, 1849.	XLI.
6090	Buckman, Christian W.	Fire-arm, cartridge tube and conveyor, forming a repeating.	Feb. 20, 1849.	XLII.
6091	Buckman, Isiah.	Bedsteads for invalids.	April 17, 1849.	XLIII.
6092	Buell, Albert, and Thomas Brown.	Suit machines.	July 17, 1849.	XLIV.
6093	Bull, James H.	Gold-washer, concentric centrifugal.	April 3, 1849.	XLV.
6094	Bullock, S. W.	Presses for pressing hay, cotton, &c., method of constructing.	Mar. 23, 1849.	XLVI.
6095	Bullock, William.	Drills, grain.	Jan. 2, 1850; antedated Oct. 29, '49.	XLVII.
6096	Burkhardt, Christian.	Fuel, consumption of, in steam boiler and other furnaces.	June 5, 1849.	XLVIII.
6097	Burden, Henry.	Iron, machinery for drawing out and compressing heated.	Oct. 16, 1849.	XLIX.
6098	Burdick, Allen.	Meat-cutters.	Aug. 21, 1849.	L.
6099	Burdick, Jason L.	Printing-presses.	Mar. 27, 1849.	XLI.
6100	Burrell, Thomas and Edward.	Straw-cutters.	April 24, 1849.	XLII.
6101	Burt, Henry.	Single machines, feed apparatus for.	Sept. 11, 1849.	XLIII.
6102	Burt, John.	Doors, double-inged, water-guard for.	Oct. 30, 1849.	XLIV.
6103	Bush, Fenner, and Julius H. Pratt.	Combs, ivory fine-tooth, making.	April 3, 1849.	XLV.

Persons whose patent for inventions have expired, &c.—Continued.

No.	Patentee.	Invention or discovery.	Date.	Class.
6228	Bushnell, Horace	Furnaces, air-heating.	Mar. 27, 1849.	V.
6109	Gall, Amos	Locks, door, by which one keyhole serves for two distinct keys.	Feb. 13, 1849.	II.
6029	Callaghan, James	Dredging machine, method of directing the scoops in.	Jan. 16, 1849.	IX.
6017	Gallard, George	Lanterns, signal.	July 31, 1849.	V.
6044	Calvert, Francis A.	Wool, &c., manufacture of cylinders for burring.	Jan. 21, 1849.	III.
6251	Calvert, Francis A.	Wool-cleaning and lapping machine.	Jan. 23, 1849.	III.
6252	Camp, Samuel H.	Tuyere, angular rotating.	Aug. 21, 1849.	III.
6785	Campbell, Samuel	Lapping machines.	Oct. 9, 1849.	III.
6014	Caples, Charles	Horse-powers, equalizing the action of gearing in.	July 31, 1849.	III.
6266	Carlock, William B.	Flange and sucks, manufacture of.	July 3, 1849.	III.
6296	Carpenter, Emanuel W.	Plane-irons, adjusting the position of, and regulating throats of planes.	Mar. 27, 1849.	XIV.
6286	Carpenter, John	Tailors' measures.	April 10, 1849.	XXI.
6458	Carter, Chandler	Boring and morticing machines.	May 22, 1849.	XIV.
6789	Carter, Charles P.	Apple-parers.	Oct. 16, 1849.	XVII.
6441	Carter, Ira, Jr.	Presses, cheese, self-acting.	Aug. 14, 1849.	XII.
6818	Cathart, Andrew	Locomotives for ascending inclined planes.	Oct. 23, 1849.	VI.
6119	Chadwick, Nelson E.	Drying-machines.	Feb. 20, 1849.	III.
6210	Chamberlain, Dexter H., assignor to Wm. A. Dodge	Wrench, sliding.	Mar. 20, 1849.	II.
6261	Chamberlain, Dexter H., assignor to Wm. A. Dodge	Awl haft.	April 3, 1849.	XVI.
6267	Chamberlain, Henry W.	Drawing boards.	Dec. 25, 1849.	XVIII.
6283	Chandler, Thomas A.	Mills for grinding.	July 10, 1849.	III.
6755	Chaplin, William A., Jr.	Lathes, varying the speed of the mandrel in.	Oct. 2, 1849.	XIV.
6295	Chapman, Abner	Roller flues, method of increasing the effective length of, and cleansing.	July 17, 1849.	VI.
6234	Chappell, Philip S. and William H.	Manures, artificial.	Mar. 27, 1849.	I.
6278	Chase, John	Ox-yokes.	Nov. 20, 1849.	I.
6466	Chase, Wesley	Fastening, opening, and shutting blinds, method of.	May 22, 1849.	II.
6125	Chever, Levi T.	Fire-kindling materials.	Feb. 20, 1849.	V.
6286	Chervey, E. B.	Veneers, &c., machinery for cutting.	April 17, 1849.	XIV.
6268	Chichester, Lewis S.	Staves, machinery for jointing.	July 3, 1849.	XIV.
6004	Chincock, Charles	Hubs and axles, connecting.	Jan. 9, 1849.	X.
6267	Chollar, John B.	Stoves, plates for boiler-boles and tops of.	Feb. 6, 1849.	V.
6724	Christ, Abraham	Ploughs, hand-held.	Sept. 18, 1849.	I.
6288	Christman, Charles G.	Plates.	Dec. 25, 1849.	XVIII.
6258	Clark, Charles	Flax, &c., machinery for spinning.	Oct. 2, 1849.	III.
6201	Clark, Edward	Saws.	April 3, 1849.	IV.
6235	Clark, Edwin and James M.	Lampblack and colophane, manufacture of.	Jan. 2, 1849.	XIII.
6114	Clark, F. H.	Flour, machinery for separating from bran, &c.	April 17, 1849.	XIII.
6416	Clarke, Augustus	Teeth-setting.	Feb. 13, 1849.	XX.
6784	Clarke, William	Chairs, easy.	May 1, 1849.	XVIII.
6764	Clinton, Thos. G., Geo. H. Knight, and Edward H. Knight.	Paper engines, bed plates for.	Oct. 2, 1849.	III.
6786	Clinton, Thos. G., Geo. H. Knight, and E. H. Knight.	Churn dashers, adjustable.	Oct. 2, 1849.	I.
6100	Cloud, Joseph C.	Stoves, cooking.	Oct. 16, 1849.	V.
6501	Coats, Stephen	Ploughs, corn.	Feb. 4, 1849.	I.
6294	Cobb, William	Stoves, cooking.	Feb. 6, 1849.	V.
6280	Cochrane, James C.	Fastener and stopper, self-acting such.	Aug. 21, 1849.	II.
6253	Cochran, John W.	Sawing ship-timber, &c., mills for.	Aug. 21, 1849.	XIV.
6205	Coffee, Goldsmith, Jr.	Freeters, ice-cream.	Nov. 13, 1849.	IV.
6313	Coffin, Richard	Gates, railroad machinery for operating by means of the locomotive.	June 5, 1849.	IX.
6142	Colborn, George F. J.	Locks, door, protector slide for.	Feb. 27, 1849.	I.
6250	Colby, George	Drill barrows.	June 12, 1849.	V.
6294	Cole, James	Stoves.	Oct. 30, 1849.	I.
6273	Cole, Luther	Seythe snaths.	Nov. 20, 1849.	I.
6577	Colver, Lewis W.	Washing-machines.	July 3, 1849.	XVII.
6726	Colver, Lewis W.	Churn dashers, rotary.	Sept. 18, 1849.	I.
6266	Colver, Nathaniel	Bedsteads.	April 24, 1849.	XVII.
6437	Conant, Jonathan S.	Sewing machines.	May 8, 1849.	X.
6096	Converse, A. T., and William S. Cooley	Wheels, cast-iron, car.	Jan. 9, 1849.	XVII.
6267	Coopers, William F., and Jonathan Burdge	Bedsteads, machinery for cutting screws on rails for.	April 24, 1849.	X.
6092	Cook, James M.	Wheels, cast-iron car.	Jan. 9, 1849.	X.
6121	Cook, Ransom	Ore separator, electro-magnetic.	Jan. 9, 1849.	X.
6842	Copeland, Charles W.	Powder magazines, method of flooding and entering.	Feb. 20, 1849.	II.
6913	Copeland, Charles W.	Valve, blow-off, of steam-boilers, method of regulating the.	Nov. 6, 1849.	XIX.
6003	Cornelius, Robert, and Chas. Welbelm, assignors to Robert Cornelius and Isaac F. Baker.	Lampwick, elevator tubes for.	Nov. 27, 1849.	VI.
6033	Corser, Elias	Clapboard machines.	July 24, 1849.	V.
6047	Cortlan, James	Baths, shower.	Jan. 16, 1849.	XIV.
6257	Couch, Joseph J.	Drilling rocks, machinery for.	Jan. 21, 1849.	XX.
6457	Coul, Joseph C. and Augustus B. Davis	Churns, atmospheric.	Jan. 21, 1849.	IX.
6757	Cox, Green S.	Composition for metallic packing in steam engines.	Mar. 27, 1849.	I.
6491	Cox, James, assignor to Jacob and John Pringle	Raising bricks, mortar, &c., extension machines for.	May 15, 1849.	IV.
6257	Cox, John J. and Samuel P.	Water, raising and conveying.	Oct. 2, 1849.	XII.
6280	Crafts, Ashley, and Ebenezer Weeks	Auger for boring earth.	June 5, 1849.	XI.
6918	Crafter, Ashley, and Ebenezer Weeks	Scraper, double revolving.	April 3, 1849.	IX.
6200	Crafter, James A.	Knobs, method of attaching to doors.	Nov. 20, 1849.	II.
6204	Criswell, William	Horse-collars, machines to manufacture.	Dec. 4, 1849.	XVI.
6208	Crosdale, William	Plough and seed planter combined.	Oct. 16, 1849.	II.
6271	Cronk, Munson C.	Bottles, cleansing.	Nov. 27, 1849.	XVII.
6793	Crooker, Matthew A.	Propellers, journals for oscillating.	Aug. 13, 1849.	II.
6222	Crooby, George, Camillus Kidder, administrator of.	File cutting machines.	Dec. 4, 1849.	II.
6253	Cruik, John, and Abraham Larwill	Broom, splint, machines.	Mar. 27, 1849.	XVII.
6254	Cumberland, John, and William W.	Compounds, lubricating.	April 13, 1849.	IV.
6040	Curtis, Lucius G.	Telegraphs, indicating.	Jan. 16, 1849.	VIII.
6266	Custer, Daniel	Drills, seed.	Nov. 13, 1849.	I.
6259	Cutler, Job	Method of liberating metal tubes from forming mandrel.	July 29, 1851; antedated Feb. 28, '49.	VI.
6559	Cutting, James A.	Spark-arresters.	June 26, 1849.	VI.
6014	Danforth, Charles	Drawing frames, stop motion for.	Jan. 9, 1849.	III.
6259	Daniels, Reuben, and Albert G. Dewey	Wool, &c., machinery for picking.	April 3, 1849.	XXII.
6495	Davis, Thomas A.	Trap, and method of setting it.	June 5, 1849.	XX.
6450	Davis, Henry G.	Supporters, spinal.	Aug. 28, 1849.	XV.
6471	Davis, Samuel W.	Marble, imitations of.	May 22, 1849.	XIV.
6408	Davis, Wilbur M.	Boxes, machinery for making.	Jan. 16, 1849.	IV.
6253	Davison, Thomas	Meats, salting.	Aug. 7, 1849.	X.
6074	Day, Jacob G.	Trucks, railroad.	Jan. 30, 1849.	II.
6278	Day, Jacob G., assignor to John L. Kingsley	Bolt and rivet machine, rotating disk.	July 3, 1849.	III.
6143	Day, Lewis K. and Preston	Temples, weavers.	Feb. 27, 1849.	III.

No.	Patentee.	Invention or discovery.	Date.	Class.
6029	Cobb, William	Stoves, cooking.	Feb. 6, 1849.	V.
6280	Cochrane, James C.	Fastener and stopper, self-acting such.	Aug. 21, 1849.	II.
6253	Cochran, John W.	Sawing ship-timber, &c., mills for.	Aug. 21, 1849.	XIV.
6205	Coffee, Goldsmith, Jr.	Freeters, ice-cream.	Nov. 13, 1849.	IV.
6313	Coffin, Richard	Gates, railroad machinery for operating by means of the locomotive.	June 5, 1849.	IX.
6142	Colborn, George F. J.	Locks, door, protector slide for.	Feb. 27, 1849.	I.
6250	Colby, George	Drill barrows.	June 12, 1849.	V.
6294	Cole, James	Stoves.	Oct. 30, 1849.	I.
6273	Cole, Luther	Seythe snaths.	Nov. 20, 1849.	I.
6577	Colver, Lewis W.	Washing-machines.	July 3, 1849.	XVII.
6726	Colver, Lewis W.	Churn dashers, rotary.	Sept. 18, 1849.	I.
6266	Colver, Nathaniel	Bedsteads.	April 24, 1849.	XVII.
6437	Conant, Jonathan S.	Sewing machines.	May 8, 1849.	X.
6096	Converse, A. T., and William S. Cooley	Wheels, cast-iron, car.	Jan. 9, 1849.	XVII.
6267	Coopers, William F., and Jonathan Burdge	Bedsteads, machinery for cutting screws on rails for.	April 24, 1849.	X.
6092	Cook, James M.	Wheels, cast-iron car.	Jan. 9, 1849.	X.
6121	Cook, Ransom	Ore separator, electro-magnetic.	Jan. 9, 1849.	X.
6842	Copeland, Charles W.	Powder magazines, method of flooding and entering.	Feb. 20, 1849.	II.
6913	Copeland, Charles W.	Valve, blow-off, of steam-boilers, method of regulating the.	Nov. 6, 1849.	XIX.
6003	Cornelius, Robert, and Chas. Welbelm, assignors to Robert Cornelius and Isaac F. Baker.	Lampwick, elevator tubes for.	Nov. 27, 1849.	VI.
6033	Corser, Elias	Clapboard machines.	July 24, 1849.	V.
6047	Cortlan, James	Baths, shower.	Jan. 16, 1849.	XIV.
6257	Couch, Joseph J.	Drilling rocks, machinery for.	Jan. 21, 1849.	XX.
6457	Coul, Joseph C. and Augustus B. Davis	Churns, atmospheric.	Jan. 21, 1849.	IX.
6757	Cox, Green S.	Composition for metallic packing in steam engines.	Mar. 27, 1849.	I.
6491	Cox, James, assignor to Jacob and John Pringle	Raising bricks, mortar, &c., extension machines for.	May 15, 1849.	IV.
6257	Cox, John J. and Samuel P.	Water, raising and conveying.	Oct. 2, 1849.	XII.
6280	Crafts, Ashley, and Ebenezer Weeks	Auger for boring earth.	June 5, 1849.	XI.
6918	Crafter, Ashley, and Ebenezer Weeks	Scraper, double revolving.	April 3, 1849.	IX.
6200	Crafter, James A.	Knobs, method of attaching to doors.	Nov. 20, 1849.	II.
6204	Criswell, William	Horse-collars, machines to manufacture.	Dec. 4, 1849.	XVI.
6208	Crosdale, William	Plough and seed planter combined.	Oct. 16, 1849.	II.
6271	Cronk, Munson C.	Bottles, cleansing.	Nov. 27, 1849.	XVII.
6793	Crooker, Matthew A.	Propellers, journals for oscillating.	Aug. 13, 1849.	II.
6222	Crooby, George, Camillus Kidder, administrator of.	File cutting machines.	Dec. 4, 1849.	II.
6253	Cruik, John, and Abraham Larwill	Broom, splint, machines.	Mar. 27, 1849.	XVII.
6254	Cumberland, John, and William W.	Compounds, lubricating.	April 13, 1849.	IV.
6040	Curtis, Lucius G.	Telegraphs, indicating.	Jan. 16, 1849.	VIII.
6266	Custer, Daniel	Drills, seed.	Nov. 13, 1849.	I.
6259	Cutler, Job	Method of liberating metal tubes from forming mandrel.	July 29, 1851; antedated Feb. 28, '49.	VI.
6559	Cutting, James A.	Spark-arresters.	June 26, 1849.	VI.
6014	Danforth, Charles	Drawing frames, stop motion for.	Jan. 9, 1849.	III.
6259	Daniels, Reuben, and Albert G. Dewey	Wool, &c., machinery for picking.	April 3, 1849.	XXII.
6495	Davis, Thomas A.	Trap, and method of setting it.	June 5, 1849.	XX.
6450	Davis, Henry G.	Supporters, spinal.	Aug. 28, 1849.	XV.
6471	Davis, Samuel W.	Marble, imitations of.	May 22, 1849.	XIV.
6408	Davis, Wilbur M.	Boxes, machinery for making.	Jan. 16, 1849.	IV.
6253	Davison, Thomas	Meats, salting.	Aug. 7, 1849.	X.
6074	Day, Jacob G.	Trucks, railroad.	Jan. 30, 1849.	II.
6278	Day, Jacob G., assignor to John L. Kingsley	Bolt and rivet machine, rotating disk.	July 3, 1849.	III.
6143	Day, Lewis K. and Preston	Temples, weavers.	Feb. 27, 1849.	III.

Persons whose patents for inventions have expired, &c.—Continued.

No.	Patentee.	Invention or discovery.	Date.	Class.
6019	Dean, Linus, and A. Higbam	Wheels, cast-iron car	Jan. 9, 1849.	X.
6198	Dearborn, John M.	Ranges, cooking	Mar. 20, 1849.	V.
6061	Docker, John	Freezers, ice-cream	Aug. 21, 1849.	IV.
6067	Degan, Francis	Flat-brims, curling	Nov. 13, 1849.	XVI.
6176	De Haven, John J.	Fire-box, removable, for locomotives	April 24, 1849.	VI.
6168	De Haven, John J.	Fire-boxes of steam boilers, removable, water lining for the	Oct. 2, 1849.	VI.
6181	Delano, Calvia	Rakes, horse	Feb. 27, 1849.	III.
6303	Dempey, Robert M.	Iron-dusters	Dec. 15, 1849.	XVI.
6010	Devlan, Patrick S., assignor to G. S. Langdon	Boot heels, metallic	July 24, 1849.	VI.
6049	Dickey, Ebenezer J.	Planters, seed	Jan. 23, 1849.	I.
6316	Diehl, David	Planters, seed	June 12, 1849.	II.
6291	Diehl, Hannah, and Charles M., administrators of William Diehl, deceased	Nail plate feeder	April 10, 1849.	VI.
6182	Dimpfel, Frederick P.	Smoke-consuming apparatus	Mar. 13, 1849.	VI.
6075	Doan, George N.	Drilling machines, combined construction and operation of the drill in	Aug. 24, 1849.	IX.
6772	Doane, Calvia	Ovens, portable	Oct. 9, 1849.	V.
6435	Dodge, George H.	Yarn, apparatus for spooling	May 8, 1849.	III.
6102	Dory, Cyrus B.	Bricks, coloring	Feb. 6, 1849.	XV.
6732	Dougherty, J. H.	Privies, signal for	Sept. 18, 1849.	IX.
6385	Dow, C. C.	Bonnets, pressing	July 10, 1849.	XVI.
6446	Dow, Jesse E.	Tent frames	June 5, 1849.	IX.
6970	Dow, Phineas	Borer and elevator, earth	Dec. 25, 1849.	IX.
6009	Downer, Charles	Unloading cars, &c., apparatus for	July 24, 1849.	III.
6144	Draper, George	Temples, jaw, for looms	Feb. 27, 1849.	III.
6091	Dugard, Thomas	Saw-mills, curvilinear	Nov. 30, 1849.	XIV.
6022	Dugdale, Joseph A.	Stoves, cooking	July 31, 1849.	V.
6478	Dunham, Daniel	Laufrond turnout	May 29, 1849.	IX.
6493	Dutton, Carlton	Lamps for essential oils, &c.	June 5, 1849.	V.
2658	Dyott, Michael B.	Ballances for weighing	May 30, 1842.	III.
6344	Eastman, Arthur M.	Stone-dressing machines	April 17, 1849.	XII.
6174	Eastman, Robert, assignor to Maria L. Eastman	Looms for figured fabrics	Mar. 13, 1849.	XV.
6919	Esays, William	Turning irregular forms, machinery for	Dec. 4, 1849.	III.
7137	Eedes, Samuel	Pearlsh, manufacture of	Mar. 5, 1850, antedated Dec. 23, '49.	IV.
6134	Eddy, James M., assignor to John Kimball	Churn dashers, rotary	Sept. 18, 1849.	I.
6117	Edwards, William A.	Hemp, &c., machinery for breaking and dressing	April 24, 1849.	III.
6777	Edgert, D. N.	Ploughs, hill-side	July 24, 1849.	IX.
6371	Eldred, Allen	Rail, two-part, tubular	Mar. 10, 1849.	IX.
6008	Eldred, Allen	Crudle, revolving, for unlading canal-boats or sections thereof	April 10, 1849.	IX.
6164	Elgar, John	Scuds, lever, for canals, railroads, &c.	Feb. 6, 1849.	VI.
6303	Ellicott, Ely, and Samuel A. Abbott	Locomotive, with driving axle above the boiler	May 1, 1849.	II.
6097	Emerson, Richard H.	Gold-washer	Aug. 28, 1849.	VI.
6401	English, Michael	Steam-engine, an auxiliary employment of, in combination with the condenser pump	April 3, 1849.	VI.
6253	Ertson, John			

6044	Ertson, John	Engine, arrangement of, for using steam expansively	Nov. 6, 1849.	VI.
6152	Essex, Jeremiah	Squires, carpenters, machine for making	April 17, 1849.	XIV.
6746	Essex, Jeremiah	Baths, shower	Sept. 25, 1849.	XX.
6061	Evans, Evan Lewis	Stoves, cooking	Jan. 30, 1849.	V.
6291	Ewing, David L.	Wheat-cleaning machines	July 17, 1849.	I.
6027	Fagin, Lewis	Mills for grinding	Oct. 30, 1849.	XIII.
6169	Fairbanks, Thaddeus	Ballances, double-scale	Mar. 20, 1849.	XII.
6192	Fairbank, Jehiel T.	Seals, platform	Nov. 20, 1849.	XI.
6756	Farrand, Jehiel T., and William Hinman	Water, apparatus for drawing, from wells	Mar. 20, 1849.	XI.
6316	Faulkner, Augustus	Water, machinery for raising, from wells	Oct. 2, 1849.	III.
6013	Faulkner, Augustus	Looms for weaving	April 17, 1849.	III.
6077	Felton, Joseph	Looms	Jan. 30, 1849.	V.
6041	Felton, Horace, Perley D. Cutanings, and Harrington Hineckly	Stoves, cooking	Jan. 23, 1849.	X.
6307	Fenton, C. W.	Wheels, cast-iron plate car	Nov. 27, 1849.	XV.
6723	Ferrell, William	Pottery ware, glazing	April 17, 1849.	II.
6664	Fife, Andrew	Fastener, stopper such	Aug. 24, 1849.	XVIII.
6278	Fife, Matthew S.	Inkstands	April 3, 1849.	I.
6018	Filkins, John D.	Pens, metallic	Jan. 9, 1849.	X.
6657	Fitch, Edward	Bog-cutters	Aug. 21, 1849.	XIII.
6068	Fitzley, James	Wheels, car, manufacture of	Nov. 13, 1849.	IV.
6379	Flacey, William C.	Regulators for water-wheels, &c.	April 24, 1849.	I.
7616	Fletcher, Conrad W.	Cotton scrapers	Sept. 3, 1850, antedated Oct. 12, '49.	I.
6393	Fisher, Luther B.	Sugars, draining	July 17, 1849.	II.
6034	Fisher, M., and W. Martin, Jr.	Vegetables, cutting, crushing, and grinding	Jan. 23, 1849.	I.
6363	Fisk, John W.	Iron, cast, process for welding to wrought or steel	July 3, 1849.	XX.
6090	Fitch, Samuel S.	Snowing machines	June 5, 1849.	XIX.
6070	Fitzgerald, Jesse	Braces, shoulder	Feb. 6, 1849.	VII.
6070	Fitzgerald, Jesse	Cannon, sectional, bolt and disk	Aug. 28, 1849.	X.
6684	Flack, John J.	Trenbille, machinery for dressing	Sept. 4, 1849.	VI.
6037	Flack, Josiah F.	Axles of carriages	Aug. 7, 1849.	IX.
6042	Flack, J. F. B.	Spark-arresters, locomotive, and smoke-conductors	Jan. 23, 1849.	II.
5994	Flanders, Joseph F.	Railroads, rails and wheels for turning curves of	Jan. 2, 1849.	XV.
6383	Fletcher, George, sr.	Shears, circular, and beading tool combined	April 24, 1849.	XII.
6194	Flinn, Tilly and Warren	Stone, machines for polishing	Mar. 20, 1849.	XVIII.
6025	Folger, Andrew J.	Steelyards for weighing	Oct. 30, 1849.	I.
6073	Follet, Abner	Accounts, ledger, keeping	Oct. 16, 1849.	IV.
6297	Forbes, Archibald H.	Bog-cutting machines	April 10, 1849.	XXII.
6015	Forbes, Robert B., and John Ericsson	Bottle-stopper, undetachable swiveling	Oct. 23, 1849.	X.
6442	Ford, Mason H.	Distilling sea-water, apparatus for	May 8, 1849.	XV.
6379	Foster, Charles	Carriages, railway, annunciators for	April 24, 1849.	XIII.
6020	Foster, Junius	Grindstones, machines for making	April 24, 1849.	X.
6450	Fountain, James L. and Henry K.	Belts, rope, forks for holding upon drum wheels	July 24, 1849.	I.
6344	Francisco, Samuel P.	Hub, connecting with axles	Dec. 4, 1849.	I.
6022	Frank, Theodore	Grain separators	May 15, 1849.	I.
6486	Frost, John W.	Harvesters	June 19, 1849.	XVII.
6486	Fulton, George W.	Churns, atmospheric	April 10, 1849.	XV.
6314	Furley, William	Tables, extension	Nov. 20, 1849.	XI.
6034	Garther, Abel	Bricks, machines for moulding	Oct. 30, 1849.	XVI.
6238	Garnsey, Ebenezer	Barrel carriages	Dec. 11, 1849.	IX.
		Hames, apparatus for bending		
		Weather strip	Oct.	

Persons whose patents for inventions have expired, &c.—Continued.

No.	Patentee.	Invention or discovery.	Date.	Class.
6845	Garside, Richard.	Looms for weaving figured fabrics.	Nov. 6, 1849.	III.
6846	Garside, Joseph, and Henry J. Benjamin.	Bedsteads, machinery for cutting screws in.	Aug. 28, 1849.	XVII.
6847	Gatchell, Joshua L.	Runa, water.	April 17, 1849.	XI.
6848	Gay, David.	River fountains, portable.	April 24, 1849.	IV.
6849	George, Annul M., and Ephraim Brown, assignors to Nathan Richards and Lucius C. Alexander.	Spiko machine, revolving die.	May 18, 1849.	II.
6850	George, Dennis, Jr., and Norman Millington.	Squares, carpenters', graduating.	Aug. 28, 1849.	XIV.
6851	Grow, John L.	Stoves, cooking.	Jan. 30, 1849.	V.
6852	Gilbert, George.	Staves, machinery for dressing.	April 17, 1849.	XIV.
6853	Gill, George E., and Joseph B. Tillingham.	Churns.	June 19, 1849.	I.
6854	Gilman, Alonzo, assignor to William Johnson.	Paper, machines for cutting.	Sept. 4, 1849.	III.
6855	Gilmore, Arza.	Beehives.	June 5, 1849.	I.
6856	Goffin, Francis Charles.	Lock, door, by a combined key and gauge, also a thief detector.	Mar. 10, 1849.	II.
6857	Goffin, Francis C., and Conrad Liebrich.	Lock, pad.	June 12, 1849.	II.
6858	Goodman, Agalena S.	Broom brushes.	May 8, 1849.	XVII.
6859	Goodman, Allen, and Hammond Doane.	Lathes for turning.	Nov. 6, 1849.	XIV.
6860	Goodyear, Nelson.	Suspenders, elastic cords for.	Oct. 16, 1849.	XI.
6861	Granger, R. D.	Windmills.	July 3, 1849.	V.
6862	Granger, R. D.	Stoves, cooking.	Jan. 30, 1849.	XIV.
6863	Grant, William.	Stoves, cooking.	Jan. 30, 1849.	XI.
6864	Gray, A. N.	Ladies, chucks for.	Jan. 30, 1849.	V.
6865	Green, Benjamin H.	Whiffletree hook.	Jan. 23, 1849.	XIV.
6866	Green, Thomas J.	Telegraph wires, painting.	July 24, 1849.	IX.
6867	Greene, James D.	Gold-washers, rockers of.	Jan. 9, 1849.	IX.
6868	Greenwood, Asa.	Bouts, life, form of the air chambers of.	Oct. 16, 1849.	II.
6869	Greenville, Alonzo S.	Clothes-pls, machinery for turning.	Sept. 25, 1849.	VII.
6870	Grice, Francis.	Compound, lubricating.	Dec. 11, 1849.	XVII.
6871	Groat, Gideon.	Vessels, blocks for supporting bilges and keels of.	Jan. 30, 1849.	IV.
6872	Gridley, Josiah A.	Brakes for carriages.	Feb. 20, 1849.	VII.
6873	Griffiths, Robert.	Churn dashers.	June 5, 1849.	X.
6874	Grimes, William C.	Propeller.	May 1, 1849.	I.
6875	Grinnell, Samuel H.	Rakes, horse.	April 7, 1857; antedated Sept. 13, '49.	VII.
6876	Guild, Martha.	Ropes, machinery for laying.	Feb. 12, 1842.	VI.
6877	Halle, Asahel B.	Hemorrhage, instruments for arresting from internal organs or cavities.	Feb. 20, 1849.	I.
6878	Haines, William M.	Calculating machines.	May 8, 1849.	III.
6879	Hallbert, Horace.	Stoves, cooking.	Oct. 16, 1849.	XX.
6880	Hall, Alfred.	Brick press, construction of the.	May 1, 1849.	VIII.
6881	Hall, Alexander.	Churns.	May 29, 1849.	XV.
6882	Hall, John S.	Mill for rolling irregular shapes by means of a cam pattern.	Sept. 9, 1842.	I.
6883	Hall, Lewis A.	Trusses.	Jan. 30, 1849.	II.
6884	Harbuck, Frederick K.	Furnace, multiple grate, for locomotive boilers.	May 8, 1849.	XX.
6885	Harwick, Peter W.	Fruit, paring and coring.	Jan. 30, 1849.	VI.
6886	Harmou, Emanuel.	Pictures, shading, by metallic leaves.	Sept. 25, 1849.	I.
6887	Harris, Daniel K. and John K.	Mowing machines.	Mar. 27, 1849.	XVIII.
6888			Nov. 6, 1849.	I.

No.	Patentee.	Invention or discovery.	Date.	Class.
6889	Harris, D. W., and E. P. Carter, assignors to Carter, Harris & Carter.	Corn-shellers.	Nov. 6, 1849.	XIII.
6890	Harris, Ephraim.	Tuyers, blacksmiths' rotary.	Jan. 9, 1849.	II.
6891	Hart, Carnal.	Wheels, cast-iron car.	Dec. 25, 1849.	X.
6892	Hart, Carnal, and Nathan Washburn.	Wheels, cast-iron car.	April 3, 1849.	X.
6893	Hartley, Lewis M.	Lock, double-bolt trick.	Dec. 11, 1849.	II.
6894	Hartshorne, Charles, and William B. Shaw.	Lock, machinery for turning right and left.	Nov. 13, 1849.	XVI.
6895	Hartung, Charles, assignor to J. B. Klein.	Fire-arm, safety sliding breech.	Nov. 13, 1849.	XVI.
6896	Harzborn, Sheldon S.	Buckles, suspender.	Sept. 25, 1849.	XXI.
6897	Harvey, Thomas W., assignor to Frederick Goodell.	Lock, gun, rotating tumbler.	Jan. 19, 1849.	XIX.
6898	Hastett, Lewis P.	Inhalers or lung-protectors.	June 12, 1849.	XX.
6899	Hatch, Warren D.	Car, couplings for.	Oct. 2, 1849.	X.
6900	Hathfield, Robert O., and Oliver P.	Railway propeller.	April 17, 1849.	XIV.
6901	Hathway, Gilbert.	Saw-mills, with cylindrical saws.	April 24, 1849.	III.
6902	Hay, Adam.	Wrench, hinged claw.	Jan. 30, 1849.	III.
6903	Hayden, Daniel W.	Curling-machines.	Oct. 2, 1849.	III.
6904	Hayden, Josiah, and Rufus Hyde.	Button moulds, manufacture of.	Aug. 7, 1849.	XXI.
6905	Hayden, Whiting.	Guides for warpers.	Mar. 27, 1849.	III.
6906	Hayes, John P.	Furnaces, portable hot-air.	Mar. 27, 1849.	V.
6907	Hedge, Lemuel.	Saw-mills.	May 8, 1849.	XIV.
6908	Hedden, William.	Grain-gatherers.	Mar. 13, 1849.	I.
6909	Hershey, Isaac S.	Hides, machines for breaking.	Sept. 11, 1849.	XVI.
6910	Heygel, Joseph.	Smart-machines.	June 5, 1849.	XIII.
6911	Hewitt, Henry W.	Propellers, reciprocating.	Oct. 9, 1849.	XVI.
6912	Hibbard, Harmon.	Tanning leather by tannin and acids.	Oct. 16, 1849.	IX.
6913	Hibbard, William C.	Hemp, machinery for spinning.	April 24, 1849.	III.
6914	Hicks, William C.	Railway switches, method of operating.	May 8, 1849.	III.
6915	Higgins, John, and Hiram H.	Cloth, machinery for dressing and folding.	Mar. 10, 1849.	XX.
6916	Hill, Asa, and Samuel G. Blackman.	Teeth, compositions for filling.	Feb. 13, 1849.	IV.
6917	Hills, Edwin.	Steam tables.	Aug. 14, 1849.	XVII.
6918	Hinkley, Benjamin.	Bedsteads.	Dec. 25, 1849.	I.
6919	Hinton, John.	Harvesters of clover heads.	May 22, 1849.	XXII.
6920	Hobbs, Alfred C., and John Brown.	Ice, machine for crushing.	Sept. 4, 1849.	III.
6921	Hodgman, Daniel, and Amos D. Wyckoff.	Mats, &c., machinery for making.	May 1, 1849.	II.
6922	Hoe, Richard M.	Metallic surfaces, particularly saw-plates, machinery for holding and grinding.	May 30, 1842.	VII.
6923	Hoffman, John M.	Centre-board, folding.	April 10, 1849.	IX.
6924	Hoffman, John W.	Stopper, sack spring and tackle.	July 10, 1849.	IX.
6925	Hoffman, John W., assignor to Lewis B. Kelley and Benjamin Harper.	Railroad track, lever to be placed on a, and acted upon by the wheels of cars or locomotives.	June 19, 1849.	IX.
6926	Hollingsworth, J. M., assignor to Henry A. Landry.	Paper, machinery for taking and laying, from the cutting engine.	Dec. 4, 1849.	III.
6927	Holly, Birdsell, assignor to Abel Downs, Edward Mynderse, Horace C. Sibley, and Washburn Race.	Pumps.	April 17, 1849.	XI.
6928	Holly, Henry W.	Machine-stands.	June 5, 1849.	XVIII.
6929	Holton, Simon, Jr., and William E. Harris.	Looms, machines for weaving harness for.	Feb. 6, 1849.	III.
6930	Honey, Joseph S.	Cultivator teeth.	Sept. 4, 1849.	I.
6931	Hood, John W.	Trusses.	April 17, 1849.	XX.
6932	Hopkins, Charles.	Account books, blank.	Nov. 27, 1849.	XVIII.
6933	Hopkins, John.	Brewing and preserving alcoholic drinks.	Nov. 27, 1849.	IV.
6934	Hopkins, Stevens D.	Gates, hood, for fences.	May 8, 1849.	IX.
6935	Hopper, Thomas, and Thomas Garrison.	Journals and boxes.	Nov. 20, 1849.	IX.
6936			Jan. 2, 1849.	X.

Persons whose patents for inventions have expired, &c.—Continued.

No.	Patentee.	Invention or discovery.	Date.	Class.
6733	Horn, Edwin B.	Lock, door	Sept. 25, 1849.	II.
6770	Horner, Eli R., and William Holland	Boot-cripps	Oct. 2, 1849.	XVI.
6842	Horst, Charles	Piano-fortes	April 17, 1849.	XVIII.
6178	Hotchkiss, Andrew	Curry-combs	Mar. 13, 1849.	II.
6392	Hotchkiss, Andrew	Ox-yoke fastenings	July 17, 1849.	I.
6399	Hotchkiss, David, and Benjamin R. Norton	Spectacle glasses	April 13, 1849.	VIII.
6282	Houghton, Harvey, Lucrécia Houghton, administratrix of	Self telegraph	Mar. 30, 1849.	II.
6674	Hovey, Simon	Bedstead fastenings	Aug. 28, 1849.	XVII.
6251	Howard, John C.	Steam-engines, rotary	April 3, 1849.	VI.
6848	Howell, A. J.	Winnowing machines	Nov. 6, 1849.	I.
6321	Hoyt, William	Locomotives, cog-gearing of, for ascending inclined planes.	April 17, 1849.	VI.
6333	Hubbard, Herbert R., and George W.	Supporters, abdominal	April 17, 1849.	XX.
6384	Hubbs, Paul K.	Filtering apparatus for steamboat boilers.	April 21, 1849.	VI.
6389	Huff, Samuel	Churns	Jan. 9, 1849.	I.
6006	Hunt, Adoniram F., and James S. Bradish	Musical instruments	April 24, 1849.	XVIII.
6217	Hunt, Walter, assignor to William and John Richardson	Plus, dress	Jan. 9, 1849.	XXI.
6147	Hunter, Stephen R., and Mead Merrill	Hubs and axles, manufacture of	Feb. 20, 1849.	XVI.
6131	Huntington, Samuel	Windmills	June 5, 1849.	XI.
6436	Hutchinson, Charles B.	Fire-escapes	Mar. 10, 1849.	XXII.
6155	Hüttmann, George A. W., and George Koch Kornelio	Spring, carriage	April 3, 1849.	X.
6276	Hyde, Hiram T.	Initiation stone	June 15, 1852; antedated Apr. 25, '49.	XV.
9426	Iles, Osaac	Tanning by electricity	April 24, 1849.	XVI.
6373	Irling, Ephraim	Stoves, coal, grates for	April 17, 1849.	V.
6358	Ibister, Caleb	Laucets, spring	Mar. 27, 1849.	XX.
6240	Ives, Joseph	Drilling machine, combined spring rock	Jan. 2, 1849.	IX.
6073	Jack, Samuel, 2d	Carriage bodies, hanging	Mar. 20, 1849.	X.
6213	Jackson, Israel	Mosquito bars, frames for	April 24, 1849.	XVII.
6390	Jacques, L. Aimélio Prosper	Pump pistons, packing	Dec. 11, 1849.	XI.
6037	Jeffrey, Edwin A.	Fences, wire	Feb. 13, 1849.	IX.
6106	Jenkins, Henry	Drawing-heads, mode of changing the gearing of, while in motion	Dec. 11, 1849.	II.
6238	Jenks, Alfred	Shingles, machinery for dressing	Oct. 2, 1849.	XIV.
6716	Jenny, Franklith	Gold-washer	Sept. 18, 1849.	II.
6410	Jennings, Lewis	Gold-washer	May 1, 1849.	II.
6973	Jennings, Lewis, assignor to George A. Arrowsmith	Fire-arms, breech-loading	Dec. 25, 1849.	XIX.
6267	Jennison, William H.	Filtering diaphragm, self-regulating	April 3, 1849.	II.
6408	Jenkinson, William H.	Planing machines	May 1, 1849.	XI.
6859	Jeter, Hugh, assignor to Jeter & Watson	Brushes, shaving	Oct. 30, 1849.	XIV.
6293	Jewett, William S.	Staves, machinery for jointing	April 10, 1849.	XI.
6910	Johnson, A., and H.	Cock, stop, and filters, in combination	Aug. 28, 1849.	XIV.
6288	Johnson, James H.	Laucet-spring	Nov. 27, 1849.	XX.
6287	Johnson, Job	Fish-hook, spring snap	April 10, 1849.	XX.
7168	Johnson, John, assignor to Elias Johnson	Looms for weaving piled fabrics	Mar. 20, 1849.	XXII.
6175	Johnson, William J.	Presses, cotton	Mar. 12, 1850; antedated Mar. 9, '49.	III.

No.	Patentee.	Invention or discovery.	Date.	Class.
6700	Johnson, David	Stoves, cooking	Sept. 4, 1849.	V.
6184	Johnson, John, and John D. Snyder	Cloth, apparatus for dressing	Mar. 17, 1849.	III.
6366	Johnson, Joseph	Flour, machinery for separating from bran	April 17, 1849.	XIII.
6915	Jones, Daniel, jr.	Jellie, fog, method of rugging, and an adjustable clapper for the same	Aug. 22, 1849.	VII.
6881	Jordan, Elijah	Ink fontains	Nov. 20, 1849.	XVIII.
7939	Judkins, Charles T.	Rope, machinery	Feb. 18, 1851; antedated Feb. 10, '49.	III.
6166	Joslin, William	Weavers' beddies	Mar. 10, 1849.	III.
6721	Kaighn, Elias	Stoves, cooking	Sept. 16, 1849.	V.
6814	Karney, John	Bedsteads, invalid	Oct. 20, 1849.	XVII.
6895	Keane, Samuel, jr.	Wells, machines for cutting	Sept. 4, 1849.	XVI.
6870	Kellogg, John	Hubs, connecting to axles	Nov. 13, 1849.	X.
6101	Kellogg, Lansing	Presses, cheese	Feb. 6, 1849.	XII.
6277	Kendall, Stephen	Punching machine	April 3, 1849.	IX.
6313	Kendall, Thomas	Drilling submarine rock, apparatus for	April 17, 1849.	XIII.
6382	Keppeler, Israel	Corn-shellers	April 24, 1849.	II.
6467	Kerbaw, Edward	Keyhole protector	May 22, 1849.	II.
6140	King, Julius	Nuts and bolt-heads, machine for dressing	Feb. 27, 1849.	II.
6374	King, Thomas	Washing machines	July 3, 1849.	XVII.
6739	Kingland, Cornelius	Grate-bars	Oct. 16, 1849.	V.
6359	Kirby, Josiah	Treadmill machine	Aug. 21, 1849.	VII.
6353	Kirkham, Peter, assignor to Wm. R. Hitchcock & Co.	Buttons, manufacture of	Dec. 18, 1849.	XXI.
6631	Kirkham, Peter, assignor to Wm. R. Hitchcock & Co.	Buttons, covered	Aug. 14, 1849.	XXI.
13575	Knaab, David C.	Gas, manufacture of	Mar. 9, 1858; antedated Mar. 30, '49.	IV.
6324	Knap, Cyrus	Milking cows, instrument for	Nov. 29, 1849.	I.
6370	Knight, Isaac	Trucks for railroad cars	June 12, 1849.	X.
6370	Knowles, Hazard, assignor to John Levy	Tonguing and grooving, cutters for	April 17, 1849.	XIV.
6359	Knowles, Hazard	Mill bushes	Jan. 16, 1849.	XIV.
6738	Knowles, Hazard	Planing machines	April 10, 1849.	IV.
6354	Krauser, Samuel	Veneering, ends for	Sept. 25, 1849.	I.
6386	Kreebier, Charles A.	Harvesters, clover	Dec. 18, 1849.	II.
6771	Lacharme, Louis	Distilling apparatus	July 12, 1849.	II.
6613	La Dow, James	Gold-washers	Oct. 2, 1849.	XVI.
6373	Laird, Joshua	Boots and shoes, machines for pegging	July 31, 1849.	II.
5983	Larabee, Ephraim	Knobs, shafts for mineral door	May 22, 1849.	XX.
6406	Lawrence, Henry	Baths, shower	Jan. 2, 1849.	XX.
6443	Law, Harvey	Teeth, artificial	May 1, 1849.	XIV.
6309	Law, Harvey	Staves, machinery for dressing	May 8, 1849.	III.
6169	Lawton, H. B. and H. T.	Planing machines	April 10, 1849.	III.
5959	Layman, Jesse	Cotton basting	Mar. 13, 1849.	III.
6463	Layton, William Y.	Ploughs	Jan. 2, 1849.	III.
6242	Learned, Charles, and Stephen Hughes	Gins, cotton	May 22, 1849.	III.
6485	Learned, Elijah	Flour, machinery for dressing	Nov. 27, 1849.	XIII.
6831	Leavenworth, Lucius	Holding apparatus	Feb. 6, 1849.	IX.
6775	Leffel, James	Fences	Oct. 9, 1849.	V.
5808	Leland, Abner	Stoves, cooking	Jan. 2, 1849.	I.
6074	Lent, Charles A.	Ploughs, combined	Jan. 30, 1849.	XXI.
6723	Leonard, George, jr.	Locks, suspender, machine for making	Sept. 18, 1849.	XIX.
6284	Leslie, Frank	Fire-arm, with several stationary barrels, and a revolving hammer	Nov. 20, 1849.	XVII.
6348	Levington, Robert	Table and bedstead combined	April 17, 1849.	X.
6730	Lewis, H. L. B.	Boxes for railroad cars	Sept. 18, 1849.	X.
6819	Lewis, William and William H.	Cars, couplings for	Oct. 23, 1849.	XVIII.
		Daguerreotype plates, apparatus for holding		

Persons whose patents for inventions have expired, &c.—Continued.

No.	Patentee.	Invention or discovery.	Date.	Class.
6431	Lewis, William and William H.	Daguerreotype apparatus for gilding plates.	May 8, 1849.	XVIII.
6432	Lightbower, Roger.	Looms, power.	Oct. 30, 1849.	III.
6433	Lighthall, William A.	Steam-engines, arrangement of the lever, half beam of.	Oct. 25, 1849.	VI.
6434	Lillie, Lewis.	Locks, means of changing the combination of revolving tumbler.	Nov. 13, 1849.	VI.
6435	Lindcoln, Abraham.	Vessels, method of lifting, over should.	May 22, 1849.	VIII.
6436	Lindsay, William H.	Fluid metre.	Feb. 30, 1849.	VI.
6437	Linhart, Adam, and Samuel McCloud.	Grain-carriers, construction of.	Sept. 25, 1849.	I.
6438	Larkin, Abner T.	Lounges and chair combined.	July 17, 1849.	XVII.
6439	Lavermore, Benjamin.	Chairs, fan.	April 10, 1849.	XVII.
6440	Livingston, L. R., John Jay Roggen, and Calvin Adams.	Boot crimps.	Oct. 16, 1849.	XVI.
6441	Livingston, L. R., J. J. Roggen, Calvin Adams, Amos Kendall, and Alfred Vall.	Lock, right or left hand.	May 1, 1849.	II.
6442	Lloyd, Charles C.	Telegraph wires, supporters for.	Oct. 9, 1849.	VIII.
6443	Lockett, Thomas.	Blast generators.	April 17, 1849.	XI.
6444	Loper, R. F.	Sausage machines.	May 8, 1849.	XVII.
6445	Lotze, Adolphus.	Boilers, arrangement of flues in marine.	April 17, 1849.	VI.
6446	Low, Joseph J.	Engine, method of working the air pump, and using a condensing as a non-condensing.	Aug. 28, 1849.	VI.
6447	Luter, Eliza.	Stoves.	Oct. 30, 1849.	V.
6448	Lyman, Azel S.	Spectacle frames.	April 17, 1849.	VII.
6449	Lyon, David W.	Shingle and stove dressing machines.	Jan. 23, 1849.	XIV.
6450	Macomber, Armah S.	Alarm for indicating want of water in boilers.	Dec. 18, 1849.	VI.
6451	Macomber, David O.	Hinges, machine for forming the eye of.	Sept. 11, 1849.	II.
6452	Mallard, Samuel.	Turning.	Jan. 2, 1849.	XIV.
6453	Mallow, Henry.	Pens, fountain.	Aug. 25, 1849.	XVIII.
6454	Mann, Jacob J. and Henry F.	Dyeing.	Mar. 27, 1849.	IV.
6455	Mann, Samuel.	Forebays, regulating.	Mar. 13, 1849.	XI.
6456	Manny, Pele.	Harvesting machines, grain-carriers for.	June 19, 1849.	I.
6457	Marsch, David, and Eli B. Nichols.	Presses, cheese, self-acting.	Sept. 25, 1849.	XII.
6458	Martin, William W.	Harvesters.	June 26, 1849.	I.
6459	Martin, Ebenezer F.	Mills for grinding.	Oct. 30, 1849.	XIII.
6460	Marlin, James W., and Edwin Parry.	Lock gun.	June 3, 1849.	XV.
6461	Mascher, J. F.	Stoves, cooking.	June 19, 1849.	V.
6462	Mason, Nicholas.	Chucks.	Aug. 28, 1849.	XIV.
6463	Mason, Nicholas.	Regulators.	Nov. 6, 1849.	XIII.
6464	Mearns, John.	Centre board, keel.	Oct. 9, 1849.	VII.
6465	Mearns, John.	Stoves, cooking.	Aug. 7, 1849.	V.
6466	Mearns, John.	Ranges, cooking.	Dec. 4, 1849.	V.
6467	Mearns, John.	Driers, grain, endless bands for.	April 17, 1849.	II.
6468	Mearns, John.	Hands, wrought-iron, machine for contracting the circumference of.	July 3, 1849.	XI.
6469	Mearns, John.	Water wheels.	Oct. 9, 1849.	XI.
6470	Mathews, Benjamin S.	Leather, skiving.	April 10, 1849.	V.
6471	Mathews, Benjamin S.	Stoves, cooking.	Oct. 16, 1849.	V.
6472	Mathews, David.	Spark and gas consumers.	Feb. 20, 1849.	VI.
6473	Mathewson, Ernestus C.	Railroad switches, self-actuating.	Mar. 20, 1849.	IX.

6474	Maxim, Marcus.	Spike machine.	Mar. 10, 1849.	II.
6475	McAuley, Malcolm.	Gins, cotton.	April 24, 1849.	III.
6476	McCaunton, William.	Cut-off, disk, acted upon and regulated by the governor.	May 22, 1849.	VI.
6477	McCarthy, James.	Skelps, from which iron tubes are made, method of bending.	Jan. 9, 1849.	II.
6478	McCarthy, James.	Tube, combined lap and butt welded.	Dec. 18, 1849.	XI.
6479	McCarthy, John.	Carding machines.	June 19, 1849.	VI.
6480	McCarthy, John.	Spark-arrester, spiral.	Mar. 13, 1849.	XVIII.
6481	McCarthy, Andrew.	Maps, making dissected.	Sept. 25, 1849.	XII.
6482	McCarthy, Andrew.	Presses.	Feb. 27, 1849.	II.
6483	McCarthy, Andrew.	Skelps, tube, dies for bending.	Jan. 9, 1849.	XVII.
6484	McCarthy, Andrew.	Bedsteads, portable cot.	July 10, 1849.	X.
6485	McCarthy, Andrew.	Hooks and shoes, spring shanks for.	Mar. 13, 1849.	VI.
6486	McCarthy, Andrew.	Cut-off, piston valve.	April 17, 1849.	XII.
6487	McCarthy, Andrew.	Presses, cheese, self-acting.	Feb. 13, 1849.	XX.
6488	McCarthy, Andrew.	Braces, body.	Jan. 9, 1849.	IX.
6489	McCarthy, Andrew.	Sugar, manufacture of.	Jan. 9, 1849.	V.
6490	McCarthy, Andrew.	Gates, folding.	Dec. 18, 1849.	I.
6491	McCarthy, Andrew.	Ranges, cooking.	April 3, 1849.	XVIII.
6492	McCarthy, Andrew.	Butter-working machines.	Nov. 27, 1849.	VI.
6493	McCarthy, Andrew.	Piano-fortes, elevating the tops of.	Sept. 4, 1849.	XVII.
6494	McCarthy, Andrew.	Engines, method of reversing rotating rotary.	Aug. 7, 1849.	XIX.
6495	McCarthy, Andrew.	Bedstead fastenings.	Jan. 23, 1849.	I.
6496	McCarthy, Andrew.	Planters, seed.	Feb. 27, 1849.	VI.
6497	McCarthy, Andrew.	Pistons, detached metallic, cartridge tube, &c., for.	Jan. 4, 1849.	I.
6498	McCarthy, Andrew.	Pistons and stuffing boxes, tubular packing for.	Sept. 25, 1849.	IV.
6499	McCarthy, Andrew.	Winnowing machines, motion of riddles in.	Feb. 8, 1853; antedated Nov. 14, 49.	IX.
6500	McCarthy, Andrew.	Purifying fatty materials.	Feb. 13, 1849.	III.
6501	McCarthy, Andrew.	Railroads, apparatus for removing animals from.	May 8, 1849.	XXII.
6502	McCarthy, Andrew.	Rope yarns, tarring.	Jan. 16, 1849.	III.
6503	McCarthy, Andrew.	Post-marking letters, &c., machinery for.	Feb. 6, 1849.	III.
6504	McCarthy, Andrew.	Sewing machines.	Mar. 13, 1849.	II.
6505	McCarthy, Andrew.	Rope machinery.	June 9, 1849.	XIV.
6506	McCarthy, Andrew.	Door-holder.	Sept. 18, 1849.	VIII.
6507	McCarthy, Andrew.	Shingles, machinery for riving and dressing.	May 1, 1849.	V.
6508	McCarthy, Andrew.	Telegraphs, electric.	June 12, 1849.	XVII.
6509	McCarthy, Andrew.	Stoves, cooking.	Dec. 11, 1849.	XIV.
6510	McCarthy, Andrew.	Bedstead fastenings.	May 1, 1849.	X.
6511	McCarthy, Andrew.	Slaves, machinery for jointing and cutting.	Dec. 25, 1849.	VI.
6512	McCarthy, Andrew.	Trucks, railroad.	Feb. 20, 1849.	XI.
6513	McCarthy, Andrew.	Valves, short slide, by churning the corners.	July 31, 1849.	XIII.
6514	McCarthy, Andrew.	Water, &c., apparatus for filtering.	June 12, 1849.	I.
6515	McCarthy, Andrew.	Corn-shellers.	Nov. 20, 1849.	X.
6516	McCarthy, Andrew.	Drills, seed.	Dec. 11, 1849.	X.
6517	McCarthy, Andrew.	Hubs, machinery for preparing for boxes.	Sept. 11, 1849.	XVII.
6518	McCarthy, Andrew.	Knives, machine for polishing.	Aug. 7, 1849.	XIII.
6519	McCarthy, Andrew.	Millstones, forming and balancing.	Jan. 2, 1849.	X.
6520	McCarthy, Andrew.	Hubs and axles, attaching and detaching.	May 8, 1849.	XVII.
6521	McCarthy, Andrew.	Washing machines.	Feb. 20, 1849.	I.
6522	McCarthy, Andrew.	Teeth, making artificial.	Dec. 4, 1849.	XX.

Persons whose patents for inventions have expired, &c.—Continued.

No.	Patentee.	Invention or discovery.	Date.	Class.
6112	Mazzy, Jacob	Saw-set, nipper	Feb. 3, 1849	XIV.
6142	Myers, Emanuel	Planters, seed	June 19, 1849	I.
6159	Myers, Jeremiah	Looms, let-off motion of	Mar. 10, 1849	III.
6193	Myrick, Freeman F.	Water-wheels, tide	Mar. 20, 1849	XI.
6005	Nettleton, Alphons	Cars, dumping	Jan. 30, 1849	X.
6605	Nichols, John C.	Tables, diluting	Aug. 21, 1849	XVII.
6636	Niles, Peter H.	Lock, eccentric piano	Aug. 7, 1849	II.
6574	Norris, Charles E.	Hobblers, machinery for boring	April 24, 1849	II.
6137	North, Gibson	Hobblers, tin, for cooking stoves with cast-iron bottoms, making	Dec. 18, 1849	V.
6015	Norton, James L.	Stoves, cooking	Feb. 27, 1849	XIV.
6732	Nowell, Foster	Saws, machine for filing	Jan. 9, 1849	III.
6302	Olinstead, Adolphus	Spinning jack	Sept. 25, 1849	XVII.
6486	O'Neill, Patrick	Galvanic batteries	April 17, 1849	III.
2646	Osborne, Marauduke	Mattresses, spring	Sept. 4, 1849	III.
6011	Osgood, Enoch	Felling, for coats, hats, &c.	May 28, 1849	III.
6255	Ostrander, Jonathan F.	Tooth extractors	Jan. 9, 1849	III.
6844	Olla, Benjamin H.	Bullets or pills, machine for spherifying	April 3, 1849	XIX.
6846	Owen, Benson	Presses, cheese, self-acting	Mar. 27, 1849	XII.
6844	Owen, J. Parsons	Stoves, self-regulating dampers for	June 19, 1849	V.
6752	Page, Lewis H.	Hedstead fastenings	Dec. 11, 1849	XVII.
6752	Palmer, Henry M.	Fastener, sash, eccentric	Sept. 4, 1849	II.
6536	Palmer, Aaron	Copying presses, portable	Oct. 2, 1849	XVIII.
6122	Palmer, Benjamin F.	Drills, grain	June 19, 1849	I.
7145	Parla, Charles E. & Charles H.	Legs, artificial	Feb. 20, 1849	XX.
6055	Park, Jesse, and Cornelius S. Watson, assignors to Wm. W. Rose	Composition for enamelling hollow ware	Mar. 5, 1850; antedated Jan. 23, '49	IV.
6229	Parker, Granville	Envelopes, machines for making	Jan. 23, 1849	XVIII.
6351	Parker, Warren	Steamboat, canal	Mar. 27, 1849	VII.
6043	Parkhurst, Stephen R.	Rakes, horse, harness adapted to	June 26, 1849	I.
6703	Parkhurst, Stephen R.	Cards, &c., cylinders for carrying and supporting	Jan. 23, 1849	III.
6308	Parry, Harrison	Gins, cotton	Sept. 11, 1849	III.
5205	Parry, John C.	Gold washer, rotary	April 10, 1849	II.
6016	Partridge, B. F.	Carling chilled rolls, method of giving a rotary motion to the melted iron in	Oct. 17, 1849	II.
6260	Pasco, Sardius, and Elihu Perry	Planters, corn	Jan. 9, 1849	I.
6814	Patch, John	Boot crimps	April 3, 1849	XVI.
6350	Patten, Joseph H.	Propellers	Nov. 27, 1849	VII.
6958	Patterson, Robert	Drying grain	June 19, 1849	V.
8252	Pattinson, H. L.	Flax and hemp, manufacture of	Dec. 18, 1849	III.
6271	Pense, Dan., Jr.	Pigments, manufacture of	Aug. 12, 1851; antedated Feb. 14, '49	IV.
6289	Pease, Dan., Jr.	Hulling machines	April 3, 1849	I.
6285	Pease, Jacob, and Josiah M. Smith	Hulling machines	April 10, 1849	I.
6392	Peck, Charles H., and Coleman Hicks	Fire-arms, concealed trigger for	Dec. 4, 1849	XIX.
		Planing machines	April 24, 1849	XIV.

6284	Pedrick, William, and Thomas M. Melvin	Hemp, machinery for spinning	Feb. 6, 1849	III.
6008	Peeler, Henry	Gun barrels, method of boring	Feb. 6, 1849	XIX.
6976	Pelton, Jacob	Planters, seed	Dec. 25, 1849	I.
6159	Pelton, A. S.	Hugs, combined, fastener and shutter opener	Jan. 23, 1849	VI.
6361	Perkins, Thatcher, assignor to Levi B. Tyng	Boilers and water-heaters of locomotive engines	June 26, 1849	VII.
6309	Perry, Charles, and Joshua Terry	Shank painter stopper	June 5, 1849	XVII.
6345	Perry, Alonzo D.	Guns, lancee breech	Dec. 11, 1849	XVII.
6018	Peters, William	Carpets, machines to beat and brush	July 31, 1849	XIV.
6380	Phillips, David	Saw-mills, circular	July 3, 1849	V.
6145	Pierce, Amalia	Gas apparatus	Feb. 27, 1849	IV.
7124	Pollat, Anthony M., and David C. Knab	Distilling oleaginous matter	Feb. 26, 1850; antedated Mar. 9, '49	IV.
6517	Platt, Nelson	Harvesters	June 12, 1849	XX.
6385	Pollard, Abinath, and Simeon Mukler	Supporters, obstetrical	April 24, 1849	XVI.
6654	Poncrov, Elisha M.	Buttons, manufacture of, from straw board	Aug. 21, 1849	XVI.
6850	Pope, Charles	Hames, harness	Nov. 6, 1849	II.
6217	Porter, Robert D.	Thyres, conical valve in	Mar. 27, 1849	VI.
6589	Porter, Rufus, assignor to Richard Van Dyke, Jr.	Engines, auxiliary arrangement and method of working the valves of, for feeding boilers	July 10, 1849	VI.
6453	Post, Jacob	Lock for fire-arms	May 15, 1849	XIX.
7228	Powers, Nathaniel B.	Printing floor all-cloths	Mar. 26, 1850; antedated Sept. 26, '49	XVIII.
6436	Powers, Rufus	Lumber, machinery for working into irregular forms	May 8, 1849	XIV.
6926	Powell, Samuel W.	Mills for grinding	Dec. 4, 1849	XIII.
6215	Pratt, Daniel R.	Springs for carriages, &c.	Mar. 20, 1849	X.
6149	Pratt, Elijah, and Raymond Graverend	Telegraph wires, suspending	Feb. 27, 1849	IX.
6047	Pratt, Samuel	Metallic plates, method of uniting to each other	Aug. 14, 1849	VI.
6168	Pratt, T. W.	Spark arresters, horizontal	Mar. 13, 1849	XVIII.
6356	Prescott, Joseph W., assignor to A. & J. Prescott	Musical instruments	Oct. 9, 1849	II.
6781	Pritchett, Jacob	Ore washers	May 29, 1849	XIII.
6431	Prouty, David O., and Ezra Whitman	Corn shellers	Feb. 1, 1853; antedated Oct. 9, '49	VIII.
9571	Pulvermacher, Isaac L.	Volts batteries, and apparatus for medical and other purposes	May 22, 1849	I.
6476	Purviance, Alfred J.	Harvesting machines	Mar. 13, 1849	II.
6184	Pye, Sylvester M.	Lock, door	Mar. 10, 1849	V.
6163	Quinn, Henry	Drying grain	Feb. 20, 1849	III.
6129	Race, Washburn, assignor to L. S. Bacon	Stoves, self-acting registers for	April 17, 1849	III.
6331	Radebaugh, John, and John A. Matlack	Hair, machinery for cleaning	Feb. 21, 1849	I.
2467	Ralston, Andrew	Threshing and winnowing grain, machine for	Oct. 23, 1849	II.
6404	Ray, Elisha M.	Latch bolt, spring	Mar. 27, 1849	X.
6231	Ray, Fowler M.	Springs, caoutchouc	Mar. 11, 1849	XI.
2488	Read, Jonathan	Reaping machines	Sept. 11, 1849	II.
6714	Read, John B.	Pumps for raising water	April 24, 1849	II.
6048	Read, Philip Pitts	Ox shoe, machine roller, with movable dies	Feb. 27, 1849	II.
6455	Reed, Cheney	Fastening and moving window blinds, method of	Oct. 16, 1849	IX.
6748	Reed, Cheney, and Elias Howe, Jr.	Blinds, apparatus for opening and closing	May 23, 1849	III.
6285	Reed, Knight	Sugar, boiling	Oct. 30, 1849	XVII.
6138	Reichert, Henry	Fences, flood	July 31, 1849	I.
6797	Reynolds, Joseph	Looms for figured fabrics	July 8, 1849	VI.
6472	Rhoades, Jeremiah, and William Pouley	Saddles, spring	April 3, 1849	VI.
6835	Rice, Orrin	Washboards	April 2, 1849	I.
6611	Rich, John	Ploughs	April 2, 1849	I.
2708	Rich, Reuben	Water wheels	April 2, 1849	I.
6250	Richards, J. Avery, and John W. Wolcott	Diving bells, deep-sea	April 2, 1849	I.
6319	Richardson, Israel J.	Straw cutters	April 2, 1849	I.

Persons whose patents for inventions have expired, &c.—Continued.

No.	Patentee.	Invention or discovery.	Date.	Class.
6330	Richardson, Israel J.	Corn-shellers.	April 2, 1849.	XIII.
6332	Richardson, Israel J.	Threshing and grain-separating machines.	Mar. 27, 1849.	I.
6333	Richter, William.	Ploughs.	Jan. 9, 1849.	IV.
6317	Riley, George.	Diatilling apparatus.	April 17, 1849.	II.
6310	Ripley, Ezra.	Chills for casting rasps, files, &c.	June 5, 1849.	XLX.
6339	Ripley, Edwin G., administrator of the estate of Edwin Wesson.	Fire-arm, method of connecting the hammer with the cylinder of a revolving.	Aug. 28, 1849.	II.
6332	Ritchie, Henry, assignor to Henry C. Jones.	Locks, bank.	April 3, 1849.	II.
6333	Ritchie, Henry, assignor to Henry C. Jones.	Lock, rotating permutation plate.	June 26, 1849.	II.
6333	Robb, Daniel.	Ploughs, hill-side.	June 26, 1849.	X.
6336	Robbins, Horace T.	Brakes for railroad cars.	Sept. 4, 1849.	XL.
6336	Robbins, Zenas C.	Churns.	June 26, 1849.	VII.
2797	Robinson, George W. & E. B.	Vessels, steering apparatus for.	Sept. 30, 1849.	XX.
6339	Robinson, Jonathan H.	Pessaries.	Aug. 7, 1849.	XVII.
6333	Robson, John A.	Bedsteads, sofa.	Nov. 20, 1849.	XVII.
6333	Roebling, John A.	Wire ropes, tops for.	Nov. 6, 1849.	II.
6181	Rogers, Charles.	Shoes, machines for cutting welts for.	May 29, 1849.	XLVI.
6761	Rogers, David B.	Cultivators.	Jan. 16, 1849.	I.
6347	Rogers, S. W.	Valve, foot, of steam-engines.	Oct. 2, 1849.	VI.
6349	Rolf, Robert B.	Fasteners, curvilinear blind-opener and shutter.	April 17, 1849.	II.
6452	Roney, B. T.	Stoves, cooking.	April 17, 1849.	V.
6452	Ropes, David N.	Cutlery, table, method of attaching the tang to the handle of.	May 29, 1849.	XVII.
6616	Ross, James P.	Steam-engine, rotary valves of.	July 31, 1849.	VI.
6743	Ross, James P.	Planters, seed.	Sept. 25, 1849.	I.
6836	Ross, William A.	Sails, means for working.	Oct. 30, 1849.	XV.
6127	Roth, Valentine.	Brick, presses.	Feb. 20, 1849.	IV.
6072	Ruggles, James.	Vinegar, manufacture of.	Jan. 30, 1849.	IV.
6168	Ruthven, Morris W.	Propelling vessels by reaction.	May 22, 1849.	VII.
6190	Sabin, Harvey W., and Luther B. Benton.	Water buckets, apparatus for rubbing and tilting.	Mar. 13, 1849.	XI.
6946	Sabin, Harvey W.	Water, apparatus for drawing from wells.	Dec. 11, 1849.	XI.
6947	Safford, Albert G.	Car couplings, self-acting.	Dec. 11, 1849.	X.
6852	Sampson, Elvathan.	Balances, pendulum.	Nov. 6, 1849.	XII.
6852	Sampson, Elvathan, and A. M. Billings.	Hubs, connecting with axles.	Nov. 20, 1849.	X.
6275	Sandborn, John D.	Bedstead fastenings.	April 3, 1849.	XVII.
6545	Sanders, Benjamin D.	Winnowing machines.	June 19, 1849.	I.
6221	Sanford, Nathaniel C.	Augers, combined convex and concave.	Mar. 27, 1849.	XIV.
6305	Sanford, Nathaniel C., and Lucius H. Smith.	Augers, screw, machine for regulating the twist and diameter of.	April 10, 1849.	III.
6370	Sanger, Ebenezer C.	Mules, self-acting regulators for.	July 3, 1849.	V.
6859	Sanger, Hugh.	Lanterns, signal.	Dec. 18, 1849.	II.
6200	Satterlee, Edward.	Metals, process for burnishing.	Mar. 20, 1849.	I.
6474	Sawyer, David.	Seythe tips.	May 22, 1849.	XXII.
6874	Sawyer, Sylvanus.	Railroad, machinery for splitting and dressing.	Nov. 13, 1849.	XXI.
6311	Scarlett, William.	Bucks, suspender, machine for making.	April 10, 1849.	VII.
6053	Schnebley, William and Thomas.	Boat, life, self-inflating and flooding.	Jan. 25, 1849.	VII.

6397	Schmacker, J. H., and Martin Kuemerle.	Books, machines for turning the leaves of.	Sept. 4, 1849.	XVIII.
6397	Schwartz, Theodore.	Paris green, manufacture of.	April 17, 1849.	IV.
6279	Scotfield, Lewis, and Edward Cooper.	Furnaces, puddling and reheating combination of ash-trap with.	April 3, 1849.	II.
6817	Scott, Elhanan W.	Saw-act, circular.	Oct. 23, 1849.	XIV.
6306	Scott, George, assignor to D. O. Ketchum.	Glass pipes, moulds for making.	Sept. 4, 1849.	XV.
6414	Scott, James.	Sun-dials.	June 5, 1849.	XIII.
6449	Scowden, Theodore R.	Water-mills, valve seats, &c., for.	May 1, 1849.	V.
6449	Scudder, Charles K.	Chimney cups.	May 13, 1849.	XL.
6132	Secor, James.	Current wheels, apparatus for.	Feb. 20, 1849.	VII.
6531	Seely, Samuel J.	Life-preserving hummock, arrangement of the sections in a.	July 10, 1849.	XII.
6553	Serrell, James E., and David Smith.	Press, centrifugal.	July 3, 1849.	VI.
6104	Sewell, William, Jr.	Rollers, steam, apparatus for ascertaining by inspection the saltiness of water in.	Feb. 6, 1849.	VI.
6788	Seyler, Benjamin.	Ploughs.	Oct. 16, 1849.	I.
6171	Seymour, Alfred B.	Railroad bar, combined.	Mar. 13, 1849.	IX.
6750	Seymour, Pierpont.	Drills, grain, devices for sowing seed in.	Sept. 25, 1849.	I.
6470	Seymour, William H.	Slaves, machines for jointing.	May 22, 1849.	XIV.
6360	Sharps, Christian.	Fire-arms, method of revolving the hammer of repeating.	Dec. 18, 1849.	XIX.
6246	Shaw, Jacob, Jr.	Spectacle frames.	April 3, 1849.	XVIII.
6095	Shaw, Philander.	Root heels, cutting.	Feb. 6, 1849.	XVI.
6404	Shaw, William M., and Ezra Gould, Gould assignor to Shaw.	Printing paper hangings.	May 1, 1849.	XVIII.
6877	Sheldon, John.	Chronometers for longitude.	Nov. 20, 1849.	XVIII.
6339	Sheldon, Job, and John S. Barden.	Planing machines.	April 17, 1849.	XIV.
6912	Shepard, Timothy.	Barrel heads, machinery for dressing.	Nov. 27, 1849.	XVII.
6557	Sherborne, Thomas P.	Tables, extension.	June 26, 1849.	XVII.
6439	Sheriff, John.	Cocks, stop for hot water and steam.	Jan. 16, 1849.	XL.
6853	Sherman, John W.	Planters, seed.	Nov. 6, 1849.	I.
2886	Sherwood, John P.	Locks, door.	Dec. 17, 1842.	II.
6156	Shields, James, and James Cole.	Stoves for heating apartments.	Mar. 10, 1849.	V.
6384	Shipton, Thomas N.	Threshing machines.	April 10, 1849.	I.
6394	Sibert, Lorenzo.	Furnace, blast, combination of a double travelling hearth with a.	Nov. 20, 1849.	II.
6230	Sickel, Horatio G.	Lamps, gas.	Aug. 7, 1849.	V.
6310	Sinclair, Heman B.	Ploughs.	Jan. 9, 1849.	I.
6375	Singer, Isaac M.	Carving wood or metal, machine for.	April 10, 1849.	XIV.
6238	Small, Johnston.	Leather-dressing machines.	Nov. 13, 1849.	XVI.
6854	Smart, John M.	Corn-shellers.	Mar. 27, 1849.	XIII.
6405	Smith, Abijah, assignor to Gilead A. Smith.	Axles, grease boxes for.	Nov. 6, 1849.	X.
6346	Smith, Alphens D.	Trusses.	May 1, 1849.	XX.
6888	Smith, Augustine.	Ram, water.	April 17, 1849.	XL.
6134	Smith, Daniel.	Hemp brakes.	Nov. 20, 1849.	HL.
6272	Smith, David M.	Rifles, attachment of loading muzzle for.	Feb. 20, 1849.	II.
6896	Smith, Edward N., assignor to James H. Gray.	Lock, bank.	April 3, 1849.	XVIII.
6452	Smith, Homer.	Paper, machines for holding.	May 27, 1849.	I.
6343	Smith, Hezekiah B.	Grain separators.	Nov. 13, 1849.	XIV.
6248	Smith, Jasper.	Mortising machines.	April 17, 1849.	XL.
6247	Smith, J. Curtis.	Water wheels, reaction.	April 3, 1849.	XVII.
6488	Smith, Lorenzo.	Baby tenders, locomotive.	May 29, 1849.	IX.
6735	Smith, Newman W.	Gates.	Oct. 17, 1849.	XX.
6882	Smith, Robert.	Accouchers' chairs.	Aug. 28, 1849.	XVI.
6837	Smith, Robert, and Alexander Bain.	Saddles, spring-seat.	Oct. 30, 1849.	VII.
6300	Snell, William.	Telegraphs electro-chemical.	April 10, 1849.	XVI.
		Boots, machinery for cutting gaiter.		

Persons whose patents for inventions have expired, &c.—Continued.

No.	Patentee.	Invention or discovery.	Date.	Class.
6552	Shaw, Anos W., assignor to Jas. D. Mowry and P. L. Hyde	Cars, railroad, seats for	June 26, 1849	X.
6553	Soliday, Daniel H.	Gas-lights	Mar. 30, 1849	V.
6554	Sourbect, John	Fences, flood	Jan. 30, 1849	IX.
6555	Sours, William	Stoves, cooking	Sept. 18, 1849	V.
6556	Southworth, D. H., and James R. Hitchcock	Hullers, rice	Nov. 6, 1849	XIV.
6557	Springstead, R. H.	Planting machines	April 3, 1849	I.
6558	Sprague, William T.	Planters, seed	July 24, 1849	I.
6559	Stafford, James R.	Ploughs	Mar. 13, 1849	I.
6560	Stanley, John B.	Stoves, cooking	Oct. 23, 1849	V.
6561	Stanton, Henry	Pea vices, machines for gathering	Jan. 9, 1849	V.
6562	Starr, Eben T.	Churn dashers	Dec. 18, 1849	V.
6563	Stacy, Edward	Boats, flexible, divisions between the tubes of	April 17, 1849	VII.
6564	Stedman, Benjamin B.	Wagons, dumping	Feb. 6, 1849	X.
6565	Steele, J. Dutton	Drills, grain	June 5, 1849	I.
6566	Stephenson, William	Veneers, machines for cutting from cylindrical blocks	July 30, 1849	IX.
6567	Stewart, William B.	Bridges, method of attaching the arch to the truss-frame in	Jan. 30, 1849	V.
6568	Sullivan, Alfred	Stoves, cooking	Oct. 2, 1849	XVII.
6569	Stinehart, William, and John Taggart	Washboards, machines for making	Aug. 28, 1849	IV.
6570	Stockwell, Lewis	Sugar pans	Dec. 4, 1849	IV.
6571	Stow, Denali S.	Brakes for cars	Feb. 27, 1849	X.
6572	Straub, Abraham	Pumps for raising water	Dec. 4, 1849	XI.
6573	Stroop, Jacob	Shingles, machinery for dressing	April 10, 1849	XIV.
6574	Stroop, Jacob	Sawing, miter, machinery for	Oct. 2, 1849	XIV.
6575	Sullivan, Jonathan	Winnowing machines	July 17, 1849	I.
6576	Swain, Benjamin O.	Ploughs, attachment of harrows to	June 26, 1849	I.
6577	Swan, Richard, Jr.	Fastener, window-shutter	July 10, 1849	II.
6578	Sweeney, Peter	Straw-cutters	Oct. 30, 1849	I.
6579	Tabole, William	Planotatums	Aug. 21, 1849	VIII.
6580	Taft, Andrew B.	Pumps, rotary	Nov. 27, 1849	XI.
6581	Tappin, John A.	Spark-arresters, deflectors for	Nov. 27, 1849	VI.
6582	Tarr, John B.	Bandboxes, manufacture of	July 24, 1849	XXI.
6583	Taylor, Isaac	Hinge and spring, combined double	Oct. 9, 1849	III.
6584	Taylor, James	Horse-powers, construction of the master wheel of	June 12, 1849	XI.
6585	Taylor, Samuel	Engraving surfaces	Nov. 6, 1849	XI.
6586	Towksbury, George P.	Bedstead fastenings	June 1, 1852; antedated Feb. 21, 49	XVIII.
6587	Thatcher, Thomas	Warps, dressing, manner of constructing brushes for	Sept. 4, 1849	XVIII.
6588	Thomas, James	Boat, life, reversible	May 28, 1849	III.
6589	Thomas, William S.	Pump valves, and their arrangement	Aug. 7, 1849	VII.
6590	Thomas, William S.	Trap, animal, adaptable platform	July 17, 1849	XXII.
6591	Thomas, William S.	Brooms, machine for making	Sept. 14, 1849	XVII.
6592	Thomas, William S.	Springs for carriages	Oct. 30, 1849	X.

6593	Thompson, Henry G.	Engines, rotary, valve motion cut-off and steam-stops	Dec. 18, 1849	VI.
6594	Throckmorton, Held R.	Planing machines	Aug. 26, 1849	XIV.
6595	Touman, John W.	Plough, hill-side	Aug. 26, 1849	V.
6596	Tiffany, Oliver	Furnaces, air-heating	Mar. 20, 1849	II.
6597	Tilden, Richard S.	Punching machine, with a combination of adjustable gauges	Mar. 10, 1849	I.
6598	Tilden, Stephen	Beehives	April 10, 1849	III.
6599	Tisdale, Charles R., James Keane and Thomas Keane, assignors to Chas. R. Tisdale	Cotton, machinery for spinning	July 17, 1849	III.
6600	Todd, Hiram	Ruckles for harness	May 22, 1849	XVI.
6601	Torrey, Ambrose	Waste gate or valve, self-acting	Oct. 2, 1849	IX.
6602	Touchstone, James, and Jacob H. Clark	Pistons, metallic, method of expanding	April 17, 1849	VI.
6603	Townsend, Benjamin M.	Road-scrapers	Aug. 14, 1849	IX.
6604	Toy, James M., assignor to David Bonner	Sawing wood, machinery for	April 24, 1849	XIV.
6605	Treadwell, Leverett	Brakes for railroad cars	April 3, 1849	X.
6606	Treadwell, William B.	Wheels, cast-iron car	Jan. 9, 1849	X.
6607	Trees, James	Water wheels	Feb. 13, 1849	XI.
6608	Trempier, John	Piston ring, and method of deriving motion therefrom in rotary engines	April 17, 1849	VI.
6609	Truscott, Samuel	Wheels, cast-iron car	Jan. 16, 1849	X.
6610	Tucker, John E.	Well cutting and splitting machines	Nov. 20, 1849	VI.
6611	Tupper, Lewis	Straw-cutters	Aug. 28, 1849	I.
6612	Tuttle, Thomas J.	Ploughs, rotary cutter	Feb. 6, 1849	V.
6613	Tuttle, Charles F.	Furnaces, register for hot air	Jan. 23, 1849	V.
6614	Tuttle, Charles F.	Furnaces, register for hot air	Sept. 11, 1849	III.
6615	Tuttle, John L.	Cylinders, toothed, mode of making	Oct. 30, 1849	IX.
6616	Twitchell, Willard	Gates, arrangement of weight and pulley for closing	Aug. 7, 1849	IV.
6617	Tyer, H. G., and John Helio	India-rubber, manufacture of	Jan. 30, 1849	II.
6618	Van Anden, William	Screw-cutting machine, feeder and nipper for	Mar. 27, 1849	II.
6619	Van Bunschooten, Isaac, John J. Woodbridge, and William E. Mann, Woodbridge & Mann ass'rs to Van Bunschooten	Springs, spiral, machine for making of wire	Aug. 7, 1849	XVIII.
6620	Vance, Eliza	Daguerreotype apparatus for panoramic views	April 17, 1849	V.
6621	Van Kuren, Isaac	Stoves, cooking	Feb. 6, 1849	X.
6622	Van Nieu, William J.	Wheels, cast-iron car	May 1, 1849	V.
6623	Van Riper, Garrett	Calipers, transverse	Oct. 30, 1849	VIII.
6624	Vaughan, David	Hemp, machinery for spinning	Dec. 4, 1849	III.
6625	Vaughan, Joseph, Jr.	Staves, machinery for jointing	Dec. 11, 1849	XIV.
6626	Von Heering, Ernest	Tools, machine for grinding and polishing	Dec. 11, 1849	XIV.
6627	Von Heering, Ernest	Musical notation	June 12, 1849	XVIII.
6628	Von Schmidt, Peter	Piano-forte, instruments for teaching music with the	June 26, 1849	XVIII.
6629	Waldran, William B., and Godfrey Hargitt	Ore-washers	Oct. 16, 1849	II.
6630	Walker, Andrew, Jr.	Brick presses	July 10, 1849	XV.
6631	Walker, Charles	Gas apparatus	Aug. 7, 1849	V.
6632	Walker, Charles	Hullers, rice	Aug. 14, 1849	I.
6633	Walker, Charles, and George Wilson	Veneers, manufacture of paper	Mar. 20, 1849	XVII.
6634	Walker, Daniel L.	Washing machines	June 19, 1849	XVI.
6635	Walker, Thomas, ass'rs to W. W. Churchill & J. Paxter	Revolving boot heels	June 20, 1852; antedated July 18, 49	XVI.
6636	Walley, Samuel S.	Pawls, jointed	Sept. 11, 1849	XII.
6637	Ward, Isaac B.	Wheels for carriages	Dec. 27, 1849	X.
6638	Ward, William	Horse-powers	Sept. 11, 1849	V.
6639	Waring, George E.	Stoves, cooking	Mar. 17, 1849	XXI.
6640	Warner, Benjamin W.	Shavers, tailors	Jan. 9, 1849	II.
6641	Warner, Chapman	Cores, moulding and compressing	Jan. 9, 1849	II.
6642	Warner, Chapman	Pipes, legs and links for connecting	May 8, 1849	XI.

Persons whose patents for inventions have expired, &c.—Continued.

No.	Patentee.	Invention or discovery.	Date.	Class.
6527	Warner, Chapman.	Churns.	June 12, 1849.	I.
6570	Warner, Chapman.	Foundry apparatus.	Dec. 2, 1851; antedated Oct. 5, '49.	II.
6515	Warner, George E.	Boom-derrick.	June 5, 1849.	XII.
6167	Warner, Jeremiah.	Cultivators.	Mar. 13, 1849.	I.
6620	Warren, Jesse.	Ploughs.	July 31, 1849.	I.
6740	Warren, Thomas E.	Chairs, springs for.	Sept. 25, 1849.	XVII.
6978	Waterman, Nathaniel.	Lanterns, portable.	Dec. 25, 1849.	V.
6729	Watson, John, and Edward Cart, assignors to Albert Wood-hall & Charles Miltum.	Gas-generators.	Sept. 18, 1849.	IV.
6434	Watson, William.	Grain, destroying weevil in.	May 8, 1849.	I.
6438	Weatherhead, David L.	Bolt machines, method of constructing and operating the bender in.	May 8, 1849.	II.
6625	Webb, John G.	Lamps, gas, Argand burners for.	Aug. 7, 1849.	V.
6448	Webb, Joseph W., assignor to Benjamin Gould.	Cut-off and steam-stop of rotary engines.	May 15, 1849.	VI.
6253	Webber, Filbridge, and Charles Hartshorn.	Lasts, &c., machinery for turning.	April 3, 1849.	XVI.
6702	Webber, George.	Can hooks.	Sept. 11, 1849.	XII.
6433	Webster, Francis M.	Bedsteads for invalids and others.	May 8, 1849.	XVII.
6619	Weed, Julius.	Apples, paring, coring, and slicing.	July 31, 1849.	XVII.
6350	Weeks, John J.	Mortising machines.	April 17, 1849.	XVII.
6541	Welschmuller, John F.	Grates, coal, revolving horizontal.	June 19, 1849.	V.
6195	Wells, Thomas J., assignor to Daniel Larum.	Planing machines.	Mar. 20, 1849.	XIV.
6855	Wheaton, Milow S.	Carpet-cleaning machine.	Nov. 6, 1849.	XVII.
6615	Wheeler, Asa.	Dam or water weir, adjustable.	April 3, 1849.	IX.
6576	Wheeler, George.	Metals, process of hardening.	July 31, 1849.	II.
6719	Wheeler, William.	Beehives.	July 3, 1849.	I.
6056	Whipple, John A.	Stoves, cooking.	Sept. 18, 1849.	V.
6911	Whipple, Milton D., assignor to the Bay State Mills.	Daguerrotype pictures, taking.	Jan. 23, 1849.	XVIII.
2754	Whipple, Cullen.	Fringe, shawl, machinery for twisting.	Nov. 27, 1849.	III.
6381	Whistler, John.	Screws, wood, machine for cutting thread of.	Aug. 18, 1849.	II.
6646	White, Edwin B.	Lasts, shoe.	April 24, 1849.	XVI.
6863	White, Edwin B.	Spike machines, rotating.	Aug. 28, 1849.	II.
6481	White, James.	Spike machine, double-cylinder.	Oct. 16, 1849.	II.
6454	White, Jonathan.	Stoves, cooking.	Feb. 6, 1849.	V.
7043	White, Stephen.	Saw-cutters.	May 15, 1849.	I.
6083	Whitcliffe, G. B.	Gases, preparing illuminating.	Jan. 22, 1850; antedated Mar. 26, '49.	IV.
6856	Whitburn, James M.	Stoves, cooking.	Feb. 6, 1849.	V.
6118	Whitmarsh, Samuel.	Tailors' measures.	Nov. 6, 1849.	XXI.
3124	Whitworth, Joseph.	Warning apparatus, apparatus for.	Feb. 20, 1849.	V.
6645	Wilder, William S.	Streets, sweeping and cleaning, machine for.	June 1, 1843; antedated Aug. 2, '42.	IX.
6979	Wiley, John.	Rolling paper, machines for.	Aug. 14, 1849.	XVIII.
9525	Wilkinson, Joseph A.	Boring window sash, machinery for.	Dec. 25, 1849.	XVII.
6484	Wilcox, William V.	Printing presses.	Jan. 4, 1853; antedated Sep. 23, '42.	XVIII.
6701	Williams, Abner J.	Boring machines.	May 29, 1849.	XIV.
6504	Willoughby, James D.	Hedlives, wire, machinery for making.	Sept. 11, 1849.	III.
6857	Willoughby, James D.	Planters, seed.	June 5, 1849.	I.
		Water, apparatus for raising and carrying.	Nov. 6, 1849.	XI.

6650	Willis, Harry A.	Spike machines, operating the hammers of.	Dec. 11, 1849.	II.
6287	Wilson, Charles.	Stone, machines for dressing.	April 10, 1849.	XV.
6776	Wilson, Charles.	Presses for cotton, &c., hydraulic.	Oct. 9, 1849.	XII.
6487	Wilson, John.	Looms.	May 29, 1849.	III.
6547	Wilson, Rowell.	Stoves, cooking.	June 19, 1849.	V.
6203	Winegar, Caleb.	Telegraphs, magnetic.	Mar. 20, 1849.	VIII.
6306	Winne, Simon P.	Valve, sliding cut-off.	April 10, 1849.	VI.
6363	Winslow, Isaac.	Bottle fasteners.	Dec. 18, 1849.	XXII.
6300	Wiser, Hiram H.	Wheels, cast-iron car.	Dec. 4, 1849.	X.
6345	Wood, Thomas R.	Office roaster.	April 17, 1849.	XVII.
6235	Woodbury, Daniel.	Grain separators.	Mar. 27, 1849.	I.
6858	Woodruff, Jerome B., and Benjamin M. Townsend.	File supporter.	Nov. 6, 1849.	XIV.
6427	Woods, Lucius B.	Railroad switch, self-acting.	Nov. 8, 1849.	IX.
6394	Woodward, Francis G.	Railroad switches, method of fastening.	April 24, 1849.	IX.
6375	Woodward, Mary Ann.	Chairs, fan rocking.	April 24, 1849.	XVII.
6899	Woodward, Arsd, 3d, and Samuel Mower.	Brick-presses.	Nov. 27, 1849.	XV.
8396	Worms, Jacob, assignor to J. Phalen.	Pins, shielded, for securing shawls, diapers, &c., manner of constructing.	May 7, 1842.	II.
6331	Worster, Alvah.	Printing-press.	Sept. 23, 1851; antedated May 19, '49.	XVIII.
6397	Worster, J. Rutherford.	Buckle tongues, detachable.	Dec. 4, 1849.	XVI.
2648	Wright, George L.	Diving-bells.	April 24, 1849.	VII.
6957	Wright, George L.	Machine for ruling paper.	May 28, 1842.	XVIII.
6031	Wright, Alexander.	Burring machines, guards or stripper for.	Jan. 23, 1849.	III.
6316	Wright, Henry.	Boat-irons.	Jan. 16, 1849.	XVI.
	Wright, John, assignor to Francis Leonard and Daniel Hughes.	Lock, a, machine for turning on sheet metal.	Mar. 20, 1849.	II.
6390	Wright, Lemuel W.	Rotting hemp and other fibrous materials, apparatus and process for.	Dec. 25, 1849.	IV.
6146	Wright, William.	Pistons, metallic packing for.	Feb. 27, 1849.	VI.
6711	Wright, William M.	Churn-dashers, atmospheric.	Sept. 11, 1849.	I.
6709	Wurdemann, William.	Parallactic instruments for measuring distances.	Sept. 11, 1849.	VIII.
6361	Wurflein, Andrew.	Lock, turning nipple and concealed hammer.	Dec. 18, 1849.	XIX.
6111	Yale, Linus.	Lock, combination revolving tumbler.	Dec. 13, 1849.	II.
6214	Yerger, George W.	Fractured or injured ankles, surgical apparatus for.	Mar. 20, 1849.	XX.
6602	Young, Samuel S.	Calculating machines.	July 24, 1849.	VIII.
6576	Ziesemann, Ferdinand.	Brick-presses.	Nov. 13, 1849.	XV.

ALPHABETICAL LIST OF PERSONS WHOSE PATENTS HAVE EXPIRED DURING THE YEAR 1856.

No.	Patentee.	Design.	Date.
807	Allen, John F., assignor to Stratton and Massey	Stoves, cooking.	June 17, 1856.
816	Anea, Windsor	Stove, box, plate	July 15, 1856.
783	Beesley, Jacob, assignor to Cresson, Stuart, and Peterson	Furnace, summer.	April 15, 1856.
841	Beesley, J., and E. J. Delany, assignors to Cresson, Stuart, and Peterson	Stoves, parlor	October 7, 1856.
890	Blake, P., and E. W., and J. A.	Drawer-pulls	August 5, 1856.
798	Blosworth, Albert, assignor to Albert Bosworth and Timothy H. Loomis	Piano-forte legs	May 27, 1856.
837	Bridge, Hudson E.	Stoves, cooking	October 7, 1856.
845	Bridge, Hudson E.	Stoves	October 14, 1856.
851	Bruce, George	Printing types	December 2, 1856.
765	Burnham, Sanford, assignor to Cox, Warren, Morrison & Co.	Stove-plates	February 12, 1856.
767	Cogshall, Wm. S.	Stoves, parlor	February 19, 1856.
855	Davy, John T.	Grates, parlor	December 23, 1856.
866	Davy, John T.	Stoves, cooking	December 23, 1856.
857	Davy, John T.	Stoves, cooking, parlor	December 23, 1856.
782	Delany, Edward J., assignor to Cresson, Stuart, and Peterson	Oven, gas	April 15, 1856.
801	Diller, Isaac	Stoves	June 17, 1856.
848	Dulley, James J., assignor to Fuller, Warren, and Morrison	Stoves	November 4, 1856.
796	Dyott, Michael B.	Watch safes, paper weights, and pin cushions combined	May 27, 1856.
788	Engle, Isaac	Piano-forte legs	May 13, 1856.
789	Evans, Theodore	Forks and spoons, handles of	March 4, 1856.
852	Gallagher, Anthony J.	Stoves, cooking	May 13, 1856.
853	Gibbs, Samuel W., assignor to A. H. McArthur & Co.	Stoves, cooking	December 9, 1856.
858	Gibbs, Samuel W., assignor to G. W. Hall & Co.	Stoves, cooking	December 23, 1856.
840	Gibbs, Samuel W., assignor to North, Chase, and North	Stoves, cooking	June 24, 1856.
846	Gibbs, Samuel W., assignor to North, Chase, and North	Stoves	October 7, 1856.
770	Gibbs, Samuel W., assignor to Treadwell, Perry, and Norton	Stoves	June 17, 1856.
793	Gibbs, Samuel W., assignor to W. and J. Treadwell, Perry, and Norton	Stoves, elevated oven	March 18, 1856.
850	Gibbs, Samuel W., assignor to W. and J. Treadwell, Perry, and Norton	Stoves	May 20, 1856.
763	Gleason, R. Jr., assignor to R. Gleason & Sons	Stoves, kitchen	November 25, 1856.
811	Gloninski, A., assignor to D. A. E., and N. B. Powers	Bottle-casters and egg-cup stands	February 12, 1856.
853	Gloninski, A., assignor to D. A. E., and N. B. Powers	Floor-cloths	September 16, 1856.
859	Gloninski, Antoine, assignor to D. A. E., and N. B. Powers	Floor-cloths	September 16, 1856.
838	Gott, John	Floor-cloths	December 23, 1856.
780	Granger, Albert	Bands of J. C. Frémont	October 7, 1856.
784	Green, V. John H.	Pen, steel	April 15, 1856.
817	Hackett, Joseph	Casters, cooking	April 22, 1856.
794	Hathaway, David, assignor to Cox, Richardson, and Boynton	Stoves, cooking	April 29, 1856.
826	Hathaway, David, assignor to Cox, Richardson, and Boynton	Stoves, parlor	July 1, 1856.
795	Herrick, Thomas H., assignor to Lemuel M. Leonard	Stoves, parlor	July 1, 1856.
797	Horton, James, and John Currie, assignors to Cox, Hager, and Cox	Stoves, cooking	August 19, 1856.
760	Johnson, L.	Stoves, cooking	May 20, 1856.
814	May, John C.	Ranges, portable	May 27, 1856.
847	Muller, Charles	Printing type	February 12, 1856.
771	Muller, Nicholas	Grate, ornamental, for fire-places	July 9, 1856.
		Statuettes of Burton as Captain Cuttle	October 21, 1856.
		Clock-case fronts	April 1, 1856.

786	Muller, Nicholas	Clock-case fronts	April 29, 1856.
787	Muller, Nicholas	Clock-case fronts	April 29, 1856.
812	Muller, Nicholas	Clock-case fronts, the base of	July 1, 1856.
813	Muller, Nicholas	Clock-case fronts	July 1, 1856.
823	Pierce, Samuel, and J. J. Dalley, assignors to Fuller, Warren, and Morrison	Stoves, cooking	August 5, 1856.
764	Pierce, Samuel, and J. J. Dalley, assignors to Fuller, Warren, and Morrison	Stoves, cooking	August 5, 1856.
822	Pierce, Samuel, and J. J. Dalley, assignors to Fuller, Warren, and Morrison	Stoves, parlor	August 5, 1856.
766	Pierce, Samuel, and Sanford Burnam, assignors to Cox, Warren, and Morrison	Stoves, cooking	February 24, 1856.
809	Pratt, Samuel F., assignor to W. and J. Treadwell, Perry, and Norton	Stoves, oven	September 23, 1856.
834	Pratt, Samuel F., assignor to W. and J. Treadwell, Perry, and Norton	Stoves, parlor	September 23, 1856.
831	Pratt, Samuel F., assignor to W. and J. Treadwell, Perry, and Norton	Stoves, cooking	September 23, 1856.
775	Ransom, Samuel H.	Stoves, parlor	April 1, 1856.
772	Ransom, Samuel H.	Stoves, parlor	April 1, 1856.
774	Ransom, Samuel H.	Stove-plates	April 1, 1856.
773	Ransom, Samuel H.	Stoves, six-plate	April 1, 1856.
776	Ransom, Samuel H.	Stoves, cooking, elevated oven	April 15, 1856.
781	Read, Joseph A., assignor to John H. Cahill	Stoves, cooking	April 13, 1856.
792	Read, Wm.	Oven and stove doors	May 3, 1856.
800	Reor, Wm.	Stoves, cooking	June 3, 1856.
791	Sanderson, W. L., and N. S. Vedder, assignors to Sanders, Wolfe, and Warren	Stoves, cooking	June 13, 1856.
818	Shepherd, J. and R.	Stoves, cooking, plates of	March 29, 1856.
849	Smith, Eliza	Clock fronts	July 29, 1856.
854	Smith, Garretson, and H. Brown	Stoves, parlor	November 11, 1856.
803	Smith, Garretson, and Henry Brown, assignors to J. G. Abbott and A. Lawrence	Stoves, alt-light	December 23, 1856.
802	Smith, G. H. Brown, and Jas. A. Read, assignors to J. G. Abbott and A. Lawrence	Stoves, cooking	June 17, 1856.
804	Smith, G. H. Brown, and Jas. A. Read, assignors to J. G. Abbott and A. Lawrence	Stoves, cooking	June 17, 1856.
805	Smith, G. H. Brown, and Jas. A. Read, assignors to J. G. Abbott and A. Lawrence	Stoves, blue-plate	June 17, 1856.
830	Smith, G. H. Brown, and Jas. A. Read, assignors to Cox, Hager, and Cox	Stoves	September 16, 1856.
844	Smith, G. H. Brown, and Jas. A. Read, assignors to Hayward, Bartlett & Co.	Stoves	September 16, 1856.
811	Smith, Garretson, Henry Brown, and Joseph A. Smith, assignors to Leibrant, McDowell & Co.	Stoves, cooking	October 24, 1856.
785	Smith, Harvey, and Frederick A. Sheldon	Stove-plates	April 22, 1856.
761	Thompson, James M.	Bricks, moulded	February 12, 1856.
753	Vance, S. B. H., assignor to Mitchell, Bailey & Co.	Pendants, hall	January 2, 1856.
754	Vance, Samuel B. H., assignor to Mitchell, Bailey & Co.	Pendants or chandeliers, hall	January 2, 1856.
777	Vance, Samuel B. H., assignor to Mitchell, Bailey & Co.	Chandeliers	April 8, 1856.
778	Vance, Samuel B. H., assignor to Mitchell, Bailey & Co.	Chandeliers	April 8, 1856.
824	Vedder, N. S., assignor to Cox, Richardson, and Boynton	Stoves, cooking	August 5, 1856.
821	Vedder, N. S., assignor to G. F. Filley	Stove-plates	August 5, 1856.
843	Vedder, N. S., assignor to Mann, Torrence & Co.	Stoves, cooking	October 7, 1856.
842	Vedder, N. S., assignor to Mann, Torrence & Co.	Stove-plates, cooking	October 7, 1856.
825	Vedder, N. S., and Ezra Ripley, assignors to Sweetland and Little	Stoves, cooking	August 26, 1856.
827	Vedder, N. S., and W. L. Sanderson, assignors to G. W. Edly	Stoves, six-plate	August 26, 1856.
846	Vedder, N. S., and Wm. L. Sanderson, assignors to North, Chase, and North	Stoves, cook	June 24, 1856.
810	Vedder, N. S., and Wm. L. Sanderson, assignors to North, Chase, and North	Stoves	June 24, 1856.
839	Vedder, N. S., and Wm. L. Sanderson, assignors to North, Chase, and North	Stoves, parlor	October 7, 1856.
779	Vedder, N. S., and Wm. L. Sanderson, assignors to North, Chase, and North	Stoves, cooking	April 8, 1856.
828	Vedder, N. S., and Wm. L. Sanderson, assignors to Sweetland and Little	Stoves, cooking	August 26, 1856.
829	Vedder, N. S., and Wm. L. Sanderson, assignors to Sweetland and Little	Stoves, parlor	August 26, 1856.
808	Vedder, N. S., and Wm. L. Sanderson, assignors to N. S. Vedder	Stoves, parlor	May 13, 1856.
807	Vose, Samuel D.	Stoves, parlor	March 8, 1856.

Alphabetical list of persons whose patents for designs have expired, &c.—Continued.

No.	Patentee.	Design.	Date.
819	Wardwell, Benjamin, and Ephraim R. Harston.	Stoves, cooking.	July 29, 1856.
759	Weebe, Herman E., assignor to Robert Wood.	Gates.	February 5, 1856.
763	Weebe, Herman E., assignor to Robert Wood.	Gates.	February 12, 1856.
755	Wetherill, Augustus E.	Bottles, perfumery.	January 8, 1856.
815	Wheeler, Russell, and Stephen A. Bailey.	Ovens, parlor.	July 8, 1856.
836	Wheeler, Russell, and Stephen A. Bailey.	Stoves, coal, cylindrical.	October 7, 1856.
838	Wickersham, John B.	Bedsteads, metallic.	December 23, 1856.
835	Wilson, Daniel.	Stoves, cooking.	October 7, 1856.

ALPHABETICAL LIST OF PATENTEES OF INVENTIONS, DESIGNS, AND REISSUES, FOR THE YEAR 1863.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
40, 206	Abbot & Noble. (See Smith & Brown, assignors.)	Chelsea, Mass.	Stool, portable.	Oct. 6, 1863.
38, 271	Abbot, Oliver D., assignor to Charles A. Gardiner.	Hudson, Mich.	Stoves, foot.	April 28, 1863.
1, 548	Ackley, Sterling.	Pittsburg, Pa.	Lamps.	Oct. 6, 1863.
40, 222	Adair, James.	Pittsburg, Pa.	Lamps.	Oct. 13, 1863.
40, 223	Adams, Andrew L.	Philadelphia, Pa.	Books, pocket.	Oct. 13, 1863.
38, 010	Adams, Calvin, et al. (See Bullock, William, assignor.)	New York, N. Y.	Hair-crimpers.	Mar. 24, 1863.
38, 620	Adams, Henrietta A.	Chester, Ill.	Milk, elder, corn-shellers, and fodder-cutters, mode of using.	Aug. 25, 1863; ante'd Feb. 9, 1863.
39, 455	Adams, John S.	Taunton, Mass.	Fire-arms, breech-loading.	Aug. 11, 1863.
38, 207	Adams, Maybrow.	Chilmark, Mass.	Harpoon.	April 21, 1863.
40, 224	Adams, Robert A.	Chicago, Ill.	Graining in imitation of wood, tools for.	Oct. 13, 1863.
40, 048	Adancourt, C. L.	Troy, N. Y.	Pumps, rotary.	Sept. 22, 1863.
39, 107	Adila, Henry C.	Springfield, Ill.	Churns, device for operating.	July 1, 1863.
38, 208	Adlam, Samuel, Jr. (See Fogg, Jeremiah R., assignor.)	Portland, Me.	Lamps, kerosene.	April 21, 1863.
39, 193	Adlam, Samuel, Jr., & Jeremiah R. Fogg.	Waterbury, Conn.	Anvils, centering.	July 7, 1863.
38, 272	Adt, John, assignor to self and Ellisha Turner.	Dobbs' Ferry, N. Y.	Boots.	April 28, 1863.
38, 575	Agnew, J. Holmes.	Mercersburg, Pa.	Globes, school.	June 16, 1863.
38, 800	Agnew, John R.	Turin, Italy.	Cars, railroad, for facilitating the passage up steep gradients of inclined planes, devices attached to.	June 9, 1863.
37, 327	Aiken, John.	Warner, N. H.	Press, cheese.	Jan. 6, 1863.
38, 964	Aiken, Walter, assignor to self and Henry R. Fowler.	Newark, Ill.	Propelling apparatus, marine.	Sept. 15, 1863; ante'd Sept. 12, 1863.
40, 729	Aiken, William B., assignor to self and James H. Haynes.	Philadelphia, Pa.	Journal boxes for railroad cars.	Dec. 1, 1863.
1, 388	Akins, W. H., and J. D. Feldhausen, assrs to Jas. Wilson.	New York, N. Y.	Sewing machines.	Jan. 27, 1863.
37, 798	Alberger, J. L.	Buffalo, N. Y.	Distilling coal oil, apparatus for.	Mar. 3, 1863.
38, 139	Alberger, J. L.	Buffalo, N. Y.	Hoops, metallic.	April 14, 1863.
39, 436	Albertson, Albert.	Buffalo, N. Y.	Refrigerating apparatus.	Aug. 11, 1863.
40, 800	Albertson, Albert.	New York, N. Y.	Lamp chimney.	Dec. 8, 1863.
38, 366	Albright, Lonla.	Ohio.	Fire-arms, breech-loading.	May 5, 1863.
39, 286	Alcorn, David.	New York, N. Y.	Gas meters, dry.	July 21, 1863.
40, 451	Alden, J. T.	Cincinnati, Ohio.	Yeast, preparation of.	Nov. 3, 1863; ante'd Oct. 20, 1863.
39, 457	Alden, Monsah.	Philadelphia, Pa.	Chuck, universal.	Aug. 11, 1863.
39, 871	Aldrich, Frederick, Jr.	Augusta, Mich.	Ladders.	Sept. 15, 1863.
38, 455	Aldrich, Wales.	Cleveland, Ohio.	Fire-arms, breech-loading.	May 12, 1863.
40, 225	Alexander, Abraham.	Pittsburg, Pa.	Cannons, apparatus for planing the chambers of.	Oct. 13, 1863.
40, 006	Alexander, Calvin C.	Denver, Colorado Territory.	Pumps.	Sept. 22, 1863.

List of patentees of inventions, designs, and reissues, 1863.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
36, 370	Alexander, Elias.	Providence, R. I.	Boots and shoes.	Aug. 4, 1863.
	Alexander, E. A., et al. (See Edgell, Alexander & Kellogg.)			
	Alexander, E. A., et al. (See Edgell, Martin, Kellogg & Alexander.)			
	Alexander, Levi, and Gilbert Richards. (See Richards & Alexander.)			
36, 367	Alger, Francis.	Roseton, Mass.	Shells, explosive, removable charge-chamber for.	July 21, 1863.
37, 266	Algoover, Augustus.	New York, N. Y.	Fences, &c., wire-work for.	Jan. 6, 1863.
	Allen, E., and E. S. Wright. (See Wright & Allen.)			
	Allen, E., and E. S. Wright. (See Wright & Allen.)			
	Allen, E., and E. S. Wright. (See Wright & Allen.)			
36, 872	Allen, Edwin.	Hosston, Mass.	Paper-feeders.	Sept. 15, 1863.
36, 024	Allen, Epos G.	New York, N. Y.	Fire-arms, rifling.	June 30, 1863.
40, 892	Allen, John F., and R. W. McGowan.	Fox Lake, Wis.	Printing press.	Dec. 15, 1863.
36, 523	Allen, Nelson E., assignor to self and Charles B. Warren.	West Meriden, Conn.	Seedling machine.	May 12, 1863.
37, 378	Allen, Norman.	West Meriden, Conn.	Lamp-lighting device.	Jan. 13, 1863.
36, 273	Allen, Norman.	San Francisco, Cal.	Vices.	April 28, 1863.
40, 387	Allen, Oliver.	Cleveland, Ohio.	Lance, bomb.	Oct. 27, 1863.
37, 427	Allen, Richard N.		Barrel, oil.	Jan. 30, 1863.
	Allen, Sidney. (See French, Samuel, assignor.)			
37, 559	Allen, Stephen M.	Hosston, Mass.	Felt, manufacture of.	Feb. 3, 1863.
37, 728	Allen, Stephen M.	Boston, Mass.	Carpet-making, manufacture of.	Feb. 24, 1863.
37, 846	Allen, Stephen M.	Woburn, Mass.	Fibre, long staple, reducing.	Mar. 10, 1863.
36, 019	Allen, Stephen M.	Woburn, Mass.	Paper for collars, &c., manufacture of.	Mar. 31, 1863.
36, 020	Allen, Stephen M.	Woburn, Mass.	Paper from wood, manufacture of.	Mar. 31, 1863.
36, 025	Allen, Stephen M.	Woburn, Mass.	Flax, &c., machines for breaking and dressing.	June 30, 1863.
39, 371	Allen, Stephen M.	Woburn, Mass.	Leather paper.	Aug. 4, 1863.
40, 562	Allen, Stephen M.	Woburn, Mass.	Cloth, floor.	Nov. 17, 1863.
40, 593	Allen, Stephen M.	Woburn, Mass.	Insoles, fabric for.	Nov. 3, 1863.
40, 452	Allen, T. F.	Canandaigua, N. Y.	Car springs.	anted'd Oct. 3, 1863.
	Allen, Wm. H. (See Bain, Alexander, assignor.)			
1, 524	Allen, Wm. H. (See Bain, Alexander, assignor.)			
37, 729	Allen, Wm. H. (See Bain, Alexander, assignor.)	New London, Conn.	Bottle-stoppers, securing.	Dec. 1, 1863.
36, 543	Allen, Wm. H. (See Bain, Alexander, assignor.)	West Dayton, Iowa.	Fences.	Feb. 24, 1863.
37, 481	Allen, Wm. H. (See Bain, Alexander, assignor.)	Washington, Ohio.	Engines, rotary.	May 19, 1863.
	Allyn, W. H.	Middletown, Conn.	Cartridges.	Jan. 27, 1863.
	Altep, Charles R.			
36, 621	Altep, Charles R. (See Meta, John D., assignor.)			
37, 996	Alvord, John J.	Tecumseh, Mich.	Fille, drain, mould.	Aug. 25, 1863.
	Ambler, Augustus I., assignor to self, R. N. Ambler, and Warrick Martin.	Chicago, Ill.	Needles.	Mar. 24, 1863.
40, 005	Ambler, Augustus Irel.	Chicago, Ill.	Car-brakes.	Sept. 22, 1863.
40, 007	Ambler, Augustus Irel.	Chicago, Ill.	Car-brakes, railroad.	Sept. 22, 1863.
	Ambler, Rodolph N., et al. (See Morrow, W. T., assignor.)			
37, 482	Amelung, H. A.	Chicago, Ill.	Fatty matter from animal substances, separating.	Jan. 27, 1863.

40, 803	Amelung, H. A.	New York, N. Y.	Composition for covering hams.	Dec. 8, 1863.
	American Shoe-Tip Company. (See Mitchell, George A., assignor. Release.)			
	American Spiral Spring Butt-hinge Manufacturing Company. (See Bommer, Lorenz, assignor.)			
	American Water-proof Fabric Company. (See Wanda, John B., assignor. Release.)			
40, 377	Ames, Leonard, and Melville Miles, assignors to Leonard Ames.	Wanbeck, Wis.	Paddle wheel.	Oct. 20, 1863.
39, 269	Ames, Nathan.	Saugus Center, Mass.	Railroad switches.	July 21, 1863.
39, 026	Anderson, A. B., Jr.	Brooklyn, N. Y.	Chair, nursery.	June 30, 1863.
36, 719	Anderson, Charles B.	St. Louis, Mo.	Car-trucks, railroad.	June 2, 1863.
40, 668	Anderson, Louis F.	St. Louis, Mo.	Liniment, rheumatic.	Nov. 18, 1863.
36, 711	Anderson, Philander, assignor to self and P. K. Bronson.	Norwich, N. Y.	Water elevators.	May 26, 1863.
39, 757	Anderson, Thomas K.	Hornelaville, N. Y.	Obstacles under water, mode of removing.	Sept. 8, 1863; anted'd Oct. 26, 1863.
	Andre, Antoine.	Chicago, Ill.	Bottles, device for stopping.	May 5, 1863.
36, 768	Andrew, Peter.	Cincinnati, Ohio.	Vessels, war, construction of.	Sept. 8, 1863.
40, 453	Andrew, Peter.	Cincinnati, Ohio.	Ordnance, shield for.	Nov. 3, 1863.
40, 317	Andrews, Horatio.	Fredonia, N. Y.	Scrapers.	Oct. 20, 1863.
36, 543	Andrews, R. T.	Plymouth Hollow, Conn.	Clocks.	May 19, 1863.
40, 304	Andrews, Wm. H., assignor to self and Charles H. Hurd.	New Haven, Conn.	Pastor, window-shut.	Oct. 13, 1863.
37, 739	Andrews, William Watson.	Warrensville, Ohio.	Boat-detaching hook.	Mar. 3, 1863.
39, 622	Andrus, J. H.	Almont, Mich.	Reelives.	Aug. 25, 1863.
36, 456	Angell, Charles B.	Coventry, R. I.	Registers for horse cars.	May 12, 1863.
37, 428	Anslley, G. W.	Cleveland, Ohio.	Skates.	Jan. 30, 1863.
	Anthony, David, et al. (See Harder, Douglas, Becker & Anthony.)			
36, 274	Anthony, Joseph.	Greenbush, N. Y.	Railroads.	April 28, 1863.
	Appleton, Daniel S., George S., Samuel F., John A. and William R. (See North, John, assignor.)			
	Appleton, David, et al. (See Davis, R. W. and D., assignors.)			
	Appleton, G. S., et al. (See Stevens, B. D., assignor.)			
	Appleton, G. S., et al. (See Stevens, B. D., assignor.)			
40, 804	Arbosa, Jacques.	Spain.	"Gases, generating, for heating and illumination."	Dec. 8, 1863.
40, 805	Arbosa, Jacques.	Spain.	Gases for motive power.	Dec. 8, 1863.
	Archer, Samuel.	Globe Village, Mass.	Flanella, process for finishing.	Aug. 18, 1863.
39, 539	Archibald, W. H., et al. (See Cruikshank, Robert, ass't.)	St. Clairville, Ohio.	Projectiles, sub-caliber, compound.	July 28, 1863.
39, 369	Arick, Clifford.	Somerset, Pa.	Rakes, hay.	Jan. 20, 1863.
37, 429	Armel, Daniel.	Troy, N. Y.	Railroad chairs.	Feb. 17, 1863.
37, 668	Arncliffe, John.	Heidelberg, Pa.	Pumps.	April 21, 1863.
36, 909	Arnold, Abraham.	Haddam, Conn.	Wringing machine.	Aug. 25, 1863; anted'd Oct. 18, 1862.
29, 623	Arnold, Francis.			
	Arnold, T. H.	Arlington, Ill.	Car-coupling.	June 9, 1863.
36, 801	Arnold, Wm. E., assignor to H. G. Arnold and J. H. Castle.	Rochester, N. Y.	Locks, window-sash.	Sept. 29, 1863.
40, 138	Arnold, Wm. E., assignor to H. G. Arnold and J. H. Castle.			
40, 139	Arnold, Wm. H., & Wm. J. Potter. (See Potter & Arnold.)	Rochester, N. Y.	Locks, window-sash.	Sept. 29, 1863.

List of patentees of inventions, designs, and reissues, 1863.

No.	Name.	Residence.	Invention or discovery.	Date.
36, 322	Arnoux, Claude.	Paris, France.	Railroad trains, traction and connexion apparatus for.	July 28, 1863.
36, 645	Ashcroft & Brown. (See Brown, James R., assignor.)	Boston, Mass.	Fire-arms, breech-loading.	May 26, 1863.
37, 376	Ashley, Herman H., assignor to Wm. Ridenour and Mahlon H. Biser.	Springfield, Ohio.	Press, hay and cotton.	Jan. 6, 1863.
40, 893	Ashley, S. J.	San Francisco, Cal.	Gun-carriages, operating.	Dec. 15, 1863.
38, 544	Assmus, George. (See Schell, Aug. W., assignor.) Assmus, George. (See Schell, August W., assignor.) Atkinson, William.	Brooklyn, N. Y.	Sewerage, &c., apparatus for.	May 19, 1863; anted'd Oct. 26, 1862.
39, 194	Atkinson, William, deceased, by Charles and Joseph Atkinson, executors.	Moline, Ill.	Dredging and excavating machine.	July 14, 1863.
37, 297	Atterbury, James S. and Thomas B.	Pittsburg, Pa.	Lamps, kerosene.	Jan. 6, 1863.
38, 067	Atterbury, James S. and Thomas B.	Pittsburg, Pa.	Lamp-chimneys.	April 7, 1863.
34, 457	Atterbury, James S. and Thomas B.	Pittsburg, Pa.	Lanterns.	May 12, 1863.
38, 037	Atterbury, James S. and Thomas B.	Pittsburg, Pa.	Jar, fruit or preserve.	June 30, 1863.
40, 594	Atterbury, James S. and Thomas B. (See Rold, P. W., assignor.)	Pittsburg, Pa.	Lanterns.	Nov. 18, 1863.
38, 140	Atwood, Charles.	England.	Steel, manufacture of.	April 14, 1863.
37, 891	Atwater, J. B.	Chicago, Ill.	Projectiles for rifled ordnance.	Mar. 17, 1863.
38, 730	Atwater, J. B.	Chicago, Ill.	Ellipses, instruments for describing.	June 3, 1863.
40, 894	Atwater, J. B.	Chicago, Ill.	Amalgamating precious metals, apparatus for.	Dec. 15, 1863.
37, 379	Atwater, Joseph H.	Providence, R. I.	Press, copying.	Jan. 13, 1863.
40, 543	Atwater, Joseph H.	Providence, R. I.	Paper, news, file.	Nov. 10, 1863; anted'd Oct. 29, 1863.
40, 926	Atwood, Lewis J.	Waterbury, Conn.	Lamps.	Oct. 13, 1863.
40, 257	Atwood, Lewis J.	Waterbury, Conn.	Lamp-chimneys.	Oct. 13, 1863.
40, 258	Atwood, Lewis J.	New York, N. Y.	Vessels-of-war, port closer for.	Dec. 15, 1863.
40, 895	Auchincloss, William Stuart.	Philadelphia, Pa.	Shoes, eyelet.	Jan. 6, 1863.
37, 338	Autenrieth, Jacob.	Dunkirk, N. Y.	Weather strips.	June 9, 1863.
38, 802	Averill, B. F.	Tunkhannock, Pa.	Engines, rotary.	June 2, 1863.
38, 721	Avery, Cyrus.	Lewiston, Me.	Roofing.	May 26, 1863.
38, 646	Ayer, David M.	Pine Bend, Minn.	Drills, grain.	April 28, 1863.
38, 275	Aylsworth, Thomas B.	Hartford, Conn.	Screws.	April 14, 1863.
38, 141	Ayres, D. S., et al. (See Olmstead, Samuel J., assignor.)	Hartford, Conn.	Screw-driver.	July 14, 1863.
39, 306	Ayres, J. A.	New York, N. Y.	Ships and other batteries, armor plates for.	Jan. 13, 1863.
37, 380	Babbitt, Benjamin T.	New York, N. Y.	Steam, exhaust, for heating purposes, method of using.	Mar. 31, 1863.
38, 021	Babbitt, Benjamin T.	New York, N. Y.	Propeller, marine.	May 8, 1863.
38, 324	Babbitt, Benjamin T.	New York, N. Y.	Condensers.	Sept. 1, 1863.
39, 769	Babbitt, Benjamin T.	New York, N. Y.		

37, 500	Babcock, Albert, and William W. Huntley. (See Huntley and Babcock.)	Seneca Falls, N. Y.	Boatstead fastener.	Feb. 3, 1863.
40, 806	Babcock, George H., and Geo. H. Reynolds. (See Reynolds and Babcock.)	Middletown, Conn.	Hook, snap.	Dec. 8, 1863.
37, 600	Babcock, H. H. (See Cones and Osborne, assignors.)	Detroit, Mich.	Drying grain.	Mar. 3, 1863.
1, 543	Babillon, John.	Lisbon, Conn.	Sewing machines. (Extension).	April 21, 1863.
37, 847	Bachelder, John.	Lisbon, Conn.	Sewing machines. (Release).	Sept. 22, 1863.
46, 949	Bachus, Evans.	Coxsack, N. Y.	Stoves.	Mar. 10, 1863.
40, 988	Bacon, A. C., and J. G. Jennings.	Cleveland, Ohio.	Fire-places.	Dec. 22, 1863.
38, 270	Bacon, Edward P.	Milwaukee, Wis.	Tickets, coupon, &c., suspension rack for.	Sept. 29, 1863.
39, 195	Bader, Louis, assignor to self and Christian F. Elwert.	Providence, R. I.	Fire-arms, breech-loading.	July 21, 1863.
38, 936	Badger, D. D. (See Merrill, Helen, assignor.)	Philadelphia, Pa.	Lamps, coal-oil.	July 21, 1863.
38, 369	Badgley, Nathan.	New York, N. Y.	Jack, lever.	June 23, 1863.
40, 896	Baguall, William R.	Chelsea, Mass.	Caoutchouc, apparatus for curing.	May 5, 1863.
39, 028	Bailey, Harry J. (See Williams, Samuel S., assignor.)	Philadelphia, Pa.	Paddle-wheel.	Dec. 15, 1863.
40, 807	Bailey, James S., et al. (See Tuttle, Chas. F., deceased.)	Prairie township, Ind.	Saw, drag.	June 30, 1863.
1, 719	Bailey, Jos. H. and Geo. A. Jones. (See De Kervanaw, F. B., assignor.)	Utica, N. Y.	Skates.	Dec. 8, 1863.
37, 597	Bailey, William.	Philadelphia, Pa.	Statuettes.	Feb. 17, 1863.
38, 529	Bailey, Joseph A.	New York, N. Y.	Telegraphs, electric. (Design).	Mar. 24, 1863.
38, 530	Bain, Alexander, assignor to Wm. H. Allen.	New York, N. Y.	Telegraphs, calls for.	May 12, 1863; anted'd Dec. 21, 1862.
39, 624	Bainbridge, E. T.	New York, N. Y.	Telegraphs, electric, keys for.	May 12, 1863; anted'd Dec. 11, 1862.
39, 802	Baird, John.	Louisville, Ky.	Lanbs, tidal valves for draining.	Aug. 25, 1863.
38, 722	Baird, John.	New York, N. Y.	Engines, steam, valves for.	Mar. 3, 1863;
39, 438	Baird, Joseph H., and Wm. F. Lewis. (See Lewis and Baird.)	New York, N. Y.	Engines, steam, valves for.	Aug. 25, 1863; anted'd June 21, 1862.
1, 849	Baker, A. H. (See Preston, H. M., assignor.) Baker, Albert Osborn.	Providence, R. I.	Belt-fastener. (Design).	Nov. 17, 1863.

List of patentees of inventions, designs, and reissues, 1863.

No.	Name.	Residence.	Invention or discovery.	Date.
40, 897	Baker, John G., assignor to Samuel Seeley.	Washington, D. C.	Corrugating machine.	Dec. 15, 1863; anted'd Dec. 6, 1863.
39, 106	Baker, Theodore.	Stillwater, N. Y.	Diggers, potato.	July 7, 1863; anted'd July 2, 1862.
1, 541	Baker, William.	Utica, N. Y.	Clap-board joint.	Sept. 22, 1863.
38, 210	Baker, William C.	New York, N. Y.	Heaters, screen for.	April 21, 1863.
38, 211	Baker, William C.	New York, N. Y.	Radiators, steam.	April 21, 1863.
38, 212	Baker, William C.	New York, N. Y.	Detector, low-water.	April 21, 1863.
40, 722	Baker, William C., assignor to self and John J. Smith.	New York, N. Y.	Steam generators.	Nov. 24, 1863.
40, 805	Baker, William H.	Marathon, N. Y.	Telescopes.	Dec. 8, 1863.
40, 809	Baker, William H., and Henry R. Worthington. (See Worthington and Baker.) Extension.	Marathon, N. Y.	Fire-arms, locks for.	Dec. 8, 1863.
38, 718	Baker, Wm. H., and George J. Hill, assignors to selves, Jay Pettibone, and Joseph Warran.	Buffalo, N. Y.	Printing press.	June 2, 1863.
39, 610	Baker, W. M., assignor to self and W. R. Heath.	Walpole, Ind.	Refrigerator.	Aug. 18, 1863.
40, 976	Baker, W. M., assignor to self and W. R. Heath.	Walpole, Ind.	Refrigerator.	Dec. 15, 1863.
39, 103	Bakewell, William.	Pittsburg, Pa.	Cartridge, metallic.	July 7, 1863.
38, 276	Baldwin, Cyrus W.	Boston, Mass.	Sewing machines.	April 28, 1863.
39, 507	Baldwin, David W. (See Purves, William A., assignor.)	Boston, Mass.	Sewing machines.	July 14, 1863.
38, 965	Ball, Albert.	Worcester, Mass.	Fire-arms, self-loading.	June 23, 1863.
40, 546	Ball, Albert.	Worcester, Mass.	Polishing machine.	Nov. 10, 1863.
39, 453	Ball, Thomas C.	Springfield, Vt.	Lumbe, wound-d, ventilating apparatus for.	Aug. 4, 1863.
41, 035	Ball, Thomas C., assignor to self and M. L. Baxter.	Helios Falls, Vt.	Engines, steam, piston valve for.	Dec. 22, 1863.
40, 229	Baldon, Samuel.	Brooklyn, N. Y.	Composition for lubricating machinery.	Oct. 13, 1863.
38, 545	Bamber, John.	Rochester, N. Y.	Pots, tea and coffee.	May 19, 1863.
40, 318	Banister, Isaac.	Newark, N. J.	Wax, semi-liquid, for sewing thread.	Oct. 2, 1863.
40, 240	Barker, George W.	St. Louis, Mo.	Oil vessels.	Oct. 13, 1863.
39, 540	Banks, Joseph.	New York, N. Y.	Pumps, rotary.	Aug. 18, 1863.
39, 873	Banks, Thaddeus C.	New York, N. Y.	Signal whistle.	Sept. 15, 1863; anted'd Apr. 26, 1862.
38, 647	Barber, Hiram.	Jenau, Wis.	Threshing machines, band-cutter for.	May 26, 1863.
39, 333	Barber, Philo.	Lokant, Ill.	Plant-fenders.	July 28, 1863.
1, 519	Barcelo, Joel B.	Tuscarora, N. Y.	Separators, grain.	Aug. 11, 1863.
38, 937	Barcelo, Myron J.	Mount Morris, N. Y.	Separators, grain.	June 23, 1863.
1, 524	Barcelo, Myron J.	Mount Morris, N. Y.	Separators, grain.	Oct. 27, 1863.
39, 372	Barckley, Robert.	Philadelph., Pa.	Furunces, cupola.	Aug. 4, 1863.
40, 295	Barger, H. F., and T. R.	London Plains, Iowa.	Planters, corn.	Nov. 17, 1863.

38, 458	Barton, Peter, and James M. Morrell. (See Morrell and Barton.)	Pittsfield, Mass.	Trap, animal.	May 12, 1863.
38, 938	Barker, H., and L. A. Eusworth. (See Eusworth and Barker.)	Pittsfield, Mass.	Boots, skaling.	June 23, 1863.
39, 373	Barker, Gardner T.	San Francisco, Cal.	Car-coupling.	Aug. 4, 1863.
37, 555	Barlow, Eliza T.	Waterbury, Conn.	Metallic surfaces, modes of uniting.	Jan. 27, 1863.
37, 938	Barnard, Wm. B., assignor to self and S. G. Blackman.	Waterbury, Conn.	Vessels, iron, coppering.	Mar. 24, 1863.
39, 374	Barnard, Wm. B., assignor to self and S. G. Blackman.	Waterbury, Conn.	Vessels, iron, coppering.	Mar. 24, 1863.
39, 000	Barnes, Charles R.	Muncy, Pa.	Separators, grain.	Aug. 4, 1863.
40, 231	Barnes, Edmund F., assignor to Stephen D. Law and Edward P. Curtis.	New York, N. Y.	Paint composition.	June 23, 1863.
40, 231	Barnes, Ezra R.	Brookfield, Conn.	Paper, emery or sand, apparatus for holding.	Oct. 13, 1863.
40, 298	Barnes, Horace H.	Mexico, N. Y.	Railroads, signal switches for.	Dec. 15, 1863.
40, 441	Barnes, Joshua. (See Warran, Owen G., assignor.)	Peoria, Ill.	Engines, steam, slide valves for.	Oct. 27, 1863.
38, 876	Barnes, M. H., assignor to self and A. S. Norton.	Kingsford, N. Y.	Hinges for blinds.	June 16, 1863.
39, 029	Barnes, William L.	New York, N. Y.	Washing machine.	June 30, 1863.
40, 286	Barnett, Samuel M.	Grosbeak, Ohio.	Slave-making machine. (Antedated Nov. 11, 1863.)	Nov. 17, 1863.
1, 532	Barnum, Daniel.	New York, N. Y.	Condensers, surface.	Oct. 13, 1863.
40, 017	Barrett, Wyman R. (See Hill, Levi L., assignor.)	New York, N. Y.	Coffee and water cup for soldiers.	Sept. 22, 1863.
37, 483	Barry, Charles L.	Providence, R. I.	Kettles, tea.	Jan. 27, 1863.
37, 484	Barry, Charles L.	Providence, R. I.	Burial cases, metallic.	Jan. 27, 1863.
1, 821	Barstow, Amos C.	Providence, R. I.	Stove, parlor.	Oct. 6, 1863.
1, 830	Barstow, Amos C.	Providence, R. I.	Childron.	Oct. 13, 1863.
38, 618	Bartholomew, F. H.	New York, N. Y.	Water-closets, valves for.	May 26, 1863.
40, 232	Barthe, T. C. (See Bousley, David, assignor.)	Independence, Iowa.	Sugar evaporators.	Oct. 13, 1863.
37, 801	Bartlett, Abel H.	Spartan Dayvil, N. Y.	Refrigerator.	Mar. 3, 1863.
1, 740	Bartlett, David L., assignor to self, James H. Hayward, and H. W. Robbins.	Baltimore, Md.	Stove.	Mar. 24, 1863.
37, 381	Bartlett, Jason T., and Edward E. Butman.	Boston, Mass.	Trusses.	Jan. 13, 1863.
38, 142	Bartlett, Joseph W.	New York, N. Y.	Provision cooler.	April 14, 1863.
39, 334	Bartlett, J. W., and A. Morris.	Hartmar, Ohio.	Buckets and tubs, tools for finishing.	July 28, 1863.
39, 789	Bartlett, Jno. W., and A. Morris.	Hartmar, Ohio.	Chuck, self-cleaning.	Sept. 8, 1863.
40, 255	Bartlett, Stephen S., assignor to self and Thos. H. Dodge.	Providence, R. I.	Harvesters.	Nov. 10, 1863.
38, 088	Bartol, B. H.	Philadelphia, Pa.	Vessels, iron-clad, shutters for the port-holes of.	Nov. 10, 1863.
38, 089	Bartol, B. H.	Philadelphia, Pa.	Ordnance, mounting.	April 7, 1863.
40, 016	Barton, Anson F.	Dedham, Mass.	Boilers, steam.	Sept. 22, 1863.
38, 619	Barton, David R. (See Heleale and Nadig, assignors.)	Wenham, Mass.	Pipes, water, from blinmen, pleh, &c., manufacture of.	May 26, 1863.
39, 985	Bascom, Willard, assignor to Robert Foulds.	New York, N. Y.	Nails, &c., in picture and other frames, device for driving.	Sept. 15, 1863.
39, 541	Basford, C. H. (See Saunders, A. F., assignor.)	Salem, Mass.	Gas, apparatus for carburetting. (Antedated Mar. 18, '63.)	Ang. 18, 1863.
38, 277	Bassett, John A.	Fulton, N. Y.	Traps, fly.	April 28, 1863.
40, 730	Bassett, Royal M., and George Mallory.	Birmingham, Conn.	Chimneys.	Dec. 1, 1863.
39, 710	Bastian, Gottlieb, and Bernhard Segnitz.	New York, N. Y.	Inhalers.	Sept. 1, 1863.
37, 561	Batchelder, John M.	Cambridge, Mass.	Bank notes.	Feb. 3, 1863.

List of patentees of inventions, designs, and reissues, 1863.

No.	Name.	Residence.	Invention or discovery.	Date.
40, 233	Batcheller, H. F.	Sterling, Ill.	Planters, corn	Oct. 13, 1863.
40, 670	Bates, Cyrus	Waterville, Me.	Separators, grain	Nov. 24, 1863.
37, 999	Bates, Erasmus W., assignor to John Ellis	Waterville, Me.	Saw frames, wood	Mar. 24, 1863.
38, 674	Bates, William N.	Cedar Rapids, Iowa	Broom, (Antedated January 10, 1862)	Sept. 15, 1863.
37, 908	Battel, Mellen	Albany, N. Y.	Gold washer and amalgamator	Jan. 6, 1863.
40, 547	Bauder, Charles L.	Cleveland, Ohio	Chairs, invalid, travelling	Nov. 10, 1863.
38, 439	Bauer, August	Philadelphia, Pa.	Lubricating composition	May 12, 1863.
40, 388	Baur, Julius	New York, N. Y.	Copper, zinc, and aluminum, alloy of. (Antedated Oct. 30, 1863.)	Oct. 27, 1863.
39, 208	Baxter, Charles F.	Boston, Mass.	Bottle stopper. (Antedated January 16, 1863)	July 14, 1863.
37, 893	Baxter, D. W. C.	Philadelphia, Pa.	Knapsack sling	Mar. 17, 1863.
37, 716	Baxter, M. L. (See Bull, Thomas C., assignor.)	Lebanon, N. H.	Dredging box with grater and cake-cutter attached.	Feb. 17, 1863.
1, 734	Bayley, George D., assignor to Giles B. Johnson.	Canton, Mass.	Solitaire board	Mar. 17, 1863.
38, 723	Bazin, James A., and Charles H. Wheeler and Bazin.)	Philadelphia, Pa.	Dryers, grain	June 2, 1863.
40, 454	Beach, Henry H.	New York, N. Y.	Sugar mould carriages	Nov. 3, 1863.
38, 000	Beach, Levi, et al. (See Mozart, Beach, and Hubbell.)	Philadelphia, Pa.	Metal bars, drawing or forging	April 7, 1863.
39, 375	Beach, Theodorus	Anderson, Ind.	Stump extractor. (Antedated December 8, 1861)	Aug. 4, 1863.
40, 319	Beachler, J.	New York, N. Y.	Breast pumps	Oct. 20, 1863.
38, 546	Beall, John	Berlin, Ill.	Flour-jackers. (Antedated August 15, 1862)	May 19, 1863.
37, 359	Beals, Fortyce	New Haven, Conn.	Fire-arms, revolving, runner connexion for	Jan. 6, 1863.
38, 542	Beardslee, Frederick E.	College Point, N. Y.	Fuses by electricity, firing	Aug. 18, 1863.
39, 376	Beardslee, George W.	College Point, N. Y.	Telegraphs, magneto-electric	Aug. 4, 1863.
38, 543	Beardslee, George W.	College Point, N. Y.	Cannon by electricity, firing	Aug. 18, 1863.
40, 378	Beasley, David, assignor through <i>meane</i> as to Thompson C. Bartle)	Boone county, Ind.	Sugar evaporator	Oct. 20, 1863.
39, 110	Beaudreou, Joseph	Fond du Lac, Wis.	Shingle machine	July 7, 1863.
40, 074	Beaumont, Victor	New York, N. Y.	Stamps, hands	Sept. 22, 1863.
40, 801	Beaver, Peter, et al. (See Marsh, Shorkly, and Beaver.)	New York, N. Y.	Cords, wires, &c., covering	Dec. 1, 1863.
37, 848	Beck, Frederick	Seranton, Pa.	Composition for lining oil barrels, &c.	Mar. 10, 1863.
37, 849	Becker, Friedrich	Seranton, Pa.	Shutters and show windows, securing	Mar. 10, 1863.
39, 111	Becker, John, and Richard Mohler. (See Mohler and Becker.)	Cincinnati, Ohio	Jars, preserve, composition for sealing	July 7, 1863.
39, 335	Becker, Nicholas J., and Thomas Harvey. (See Harvey and Becker.)	Cincinnati, Ohio	Leather-rounding machine	July 28, 1863.
40, 152	Beckman, Philip	Naperville, N. Y.	Harness soap	July 6, 1863.
37, 943	Beckwith, Hiram	Grass Lake, Mich.	Bells, trimming or cutting	Oct. 24, 1863.
38, 877	Beckwith, Ira L.	Providence, R. I.	Tenons, round, machines for	June 16, 1863.

40, 597	Beckwith, Philip D.	Dowagiac, Mich.	Dolls, grain	Nov. 17, 1863.
37, 669	Bedon, George	England	Galvanizing wire	Feb. 17, 1863.
40, 015	Bebo, Richard	West Springfield, Mass.	Piano-forte, attachment for	Sept. 22, 1863.
37, 562	Beecher, Anson & Ebenzer II.	New Haven, Conn.	Match, lucifer, splints, machine for dipping	Feb. 17, 1863.
37, 269	Beecher, George C.	Lyons, N. Y.	Car wheels, anti-friction	Jan. 6, 1863.
40, 810	Beecher, O., and R. E. Rogers	Philadelphia, Pa.	Journal boxes, railroad	Dec. 8, 1863.
39, 790	Beckman, Abram	New York, N. Y.	Saws, scroll	Sept. 8, 1863.
40, 234	Beeman, Ephraim	Owego, N. Y.	Wick movers	Oct. 13, 1863.
38, 803	Beers, Lemuel. (See Colburn, George F. J., assignor.)	New Albany, Ind.	Ploughs. (Antedated April 18, 1863)	June 9, 1863.
37, 944	Beers, James R.	New York, N. Y.	Governor, marine	Mar. 24, 1863.
40, 899	Behrens, Henry J., and Wm. H. Horstmann. (See Horstmann and Behrens.)	Buffalo, N. Y.	Iron, angle, machines for bending	Dec. 15, 1863.
38, 878	Bell, David	England	Matches, lucifer, apparatus for dipping	June 16, 1863.
37, 594	Bell, Samuel, and Thos. Higgins	England	Stump extractors. (Patented in England Aug. 16, 1862)	Mar. 17, 1863.
37, 594	Bell, Thomas, and Louis Hulin	England		
1, 370	Bellamy, William, and James J. Burnet. (See Burnet and Bellamy.)	Philadelphia, Pa.	Stands for machines	Jan. 6, 1863.
38, 336	Bement, William B.	New York, N. Y.	Sewing machines, cordlog guides for	July 28, 1863.
37, 485	Bencliet, Charles P.	Cincinnati, Ohio	Cartridge box	Jan. 27, 1863.
1, 451	Bennett, Augustus A.	Cincinnati, Ohio	Cartridge box	April 14, 1863.
48, 213	Bennett, Augustus A.	Cincinnati, Ohio	Patrol holster	April 21, 1863.
37, 803	Bennett, E. R. (See Buehback, Peter, assignor.)	England	Zinc, manufacture of	March 3, 1863.
37, 803	Bennett, Frederick	England		
37, 496	Bensell, William F., and Daniel R. Bowker. (See Bowker & Bensell.)	Baltimore, Md.	Uterus, sounds for the	Jan. 27, 1863.
37, 670	Benson, Benjamin S.	Baltimore, Md.	Pipes, moulding and casting	Feb. 17, 1863.
39, 711	Benson, Benjamin S.	North Jackson, Pa.	Stave-dressing machine	Sept. 1, 1863.
40, 368	Bentley, William H.	Westford, N. Y.	Hay-loading machines	Nov. 17, 1863.
40, 789	Bergan, George I.	Galesburg, Ill.	Planters, corn	Dec. 1, 1863.
37, 430	Bergdreser, J.	Berryburg, Pa.	Grain-scouring machine	Jan. 30, 1863.
1, 749	Berkeley Manufacturing Company. (See Waite, Enoch, assignor.)	Bloomfield, N. J.	Envelopes	April 28, 1863.
39, 112	Berlin, Henry C., and George H. Jones	Jersey City, N. J.	Projectiles for rifled ordnance	July 7, 1863.
40, 599	Berney, Alfred. (See Millochen, Adolph, assignor.)	Grand Rapids, Mich.	Fire arches, or furnaces for evaporating apparatus	Nov. 17, 1863.
38, 143	Berney, Alfred. (See Millochen, Adolph, assignor.)	Hannibal, Mo.	Indicator, station and street, for railroad cars	April 14, 1863.
39, 113	Berney, Alfred. (See Millochen, Adolph, assignor.)	Tonawanda, N. Y.	Lumber, thin, machine for cutting	July 7, 1863.
39, 875	Berney, Alfred. (See Millochen, Adolph, assignor.)	Boston, Mass.	Bracket-brace for stair rails	Sept. 15, 1863.
37, 270	Berney, Alfred, and Peter B. Lawson. (See Lawson and Berney.)	Albion, Mich.	Chimney caps	Jan. 6, 1863.
37, 330	Bernstein, Samuel. (See Carter, William, assignor.)	Springfield, Ill.	Churns and washing machines, operating	Jan. 6, 1863.
37, 804	Berry, Sidney	Springfield, Ill.	Ironing stand	Mar. 3, 1863.
38, 022	Bertier, Alexander	New York, N. Y.	Iron, composition for covering and protecting	Mar. 31, 1863.

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No.	Name of patentee.	Residence.	Invention or discovery.	Date.
37, 457	Bickhart, Isaac	Harlan, Ind.	Boot and shoe blacking apparatus	Jan. 27, 1863.
38, 547	Bickhart, Jacob	Harlan, Ind.	Stack covers	May 19, 1863.
38, 782	Butwell, James, assignor to self and William W. Marston.	New York, N. Y.	Grindstone, machine for facing	June 2, 1863.
38, 691	Butwell, Julius A.	Sturges, Mich.	Teeth, artificial, bases for	April 7, 1863.
37, 671	Butwell, Samuel W.	Hartford, Conn.	Pasteners, each	Feb. 17, 1863.
1, 523	Bigelow, Erasmus B.	Boston, Mass.	Looms, Brussels carpets	Aug. 18, 1863.
	Bigelow, Erasmus B.	Boston, Mass.	Looms for weaving Brussels carpets, &c. (Extension)	Oct. 27, 1863.
	Bigelow, Erasmus B.	Boston, Mass.	Looms, Jacquard	Mar. 4, 1863.
38, 000	Bigelow, George W., assignor to H. B. Bigelow.	Boston, Mass.	Logans, Jacquard	Sept. 14, 1863.
39, 091	Bigelow, George W., assignor to self, Luther E. Porter, and Samuel M. Rowe.	New Haven, Conn.	Knitting machine	Mar. 21, 1863.
39, 522	Bigelow, Thomas S., assignor to self, Luther E. Porter, and Samuel M. Rowe.	Lake Mills, Wis.	Cars, mode of stopping and starting	June 30, 1863.
1, 703	Bignall, Moses C., assignor to Downs & Co.	Lake Mills, Wis.	Paddle-wheels	Aug. 11, 1863.
39, 611	Bignall, Moses C., and R. F. Osgood, assignors to Downs & Co.	Seneca Falls, N. Y.	Pump	Jan. 6, 1863.
39, 209	Bill, Henry W.	Seneca Falls, N. Y., &c.	Water elevators	Aug. 18, 1863.
40, 153	Billings, George W.	Cuyahoga Falls, N. Y.	Punching machines	July 14, 1863.
40, 154	Billings, George W.	New York, N. Y.	Bullet for fire-arms	Oct. 6, 1863.
40, 155	Billings, George W.	New York, N. Y.	Hemp and flax, process of rotting. (Antedated Sept. 21, 1863.)	Oct. 6, 1863.
40, 236	Billings, George W.	New York, N. Y.	Flax and hemp drying frame. (Antedated Sept. 21, 1863.)	Oct. 13, 1863.
37, 884	Billings, J. D., assignor to self and George R. Weed.	Rutland, Vt.	Stamps, self-inking	Mar. 10, 1863.
38, 791	Billings, J. D., and F. L. Tyler.	Rutland, Vt.	Car springs	Sept. 8, 1863.
38, 804	Billings, Uriah	Bedford, Mass.	Horse-shoe machines	June 9, 1863.
38, 879	Billings, William B.	New York, N. Y.	Lamps, coal-oil. (Antedated Dec. 16, 1862)	June 16, 1863.
40, 156	Blag, James	Philadelphia, Pa.	Car brakes, shoes for	Oct. 6, 1863.
40, 600	Bingham, T. F.	Gowanda, N. Y.	Beedies	Nov. 17, 1863.
40, 350	Birchard, J. F.	Milwaukee, Wis.	Tables, extension, slides for	Oct. 20, 1863.
37, 895	Birdsell, Edgar M.	Penn Yan, N. Y.	Threshing machine	Mar. 17, 1863.
37, 428	Birdsell, John C.	West Henrietta, N. Y.	Thresher and huller, clover	Jan. 27, 1863.
37, 805	Bishop, George S.	Washington, D. C.	Car coupling	Mar. 3, 1863.
37, 806	Bishop, Robert Henry	Aristol, Conn.	Motion, device for converting	Mar. 3, 1863.
37, 896	Black, A. Stewart	New York, N. Y.	Washtand and water-closet, combined	Mar. 17, 1863.
39, 210	Blackburn, Job W., assignor to James H. Prentice	New York, N. Y.	Umbrella-ribs, apparatus for tempering	July 14, 1863.
41, 036	Blackman, S. G. (See Barnard, William R., assignor.)	Brooklyn, N. Y.	Hats, apparatus for stretching	Dec. 22, 1863.
40, 990	Blair, David S.	Albany, N. Y.	Heating brewers' boilers, apparatus for	Dec. 22, 1863.

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38, 548	Blair, Thomas S.	Pittsburg, Pa.	Railroad rails	May 19, 1863.
1, 522	Blair, Thomas S.	Pittsburg, Pa.	Railroad rails	Dec. 1, 1863.
40, 811	Blake & Dodge. (See Dodge, James, assignor.)	Boston, Mass.	Soda-water apparatus	Dec. 8, 1863.
38, 650	Blake, J. A., and H. Woods. (See Hughes, Robert M., assignor.)	New Haven, Conn.	Carriages, draught, clip ties for	May 26, 1863.
1, 569	Blake, Philo	Worcester, Mass.	Sewing machines, hemming guides for	Nov. 10, 1863.
38, 625	Blake, S. E., and Thomas Johnston, assignors to Alfred and Lorenzo D. Davis.	Boston, Mass.	Zinc, retorts for refining	Aug. 25, 1863.
38, 939	Blake, William	Concord, Pa.	Car-coupling, railroad	June 23, 1863.
40, 014	Blakeslee, Homer I.	New York, N. Y.	Locomotives, application of blowers to the furnaces of	Sept. 22, 1863.
40, 812	Blanchard, Thomas	Boston, Mass.	Wood, bending	Dec. 17, 1863.
40, 900	Blanchard, Virgil W.	Bridgeport, Vt.	Harvesters. (Antedated Dec. 3, 1863.)	Dec. 8, 1863.
39, 792	Blinn, C. D.	Macomb, Ill.	Planters, corn	Dec. 13, 1863.
40, 901	Blodgett, Frank M.	Port Huron, Mich.	Lamp chimneys, mode of cleaning	Sept. 8, 1863.
38, 214	Blodgett, John W.	Boston, Mass.	Roof, gutter, protector	Dec. 15, 1863.
38, 712	Blood, Charles	Three Rivers, Mich.	Fences, portable	April 21, 1863.
40, 902	Blood, Franklin T.	Malin, N. Y.	Diggers, potato	Sept. 15, 1863.
40, 305	Blood, Oliver H., and F. C. Treadwell, Jr., assignors to Oliver H. Blood.	Janesville, Wis.	Gates	Dec. 15, 1863.
39, 271	Bloom, Earl. (See Johnson, Benjamin A., assignor.)	New York, N. Y.	Needle wrappers	Oct. 13, 1863.
38, 549	Blum, D. G.	Winfield, Iowa	Cultivators	Jan. 6, 1863.
38, 550	Bly, Douglas	Rochester, N. Y.	Legs, artificial. (Antedated July 30, 1862)	May 19, 1863.
38, 551	Bly, Douglas, and R. H. Nicholas. (See Nicholas & Bly.)	Rochester, N. Y.	Legs, artificial	May 19, 1863.
37, 945	Blythe, James	Lafayette, Ind.	Bed bottom	May 19, 1863.
38, 805	Boadman, C. T.	Philadelphia, Pa.	Lamp burners	Mar. 24, 1863.
38, 910	Boaseuf, Pierre A. F.	Bergen Point, N. J.	Engine, rotary	June 9, 1863.
40, 548	Bock, Charles F., and David H. Metcalf. (See Metcalf & Bock.)	Paris, France	Preparations to serve as hemostatics and antiseptics	June 23, 1863.
38, 144	Bodger, John S.	Bath, N. Y.	Separators, grain	Nov. 10, 1863.
37, 272	Bodker, James F.	Madison, Wis.	Photographs, mode of covering	April 14, 1863.
38, 580	Bockel, William	Philadelphia, Pa.	Projectiles, chilled iron, moulding	Jan. 6, 1863.
34, 460	Bocklen, R., and L. Planer.	New York, N. Y.	Bellows	June 16, 1863.
37, 897	Bogert, Horatio. (See Bradford, Hezekiah, assignor.)	Chicago, Ill.	Pumps, ships', apparatus for working	May 12, 1863.
37, 439	Bohm, William U.	Philadelphia, Pa.	Railroads, machines for removing snow and ice from	Mar. 17, 1863.
38, 532	Bolles, John, 2d	San Francisco, Cal.	Belt, waist, buckle for	Jan. 27, 1863.
38, 623	Bollen, Geo. W., assignor to self and Michael Maullen.	Boston, Mass.	Bridges, truss	May 19, 1863.
39, 793	Bollinger, Cornelius	St. Louis, Mo.	Engines, steam, slide valves for	May 19, 1863.
40, 657	Bollmann, Louis, assignor to Nicholas Shaugbnessy.	Harrisburg, Pa.	Mills, grinding	Sept. 8, 1863.
39, 876	Bolton, Daniel	Vienna, Austria	Sewing machines	Nov. 17, 1863.
40, 209	Bolton, James, assignor to Singer Manufacturing Company.	Franklin, Ohio	Trees, fruit, process for treating	Oct. 13, 1863.
	Bolton, Joseph Barber, and Job Johnson. (See Johnson & Bolton.)	Springfield, Ill.	Iron, railroad, straightener and carver	Sept. 15, 1863.
		Chicago, Ill.	Sewing machines, presser foot for	Oct. 6, 1863.

List of patentees of inventions, designs, and reissues, 1863.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
38, 023	Bommer, Lorenz.	New York, N. Y.	Spring, door and shutter.	Mar. 31, 1863.
40, 879	Bommer, Lorenz, assignor to American Spring Eut Hinge Manufacturing Company.	New York, N. Y.	Hinges, spring.	Dec. 8, 1863.
39, 986	Bond, Amos, assignor to self and Lewis B. Loux.	Philadelphia, Pa.	Leather, composition for blacking and polishing.	Sept. 15, 1863.
38, 442	Bond, Frederick W., assignor to John B. Murray.	Cypress Hills, N. Y.	Tourlquets.	May 5, 1863.
38, 138	Bond, Thomas D.	Laurel, Md.	Water-pipes, apparatus for preventing obstructions in.	April 7, 1863.
37, 531	Bonelli, Chev. Guétan.	Milan, Sardinia	Telegraphs, delineating.	Jan. 6, 1863.
37, 898	Bonzano, Adolphus.	Detroit, Mich.	Cannon, machine for rifling.	Mar. 17, 1863.
37, 946	Bonzano, Adolphus.	Detroit, Mich.	Ordnance, implements for disabing.	Mar. 24, 1863.
38, 651	Booker, J. W.	Palmont, Ill.	Cultivators.	May 26, 1863.
38, 877	Boon, Alonzo T.	Gatesburg, Ill.	Knife-sharpening and scourer.	Sept. 15, 1863.
40, 455	Boon, Alonzo T.	Gatesburg, Ill.	Paddle-wheel.	Nov. 3, 1863.
40, 569	Boon, Alonzo T.	Gatesburg, Ill.	Bars, metallic.	Nov. 10, 1863.
40, 550	Boon, Alonzo T.	Gatesburg, Ill.	Gear cutting.	Nov. 10, 1863.
40, 013	Boornum, John V. V.	Jersey City, N. J.	Condensers, surface, joints of tubes of.	Sept. 22, 1863.
38, 881	Booth, Holmes and Hayden, (See Hayden, Hiram W., ass't.)	New York, N. Y.	Lamp chimneys.	June 16, 1863.
38, 791	Booth, Henry, Jr.	Portsmouth, Va.	Propeller, hydraulic.	June 9, 1863.
40, 012	Boothman, Erasmus D.	Farmersville, N. Y.	Tuning instruments, innochoord.	Sept. 22, 1863.
1, 398	Borke, Gadi, Jr.	Amenia, N. Y.	Milk, concentrating and preserving.	Feb. 10, 1863.
40, 790	Borremann, Louis, assignor to August Hamann.	Hudson city, N. J.	Watch chains, &c., swivel hooks for.	Dec. 1, 1863.
38, 857	Borton, E. H., assignor to self and E. A. Skeels.	St. Louis, Mo.	Burial cases.	June 9, 1863.
38, 856	Bosworth, C. F.	New Haven, Conn.	Sewing-machine stitch.	June 9, 1863.
38, 807	Bosworth, C. F.	New Haven, Conn.	Sewing machine.	June 9, 1863.
40, 814	Bottin, Albert.	Bridgeport, Conn.	Channelling tool.	Dec. 8, 1863.
37, 730	Bottin, Charles L.	Danversville, New York.	Churns.	Dec. 24, 1863.
37, 382	Bourne, Edward and John.	Paris, France.	Gauges, pressure.	June 10, 1863.
37, 947	Bourne, Edward and John.	Pittsburg, Pa.	Steam-generators.	Jan. 13, 1863.
40, 591	Bourne, Edward and John.	Pittsburg, Pa.	Dampers.	Mar. 24, 1863.
37, 717	Bourne, Theodore, et al. (See Brown, Hiram W., ass't.)	Pittsburg, Pa.	Joint, steam-tight, making.	Dec. 22, 1863.
40, 321	Bourne, William, assignor to Nathaniel Cummings.	Boston, Mass.	Piano-fortes.	Feb. 17, 1863.
40, 352	Bowen, Henry W.	Roxbury, Mass.	Naval architecture. (Antedated October 14, 1863.)	Oct. 20, 1863.
40, 227	Bowen, Jesse.	Providence, R. I.	Fibres, woody, machines for separating from the stalk and twisting.	Oct. 20, 1863.
39, 626	Bowers, Isaac W.	Yellow Bud, Ohio.	Milk, clider.	Oct. 13, 1863.
39, 627	Bowers, Isaac W.	Ovid Centre, Mich.	Sawing machine.	Aug. 25, 1863.
39, 713	Bowker, Daniel.	Ovid Centre, Mich.	Washing machine.	Aug. 25, 1863.
1, 474	Bowker, Daniel R., and William F. Patton.	Boston, Mass.	Soles, inner.	Sept. 1, 1863.
38, 578	Bowles, J. A.	New York, N. Y.	Staves, machine for churning and jointing.	May 9, 1863.
39, 874	Boyce, B. W.	Tremont, Ohio.	Sugar-evaporators.	April 29, 1863.
40, 903	Boyce, J. R.	Lansing, Mich.	Weather-strips, door.	Sept. 15, 1863.
		Napoleon, Ohio.	Washing machines.	Dec. 15, 1863.

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No.	Name of patentee.	Residence.	Invention or discovery.	Date.
37, 541	Boyd, Amos H., assignor to self, John Orvis, James J. Cobb and John M. Sterling.	Medway, Mass.	Brail, manufacture of.	Jan. 27, 1863.
39, 378	Boyd, Franklin D.	Evansville, Ind.	Doller-feeders, self-acting.	Aug. 4, 1863.
1, 375	Boyle, H. A. (See Patton, William F., assignor.)	New York, N. Y.	Water-closets, valves for.	Jan. 6, 1863.
39, 794	Boyle, James E., assignor to James Stephenson.	Detroit, Mich.	Temperature alarms. (Antedated Aug. 19, 1863.)	Sept. 8, 1863.
38, 082	Boyle, Philip A. (See Witsell, George L., assignor.)	Hartford, Wls., &c.	Stump-pulling machine.	April 7, 1863.
38, 941	Boynton, A. E. and G. R.	Alexandria, Va.	Vault covers. (Antedated Jan. 3, 1863.)	June 23, 1863.
	Boynton, E. S.	New York, N. Y.	Dampers, ventilating.	May 5, 1863.
	Boynton, G. R., and J. M. Le Count. (See Le Count & Boynton.)	New York, N. Y.	Stoves.	June 23, 1863.
38, 370	Boynton, M. B., et al. (See Thistle, C. D., assignor.)	New York, N. Y.	Tobacco pipes. (Antedated May 5, 1863.)	Sept. 15, 1863.
38, 942	Boynton, M. B., et al. (See Thistle, Charles D., assignor.)	Plymouth, Mass.	Leathering tacks, machines for.	Mar. 10, 1863.
	Bradford, Chas. K., and J. C. Breed. (See Breed & Bradford.)	West Chester, Pa.	Letter-boxes for post offices. (Antedated Jan. 11, 1863.)	Sept. 15, 1863.
39, 987	Bradford, Ezekiah, assignor to Horatio Bogert.	New York, N. Y.	Ball, call.	Aug. 25, 1863.
37, 550	Bradley, Lewis G., and Charles O. Churchill.	West Meriden, Conn.	Trap, animal.	Mar. 31, 1863.
39, 879	Bradley, C. H.	Akron, Ind.	Armor plates, defensive, means of affixing.	Mar. 3, 1863.
	Bradley, David, et al. (See Furst, Bradley & Lacy.)	Philadelphia, Pa.	Freight or merchandise, unloading.	June 9, 1863.
	Bradley, James S., and Daniel Lippy. (See Lippy & Bradley.)	San Francisco, Cal.	Skid for discharging and loading vessels.	July 14, 1863.
36, 697	Bradley, Nathaniel L., assignor to self, Walter Hubbard and Wm. L. Bradley.	Burlington, N. J.	Tile machine.	Nov. 3, 1863.
38, 024	Bradway, Joshua W.	Norwich, Conn.	Fire-arm, revolving.	April 28, 1863.
37, 807	Brady, Edward.	Norwich, Conn.	Fire-arm, breech-loading.	April 28, 1863.
38, 725	Bragg, Robert.	Norwich, Conn.	Fire-arm, breech-loading.	June 23, 1863.
38, 211	Bragg, Robert.	Leonardville, N. Y.	Hoe blanks, manufacture of.	May 26, 1863.
40, 456	Branch, E. F., and J. N. Rathbun. (See Church, Joseph, assignor.)	Leonardville, N. Y.	Hoe blanks, manufacture of. (Division B of reissue.)	May 26, 1863.
		Burlington, Iowa	Heaters, dish.	Aug. 11, 1863.
38, 279	Brand, Christopher C.	Brooklyn, N. Y.	Lead pipe, protecting, against the action of water.	Dec. 15, 1863.
38, 280	Brand, Christopher C.	Albany, N. Y.	Planing oval moulding, machine for. (Antedated Nov. 2, 1861.)	May 12, 1863.
38, 943	Brand, Christopher C.	Providence, R. I.	Bolts, rivets, and nails, mode of attaching the heads of.	May 26, 1863.
1, 431	Brand, Nathan.	St. Louis, Mo.	Pumps, centrifugal.	May 19, 1863.
1, 452	Brand, Nathan.	Saughtuck, Conn.	Water by steam, device for raising and forcing. (Reissue.)	Oct. 27, 1863.
29, 439	Brand, William.	West Meriden, Conn.	Fadenings, window-sash.	May 12, 1863.
40, 904	Brandels, Leopold.	West Meriden, Conn.	Lanterns.	Mar. 17, 1863.
38, 461	Branger, C., and L. Mancy. (See Mancy & Branger.)	Lynn, Mass.	Boots, gaiter.	Aug. 18, 1863.
38, 652	Brayton, George B.	New York, N. Y.	Looms for weaving corsets.	Jan. 27, 1863.
38, 553	Brazleton, Eli.	New York, N. Y.	Looms.	April 14, 1863.
1, 553	Brear, Abel.	Geneva, Ohio.	Harvesters.	Nov. 17, 1863.
36, 462	Breckenridge, E. K.			
37, 899	Breed, J. C., and Charles K. Bradford.			
39, 544	Breitenstein, Wm., assignor to Fischel & Co.			
37, 556	Breitenstein, Wm., assignor to Fischel & Co.			
38, 195	Brett, Thomas.			
40, 601				

List of patentees of inventions, designs, and reissues, 1863.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
40, 206	Brown, J. Hamilton, assignor to S. S. Bucklin	Boston, Mass.	Pegging boots and shoes, machines for	Oct. 13, 1863.
40, 280	Brown, John Hamilton, ass'r to self and James E. Farwell.	Boston, Mass.	Shoes, machine for nailing.	Dec. 8, 1863.
38, 028	Brown, Joseph L. (See Whittem, Horace C., assignor.)	New York, N. Y.	Exercising machine, infants'	Mar. 31, 1863.
40, 291	Brown, J. S., assignor to self and C. P. Stimers.	Washington, D. C.	Toy automaton	Dec. 8, 1863.
40, 323	Brown, Levi	Pontiac, N. Y.	Reelives	Oct. 20, 1863.
38, 880	Brown, N. B.	Antwerp, N. Y.	Sawing machine.	Sept. 15, 1863.
38, 029	Brown, Oliver M.	Toledo, Ohio	Furnaces for heating fires.	Mar. 31, 1863.
40, 325	Brown, Robert	Frederick, Md.	Harvesters	Oct. 27, 1863.
38, 083	Brown, Robert D.	Covington, Ind.	Grain bladders, automobile	April 7, 1863.
38, 094	Brown, Robert D.	Covington, Ind.	Harvesters, self-rakers for.	April 7, 1863.
39, 402	Brown, Rufus. (See Wilder, A. A., assignor.)	New Bedford, Mass.	Back-rests, invalid	Aug. 11, 1863.
37, 808	Brown, Thomas. (See Grundle, Almable A., assignor.)	Erle, Pa.	Dumping tubs	Mar. 3, 1863.
39, 881	Brown, William H.	Brooklyn, N. Y.	Boilers, copper	Sept. 15, 1863.
1, 850	Brownell, Franklin C. (See Rowe, John L., assignor.)	Newtown, N. Y.	Types, letter-press	Nov. 17, 1863.
37, 732	Bruckart, A. M., and Elias Dohner. (See Dohner & Bruckart.)	Brunnerville, Pa.	Millstones, elevating	Feb. 24, 1863.
37, 491	Bruckart, A. M.	Brooklyn, N. Y.	Cartridges, shot	Jan. 27, 1863.
40, 977	Brunon, Felix, assignor to self and Joseph M. Nangle.	Philadelphia, Pa.	Liquors, fermented, cooling and discharging	Dec. 15, 1863.
40, 732	Brunt, Wm. H., and Joseph W. McElroy.	Pittsburg, Pa.	Steel, manufacture of	Dec. 1, 1863.
38, 536	Bruster, George N.	Factoryville, N. Y.	Locks, alarm	Dec. 1, 1863.
39, 882	Bryant, Isaac C.	Philadelphia, Pa.	Stoves, portable. (Antedated August 21, 1862)	May 19, 1863.
40, 011	Bryant, Joel	Brooklyn, N. Y.	Fly wheels, construction of	Sept. 22, 1863.
40, 010	Bryant, Joel	Brooklyn, N. Y.	Shears and scissars	Sept. 22, 1863.
40, 532	Bryant, Joel	Brooklyn, N. Y.	Cans, &c., lids or covers for	Nov. 10, 1863.
39, 545	Bryant, Mertoun C., dec'd, by Caroline Bryant, executrix.	Dowell, Mass.	Belts and brakes, binder pulleys for	Nov. 10, 1863.
40, 813	Bryant, Nahum Franklin	East Boston, Mass.	Carriages, railway	Aug. 18, 1863.
38, 090	Bryant, Nahum Franklin	East Boston, Mass.	Carriages, railway	Dec. 8, 1863.
40, 075	Bryson, Robert	Schenectady, N. Y.	Harvesters	Mar. 31, 1863.
38, 945	Bucklin, S. S. (See Brown, J. Hamilton, assignor.)	Jersey City, N. J.	Motion, mode of directing	Sept. 22, 1863.
38, 945	Bucklin, S. S.	Decorah, Iowa.	Saccharine liquids, apparatus for evaporating	June 23, 1863.
40, 604	Buckwalter, H.	Kimberton, Pa.	Cherry stoner	Nov. 17, 1863.
40, 289	Budd, James and Daniel	Albany, N. Y.	Pumps	Oct. 13, 1863.
38, 557	Budd, Lewis Ross	Asakuhwa, Iowa	Cap, percussion-holder, for printing fire-arms	May 19, 1863.
40, 731	Budd, Wm., assignor to Lucius G. Marshall and Andrew Cochran.	Philadelphia, Pa.	Fuel, non-fusible	Dec. 1, 1863.
38, 256	Budding, Benjamin Q., assignor to Benjamin I. Godfrey.	Millford, Mass.	Rolling or polishing machine.	April 21, 1863.
39, 546	Budding, Benjamin Q.	Millford, Mass.	Heel polishing machine.	Aug. 18, 1863.

39, 631	Buddebeck, Peter, assignor to E. R. Bonnett.	New York, N. Y.	Lamps, cond-nl, for locomotives	Mar. 24, 1863.
38, 463	Buddebeck, Wm., assignor to self, Calvin Adams, and George S. Schlen.	Pittsburg, Pa.	Pegging machines, shoes	May 12, 1863.
38, 460	Buddebeck, Wm., assignor to self, Calvin Adams, and George S. Schlen.	Pittsburg, Pa.	Printing machine	April 14, 1863.
40, 531	Bunnell, Jesse H.	Massillon, Ohio	Ice, apparatus for making	Nov. 10, 1863.
37, 274	Burden, Henry	Troy, N. Y.	Horse-shoes, machines for making	May 11, 1863.
38, 215	Burden, William F.	Troy, N. Y.	Rolling-mill stands, &c.	May 6, 1863.
40, 815	Burdett, O. H., and Wm. Mills. (See Mills & Burdett.)	Troy, N. Y.	Governors	April 21, 1863.
37, 673	Burdiet, Orla C.	New Haven, Conn.	Nuts, machines for making	Dec. 8, 1863.
37, 673	Burger, Theodore W.	Jersey City, N. Y.	Boiler feeders	Feb. 17, 1863.
38, 809	Burgess, Hugh, and Chas. Walt. (See Walt & Burgess.)	Millville, Wla.	Radiators	June 9, 1863.
39, 001	Burnet, Jas. J., and Wm. Bellamy, ass'r to Geo. R. Jackson.	New York, N. Y.	Locks to safe doors, applying	June 23, 1863.
39, 538	Burnet, William H., and James Perkins. (See Perkins & Burnet.)	Montague, Mass.	Trap, animal	May 19, 1863.
37, 733	Burnham, Alonzo	York, Pa.	Water wheels	Feb. 24, 1863.
1, 530	Burnham, Nathan F.	York, Pa.	Water wheels	Sept. 1, 1863.
39, 337	Burns, John	Franklin, Ohio	Cultivators	July 28, 1863.
1, 438	Burnside, Ambrose E., ass'r to the Burnside Rifle Company	Providence, R. I.	Cartridge, metallic, for breech-loading fire-arms. (Release.)	Mar. 10, 1863.
1, 439	Burnside, Ambrose E., ass'r to the Burnside Rifle Company	Providence, R. I.	Fire-arms, breech-loading. (Division of release.)	Mar. 10, 1863.
40, 534	Burr, David A. (See Guard, Chauncey H., assignor.)	Battle Creek, Mich.	Files, machines for cutting	Nov. 3, 1863.
38, 002	Burr, Theodore, assignor to self and Isaac C. Mott	Geneva, N. Y.	Coru-shellers	Mar. 24, 1863.
40, 336	Burrows, Thomas H.	Chicopee, Mass.	Projectile, explosive	Oct. 27, 1863.
37, 832	Burson, H. M., and W. W.	Atkinson, Ill.	Harvesters, binding attachment to	Mar. 10, 1863.
39, 404	Burson, H. M., and W. W.	Atkinson, Ill.	Grain forks. (Antedated July 3, 1863)	Aug. 11, 1863.
39, 402	Burson, W. W.	Atkinson, Ill.	Grain binders	Aug. 11, 1863.
37, 383	Burt, Charles S., and James Fergusson. (See Fergusson & Burt.)	Mt. Pleasant, Iowa	Pumps	Jan. 13, 1863.
37, 892	Burt, Francis S.	Harvard, Mass.	Horse-powers	Mar. 17, 1863.
37, 638	Burt, George E.	Newark, N. J.	Water meters	Feb. 10, 1863.
38, 216	Burt, Henry, assignor to self, Caleb S. Fitzworth, and Thomas W. Loweree.	Cleveland, Ohio	Propeller blades	April 21, 1863.
40, 816	Bushman, Victor H.	Baltimore, Md.	Saw mills, feeding device for	Dec. 8, 1863.
37, 492	Bush, Clark O.	Michigan Bluff, Cal.	Water elevators	Jan. 27, 1863.
37, 697	Bush, Francis	Boston, Mass.	Cartridge boxes	Feb. 10, 1863.
37, 949	Buswell, Alexander	San Francisco, Cal.	Bill holder	Mar. 24, 1863.
38, 882	Butler, W. H. (See Secor, Jerome B., assignor.)	Buffalo, N. Y.	Harvesters	June 16, 1863.
38, 882	Butman, Edward E., and Jason T. Bartlett. (See Bartlett & Butman.)	Buffalo, N. Y.	Harvesters	June 16, 1863.
38, 882	Butter, John	Buffalo, N. Y.	Harvesters	June 16, 1863.

List of patentees of inventions, designs, and reissues, 1863.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
1, 440	Butterfield, George, <i>et al.</i> (See Collins, Michael H., assignor.)	Providence, R. I.	Fastener, ash.	Mar. 24, 1863.
40, 009	Butterworth, James C.	Chelsea, Vt.	Paddle wheel, feathering.	Sept. 22, 1863.
40, 817	Buxton, Levi W., and John P. Greeney. (See Greeney & Buxton.)	Sterling, Ill.	Buggies, construction of.	Dec. 8, 1863.
37, 493	Bye, Jonathan H.	Kingsville, Ohio	Lantern, railroad switch.	Jan. 27, 1863.
40, 005	Cadwell, Jason.	Dexter, Mich.	Mature distributor.	Nov. 17, 1863.
39, 714	Cady, John.	Staffordville, Ct.	Looms, pickers for.	Sept. 1, 1863.
41, 240	Caboon, C. W.	Portland, Maine	Lamps.	Oct. 13, 1863.
41, 241	Caboon, C. W.	Portland, Maine	Lamps.	Oct. 13, 1863.
37, 935	Callender, Mills L., and Nelson W. Northrup, assignors through means assignments to James B. Ends.	New York, N. Y.	Ordnance, operating.	Mar. 17, 1863.
38, 031	Callender, Mills L.	New York, N. Y.	Burners, hydro-carbon.	Mar. 31, 1863.
38, 584	Callender, Mills L.	New York, N. Y.	Lamps.	April 22, 1863.
39, 612	Callender, Mills L., assignor to self, Chas. H. Welling, and Elbert Perce.	New York, N. Y.	Projectiles, explosive, submarine. (Antedated Oct. 16, 1862.)	Aug. 18, 1863.
39, 715	Calvert, Francis A.	Lowell, Mass.	Engines, steam.	Sept. 1, 1863.
40, 018	Calvert, Francis A.	Lowell, Mass.	Carding engines.	Sept. 22, 1863.
38, 464	Cameron, J. R.	Pittsburg, Pa.	Traction wheels.	May 12, 1863.
37, 950	Camp, F. H.	Jackson, Mich.	Haves troughs, sheet metal, soldering.	Mar. 24, 1863.
39, 629	Campbell, Felix, and Henry Davidson. (See Rozell, John, assignor.)	Newton, Ct.	Lubricators.	Nov. 24, 1863.
40, 073	Campbell, George, and George Jackson. (See Jackson & Campbell.)	Buffalo, N. Y.	Printing the address on newspapers, machines for.	Jan. 20, 1863.
37, 492	Campbell, James C.	New York, N. Y.	Pike and revolving fire-arms, combined.	June 30, 1863.
39, 032	Campbell, James C. (See Kellogg, Ebenezer C. C., <i>ass't.</i>)	St. Louis, Mo.	Belting conveyor.	Sept. 1, 1863.
39, 716	Campbell, John.	Philadelphia, Pa.	Saddle, pack.	Aug. 18, 1863.
39, 547	Campbell, W. T.	New York, N. Y.	Irons, sad.	June 2, 1863.
38, 728	Cannon, Francis A.	New York, N. Y.	Trunks.	May 12, 1863.
35, 465	Cantel, Leake.	New York, N. Y.	Chemille, machinery for manufacturing.	Jan. 13, 1863.
37, 415	Canter, William, assignor to Samuel Bernstein.	Danville, N. Y.	Sieves, grain.	Oct. 13, 1863.
40, 242	Capelli, John.	Danville, Cal.	Tires, machines for upsetting.	Aug. 25, 1863.
39, 629	Card, Ira D.	Lewistown, Pa.	Straw-cutters.	Mar. 31, 1863.
38, 077	Carey, John, <i>et al.</i> (See West, West & Carey.)	St. Johnsburg, Vt.	Rakes, lay. (Antedated December 7, 1862.)	Sept. 13, 1863.
39, 969	Carbhuff, Ralph, assignor to self and Lyman S. Paine.	Roxbury, Mass.	Bottles, case for packing.	Aug. 4, 1863.
39, 969	Carpenter, Charles P., assignor to self and Eben L. Clement.	Providence, R. I.	Engines, steam.	Sept. 1, 1863.
39, 969	Carpenter, Daniel, and John Wallace.	Providence, R. I.	Engines, steam, valve gear for.	Dec. 13, 1863.
39, 977	Carpenter, Rosanna.	Providence, R. I.	Engines, steam, valve gear for.	Dec. 13, 1863.
40, 005	Carpenter, Tisdale.	Providence, R. I.	Engines, steam, valve gear for.	Dec. 13, 1863.

38, 466	Carr, William.	Rath, Maine	Medicine for piles.	May 12, 1863.
39, 116	Carrier, Asa L.	Washington, D. C.	Mosquito bar.	July 7, 1863.
39, 116	Carron, James, and John B. Edmondson. (See Edmondson & Carron.)	Bristol, Ct.	Clocks, calendar. (Antedated September 7, 1863.)	Sept. 13, 1863.
39, 863	Carter, C. H. A. (See Perry, Stuart, assignor.)	Brockport, N. Y.	Pumps, rotary, packing of. (Extension.)	May 13, 1863.
39, 863	Carter, C. H. A. (See Perry, Stuart, assignor.)	Brockport, N. Y.	Pumps, rotary, packing of. (Extension.)	May 13, 1863.
39, 863	Carter, George R. (See Pratt, E. L., assignor.)	Brockport, N. Y.	Pumps, rotary, packing of. (Extension.)	May 13, 1863.
39, 863	Carter, William W.	Brockport, N. Y.	Pumps, rotary, packing of. (Extension.)	May 13, 1863.
39, 863	Cary, Abigene W., deceased, by Caroline Cary, administratrix.	Brockport, N. Y.	Pumps, rotary, packing of. (Extension.)	May 13, 1863.
39, 548	Casé, Lewis R. (See McCormick, Michael J., assignor.)	Kaong, N. Y.	Planters, corn, hand.	Aug. 18, 1863.
37, 543	Casé, Myron.	Florence, Italy	Telegraphic apparatus.	Feb. 3, 1863.
39, 338	Caselli, Giovanni.	Putnam, Ohio	Saw-mills.	July 28, 1863.
37, 564	Caslow, Henry.	Putnam, Ohio	Planters, corn.	Feb. 3, 1863.
38, 372	Castle, J. H., and H. G. Arnold. (See Arnold, W. E., <i>ass't.</i>)	Hudson, Wis.	Supporters, window-wash.	May 5, 1863.
40, 906	Castle, J. H., and H. G. Arnold. (See Arnold, W. E., <i>ass't.</i>)	Burlington, Vt.	Balance.	Dec. 15, 1863.
39, 030	Catin, H. W.	Paris, France	Paint, composition for.	June 23, 1863.
40, 818	Caven, William, and A. E. Chamberlain. (See Chamberlain & Caven.)	San Francisco, Cal.	Filters.	Dec. 8, 1863.
37, 951	Chabot, Anthony.	Williamstown, Mass.	Paper stock from wood, manufacture of.	Mar. 24, 1863.
1, 705	Chamberlain & Co. (See Menke, Barney H., assignor.)	Cincinnati, Ohio	Stove.	Jan. 27, 1863.
39, 349	Chamberlain, A. E., assignor to Chamberlain & Co.	Cincinnati, Ohio	Fire-arms, and appendances of the same, movable breeches for.	Aug. 18, 1863.
39, 349	Chamberlain, Benjamin.	Washington, D. C.	Brick and tile machine, dies for.	July 30, 1863.
39, 824	Chambers, Cyrus, Jr.	Philadelphia, Pa.	Brick machine. (Antedated September 2, 1863.)	Sept. 13, 1863.
40, 221	Chambers, Cyrus, Jr.	Philadelphia, Pa.	Shirt bosoms, apparatus for folding the plait in.	Oct. 6, 1863.
37, 951	Chandler, Francis M.	Buffalo, N. Y.	Carbonates, alkaline, manufacture of.	Mar. 24, 1863.
39, 213	Chandler, Lewis.	New York, N. Y.	Carbonates, alkaline, manufacture of.	July 14, 1863.
39, 213	Chandler, François Noel, and Hippolyte Marlouin. (See Marlouin & Chandler.)	New York, N. Y.	Carbonates, alkaline, manufacture of.	July 14, 1863.
40, 773	Chapin, Henry A. (See White, Le Roy S., assignor.)	Pittsfield, Mass.	Ploughs.	Dec. 1, 1863.
37, 471	Chapman, A. B.	Milford, Mass.	Soap, manufacture of.	Jan. 20, 1863.
38, 354	Chapman, Dudley B., ass't to self and Ebenezer D. Draper.	Milford, Mass.	Soap, saponified, manufacture of.	April 22, 1863.
37, 382	Chapman, Dudley B., ass't to self and Ebenezer D. Draper.	Milford, Mass.	Bolls and spikes, machine for drawing.	Jan. 6, 1863.
37, 382	Chapman, John C.	Charlestown, Mass.	Cylinders, boring and squaring.	Jan. 13, 1863.
37, 382	Chapman, John C.	Charlestown, Mass.	Teeth, artificial, setting.	Mar. 3, 1863.
37, 809	Chapman, John C.	Charlestown, Mass.	Teeth, artificial, setting.	Mar. 3, 1863.
40, 907	Chapman, J. Winslow, and William Z. W.	New York, N. Y.	Corsets.	Dec. 15, 1863.
37, 833	Chapman, L. L.	Camden, N. J.	Saws, device for gumming.	Mar. 10, 1863.
38, 946	Chase, Frederic D.	Old Town, Maine.	Ventilators.	June 23, 1863.
39, 653	Chase, John E., and Joseph Toy.	Boston, Mass.	Fuse, tape.	June 30, 1863.
38, 810	Chase, John K.	Simsbury, Ct.	Jars, cans, &c., caps for.	June 9, 1863.
1, 483	Chase, Lucius C.	New York, N. Y.	Buckles, girth.	May 26, 1863.
39, 196	Chase, Oliver Rice, assignor to Chase & Co.	Boston, Mass.	Halter rings.	July 28, 1863.
40, 243	Chase, Otis N.	Birmingham, Eng.	Lozenges, machines for making.	July 14, 1863.
40, 243	Chase, W. A., and Moses Shelden. (See Shelden & Chase.)	Boston, Mass.	Harvesters, corn.	Oct. 13, 1863.

List of patentees of inventions, designs, and reissues, 1863.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
37, 494	Chase, Sharpe, and Thompson. (See Flansburg & Gardiner, assignors.)	Seneca Falls, N. Y.	Composition for water pipes, &c.	Jan. 27, 1863.
38, 559	Chatham, Jonathan S.	Recherster, N. Y.	Filter and cooler combined.	May 19, 1863.
39, 465	Cheney, James E.	Galesburg, Ill.	Lathe for turning locomotive crank pins.	Aug. 11, 1863.
40, 158	Cheney, S. S., and Danforth.	Fort Wayne, Ind.	Saddle, riding.	Oct. 6, 1863.
40, 908	Cheney, J. C.	Abington, Ill.	Saccharine liquids, evaporator for.	Dec. 15, 1863.
40, 244	Chesney, Samuel M., and Jonathan C. Brown.	New York, N. Y., and Brooklyn, N. Y.	Skirt wire, apparatus for sizing and finishing.	Oct. 13, 1863.
38, 146	Chessey, Charles T.	New York, N. Y.	Galvanic batteries, carbon plates for.	April 14, 1863.
40, 324	Chester, Charles T.	New York, N. Y.	Telegraphs, dial.	Oct. 20, 1863.
39, 630	Chichester, Lewis S.	New York, N. Y.	Dryers, grain.	Aug. 25, 1863.
	Child and Warder. (See Cochrane, William F., assignor.)			
39, 631	Child and Warder. (See Cochrane, William F., assignor.)	New York, N. Y.	Truss-pads. (Antedated June 4, 1863.)	Aug. 25, 1863.
38, 147	Chinnock, Charles.	Buffalo, N. Y.	Cork-drawer.	April 14, 1863.
38, 883	Chinnock, Charles.	Buffalo, N. Y.	Tobacco-pipes.	June 16, 1863.
40, 674	Chinnock, Charles.	Buffalo, N. Y.	Corkscrews.	Nov. 24, 1863.
40, 159	Chipman, Edgar.	New York, N. Y.	Washing, wringing, and mangling machine.	Oct. 6, 1863.
40, 946	Chipman, Edgar.	New York, N. Y.	Washing machine.	Oct. 13, 1863.
40, 325	Chipman, Edgar.	New York, N. Y.	Presses, crushing.	Oct. 20, 1863.
40, 606	Chisholm, William.	Cleveland, Ohio.	Nuts, machine for making.	Nov. 17, 1863.
38, 196	Chormann, Ernest, assignor through <i>mesne</i> assignments to himself.	Philadelphia, Pa.	Stereoscopic instrument.	April 14, 1863.
38, 197	Chormann, Ernest, assignor through <i>mesne</i> assignments to himself.	Philadelphia, Pa.	Stereoscopic instrument.	April 14, 1863.
39, 359	Christiansen, Jos.	Millwaukee, Wis.	Bug-cutter.	July 22, 1863.
39, 885	Christman, James.	New York, N. Y.	Presses.	Sept. 15, 1863.
38, 148	Christman, J., and William Gillman.	Syracuse, N. Y.	Lathes, chock for.	April 14, 1863.
39, 523	Church, Joseph, assignor to J. N. Rathburn and E. F. Branch.	Chester, Ohio.	Shaving canes for weavers' reeds, machines for.	Aug. 11, 1863.
40, 607	Church, Thomas L.	Syracuse, N. Y.	Tobacco-cutters.	Nov. 17, 1863.
	Churchill, Charles O., and Lewis G. Bradford. (See Bradford & Churchill.)			
	Churchill, Erasmus, and Silas A. Scofield. (See Scofield & Churchill.)			
	City Manufacturing Company. (See Cooke, James C., assignor.) (Release.)			
39, 117	Clabaugh, Andrew.	Altoona, Pa.	Locks.	July 7, 1863.
37, 272	Clark, Abel. (See Lamb, Noyes D., assignor.)	Fond du Lac, Wis.	Shingle machine.	July 21, 1863.
37, 956	Clark, Augustus N., assignor to Rubber Clothing Company	Boston, Mass.	Knap sacks.	Mar. 17, 1863.
	Clark, A. N. (See Smith, O. C., assignor.)			

40, 819	Clark, Charles B.	Mt. Pleasant, Iowa.	Fastener, window-sash.	Dec. 2, 1863.
40, 069	Clark, Edison P.	Northampton, Mass.	Brush, marking.	Sept. 20, 1863.
39, 717	Clark, Edward.	New York, N. Y.	Boiler tubes, device for repairing.	Sept. 1, 1863.
38, 850	Clark, George, assignor to self and Robert Dunbar.	Sandusky, Ohio.	Grain cleaners.	April 21, 1863.
40, 019	Clark, Giles W., et al. (See Northrup, Loomis & Clark.)	Plantersville, Conn.	Tags, folding.	Sept. 22, 1863.
	Clark, James B., and Charles A. Shaw. (See Shaw & Clark.)			
39, 273	Clark, John.	Sharon, Pa.	Washing machine.	July 21, 1863.
40, 458	Clark, John S., and Wash. Harris.	Canandaigua, N. Y.	Cars for carrying petroleum.	Nov. 3, 1863.
40, 326	Clark, John S., and Wash. Harris.	Philadelphia, Pa.	Stoves, fire-doors for.	Oct. 20, 1863.
40, 960	Clark, Marcus Milton.	Industry, Ill.	Cultivators.	Dec. 15, 1863.
37, 718	Clark, P. J., assignor to S. S. Clark.	West Meriden, Conn.	Lanterns.	Feb. 17, 1863.
37, 199	Clark, P. J., assignor to S. S. Clark.	West Meriden, Conn.	Lanterns, coal oil.	April 14, 1863.
38, 936	Clark, P. J., assignor to S. S. Clark.	West Meriden, Conn.	Lamp burners.	June 16, 1863.
39, 054	Clark, P. J., assignor to S. S. Clark.	Baltimore, Md.	Boat trees.	June 30, 1863.
40, 820	Clark, W. C.	Portland, Me.	Car-coupling, railroad.	Dec. 8, 1863.
40, 357	Clark, William J.	Southampton, Conn.	Boats.	Oct. 20, 1863.
1, 369	Clark, William N.	Chester, Conn.	Door guard, elastic.	Feb. 10, 1863.
37, 628	Clarke, Horatio.	Dedham, Conn.	Furnaces, steam-boller.	Feb. 10, 1863.
39, 718	Clay, James O.	Hudson, Wis.	Weather strips.	Sept. 1, 1863.
40, 993	Clay, W. W.	Great Britain.	Knitting machines.	Dec. 22, 1863.
	Clayton, James. (See Hopkins, Joseph W., assignor.)			
39, 118	Clemens, Sullivan A.	Rockford, Ill.	Ploughs, mole.	July 7, 1863.
39, 119	Clemens, George F.	Springfield, Mass.	Tow from tangled flax-straw, machine for preparing.	July 7, 1863.
37, 472	Clement, Daniel B., assignor to self and Daniel A. Schermerhorn.	Milton, Mass.	Clothes-wringer.	Jan. 20, 1863.
	Clement, Eben L. (See Carpenter, Chas. P., assignor.)			
38, 729	Clements, Ezekiah.	Warsaw, Ky.	Stills.	June 2, 1863.
39, 379	Cleuet, V. Florentia.	Paris, France.	Boilers with water, self-acting apparatus for supplying.	Aug. 4, 1863.
37, 609	Cline, John O.	Philadelphia, Pa.	Governors, centrifugal.	Feb. 10, 1863.
40, 734	Clinton, Charles N.	Ilwaco, N. Y.	Lamp-lighter.	Dec. 1, 1863.
40, 910	Clissold, William.	England.	Chains or belts, driving.	Dec. 15, 1863.
37, 674	Clough, Benjamin.	Natick, Mass.	Coru, machines for shelling and winnowing.	Feb. 17, 1863.
37, 353	Clough, H. H., and F. M. Watson. (See Watson & Clough.)	Brooklyn, N. Y.	Tool handles.	Jan. 6, 1863.
38, 032	Clough, I. S., and J. N. Hannell.	Albany, N. Y.	Axle-boxes, fastening covers to.	Mar. 31, 1863.
39, 380	Claire, Jacob O., and Philip Kinney.	Russellville, Ohio.	Planing shingles, machine for.	Aug. 4, 1863.
38, 531	Contes, Abraham, and Martin D. Osborn, assignors to selves and H. H. Babcock.	Watertown, N. Y.	Water engines.	May 12, 1863.
40, 735	Cobb, James J., et al. (See Boyd, Amos H., assignor.)	South Danvers, Mass.	Leather, machine for finishing.	Dec. 1, 1863.
38, 285	Cobb, Seward P.	Hall, Bavaria.	Treatment of metallic silicates and the manufacture of hydro-fluo-silicic acid.	April 28, 1863.
	Cobley, Thomas.			
38, 283	Cobley, Thomas.	London, England.	White lead, manufacture of.	April 28, 1863.
38, 286	Cobley, Thomas.	Bavaria.	Porcelain, glass, &c., by the use of fluo-silicates, manufacture of.	April 28, 1863.
	Cochran, Andrew. (See Marshall, Loomis G., assignor.)			
	Cochran, Andrew. (See Marshall, Loomis G., assignor.)			
	Cochran, Andrew. (See Marshall, Loomis G., assignor.)			
	Cochran, Andrew, and Loomis G. Marshall. (See Budd, William, assignor.)			

List of patentees of inventions, designs, and reissues, 1863.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
38, 095	Cochran, Hugh M.	McConnellsville, Ohio.	Tobacco, chewing, manufacture of.	April 7, 1863.
37, 275	Cochran, John W.	New York, N. Y.	Shells, explosive, percussion fuse for.	Jan. 6, 1863.
37, 675	Cochran, John W.	New York, N. Y.	Shells, explosive, percussion fuse for.	Feb. 17, 1863.
39, 120	Cochran, John W.	New York, N. Y.	Fire-arm, breech-loading.	July 7, 1863.
40, 553	Cochran, John W.	New York, N. Y.	Fire-arm, revolving.	Nov. 10, 1863.
40, 592	Cochran, John W.	New York, N. Y.	Fire-arm, breech-loading.	Dec. 22, 1863.
39, 886	Cochrane, John.	New York, N. Y.	Fire-arm, breech-loading.	Sept. 15, 1863.
37, 717	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Metallic plates, presses for bending.	Jan. 6, 1863.
37, 718	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 719	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 720	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 721	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 722	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 723	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 724	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 725	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 726	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 727	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 728	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 729	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 730	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 731	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 732	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 733	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 734	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 735	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 736	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 737	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 738	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 739	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 740	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 741	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 742	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 743	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 744	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 745	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 746	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 747	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 748	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 749	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 750	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 751	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 752	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 753	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 754	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 755	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 756	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 757	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 758	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 759	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 760	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 761	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 762	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 763	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 764	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 765	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 766	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 767	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 768	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 769	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 770	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 771	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 772	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 773	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 774	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 775	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 776	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 777	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 778	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 779	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 780	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 781	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 782	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 783	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 784	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 785	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 786	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 787	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 788	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 789	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 790	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 791	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 792	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 793	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 794	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 795	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 796	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 797	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 798	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 799	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.
37, 800	Cochrane, Wm. F., assignor to self, Warder, and child.	Springfield, Ohio.	Bolting flour.	Jan. 6, 1863.

40, 792	Collins, C. R., and E. S. Heath. (See Smith & Brown, assignors. Design.)	Morris, N. Y.	Hops, training.	Dec. 1, 1863.
1, 746	Collins, Frederick W., assignor to self and Wm. H. Pratt	Chicago, Ill.	Stove plate.	April 14, 1863.
40, 535	Collins, Michael H., assignor to self, George Butterfield, and Wm. A. Richardson.	Chelsea, Mass.	Turret, monitor.	Nov. 3, 1863.
38, 467	Colman, John.	Houghton, Mich.	Ore-washing machine.	May 12, 1863.
37, 612	Collier, George.	Philadelphia, Pa.	Car-coupling.	Feb. 10, 1863.
38, 511	Colver, Nathaniel.	Chicago, Ill.	Water, apparatus for raising.	June 9, 1863.
37, 676	Colvin, L. O.	Philadelphia, Pa.	Milkers, cow.	Feb. 17, 1863.
37, 677	Colvin, L. O.	Philadelphia, Pa.	Milkers, cow.	Feb. 17, 1863.
1, 359	Combe, Wm., assignor to N. O. Hawxburst.	Madat Hill, N. Y.	Harness tugs, clasp for.	Jan. 27, 1863.
37, 353	Comings, George, and Louis Mensing.	New York, N. Y.	Gas purifiers, sleeves for.	Jan. 13, 1863.
38, 078	Connors, Jos. T., assignor to self and Truman W. Pepper.	New York, N. Y.	Chenille, machines for manufacturing.	Mar. 31, 1863.
39, 857	Compton, Jacob.	Elmira, N. Y.	Fire-escapes.	Sept. 15, 1863.
40, 140	Conant, Charles B., assignor to self and John D. Eager.	Springfield, Mass.	Felted-bending machine.	Sept. 29, 1863.
38, 756	Conc, N. F.	La Crosse, Wis.	Turning irregular forms, machines for.	Oct. 6, 1863.
1, 549	Conlan, David.	New York, N. Y.	Billiard tables, shades for.	Oct. 6, 1863.
37, 565	Cannell, J. M.	Newark, Ohio.	Projectiles, explosive.	Feb. 3, 1863.
37, 596	Cannell, John, assignor to Martin Briggs.	Newark, Ohio.	Shells, percussion, exploder for.	Feb. 3, 1863.
38, 558	Cannell, J. M.	Rochester, N. Y.	Lock, permutator.	June 9, 1863.
40, 618	Cannell, J. M.	Lexington, Ky.	Italocons.	Nov. 17, 1863.
37, 276	Connolly, Joseph H.	Wheeling, Va.	Lampwicks.	July 21, 1863.
39, 274	Connolly, John.	Boston, Mass.	Casks.	July 14, 1863.
39, 915	Constable, Gordon.	Canonville, N. Y.	Hay, machine for loading.	July 14, 1863.
39, 557	Constable, John L.	New York, N. Y.	Ores, refining.	Sept. 22, 1863.
40, 022	Converse, Charles C.	Dubuque, Iowa.	Mangle.	Mar. 17, 1863.
37, 991	Conway, Edward.	Dubuque, Iowa.	Lintment.	Nov. 24, 1863.
40, 676	Conyn, J. D.	Lyndon, Ill.	Harvesters, grain dischargers for.	Nov. 24, 1863.
37, 755	Cook, D. M.	Mansfield, Ohio.	Evaporating pans, cellular or tubular boilers for.	Feb. 24, 1863.
37, 756	Cook, D. M.	Mansfield, Ohio.	Evaporating pans with cellular boilers.	Feb. 24, 1863.
37, 757	Cook, D. M.	Mansfield, Ohio.	Evaporating pans with tubular boilers.	Feb. 24, 1863.
37, 758	Cook, D. M.	Mansfield, Ohio.	Sugar juices, evaporating pans for.	Apr. 11, 1863.
38, 152	Cook, D. M.	Mansfield, Ohio.	Mills, cane.	Aug. 11, 1863.
39, 467	Cook, D. M.	Mansfield, Ohio.	Carriage wheels, machine for compressing.	July 21, 1863.
39, 275	Cook, George.	New Haven, Conn.	Printing frame, photographic.	May 12, 1863.
38, 408	Cook, George W.	St. Paul, Minn.	Jacks, lifting.	May 26, 1863.
38, 654	Cook, Jeremiah.	Palmerston, Pa.	Fire-arm, breech-loading.	Mar. 10, 1863.
37, 854	Cook, Roswell F.	Watertown, N. Y.	Sewing machines.	June 16, 1863.
38, 937	Cook, Wm. G., assignor to Ellen L. Demorets.	New York, N. Y.	Hutton backs and connecting the eyes thereto, machines for forming. (Reissue.)	April 7, 1863.
1, 416	Cooke, Jas. C., assignor to the City Manufacturing Company.	Waterbury, Conn.	Engines, steam.	Oct. 13, 1863.
40, 307	Cooke, John, assignor to John Cooke.	Pateron, N. J.	Bolts, flour.	June 2, 1863.
38, 783	Cookson, John C., assignor to self and David Reynolds.	Norwich, Conn.	Rivers, mode of obstructing.	Feb. 10, 1863.
37, 613	Coombe, Aaron B.	Lancaster, Pa.	Indurating and preserving stone, cement, wood, &c.	April 28, 1863.
38, 287	Coombe, James C.	Hoxton, Great Britain.	Ordinance, serving.	Jan. 6, 1863.
38, 287	Coombe, James C., and Thomas Copley. (See Copley & Coombe.)	Hoxton, Great Britain.	Ordinance, serving.	Jan. 6, 1863.
38, 287	Coombs, S. G. E., et al. (See Knapp, A. H., assignor.)	Deposit, N. Y.	Ordinance, serving.	Jan. 6, 1863.
39, 522	Cooler, Isaac H.	Deposit, N. Y.	Ordinance, serving.	Jan. 6, 1863.
39, 522	Collins, Albert G.	Deposit, N. Y.	Ordinance, serving.	Jan. 6, 1863.

List of patentees of inventions, designs, and reissues, 1863.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
38, 884	Conrod, Philip	Kelthburg, Ill.	Cultivators.	June 16, 1863.
40, 821	Cooper, Adams R.	Mason City, Ill.	Washing machine.	Dec. 8, 1863.
40, 021	Cooper, James Maslin. (See Harris, Chas. W., assignor.)	Pittsburg, Pa.	Fire-arm, revolving.	Sept. 22, 1863.
37, 567	Cooper, John H.	Philadelphia, Pa.	Latches, door.	Feb. 3, 1863.
37, 855	Cooper, N. B.	Gratis, Ohio	Wagon bodies.	Mar. 10, 1863.
38, 217	Copo, David.	Liverpool, England	Drums, kegs, casks, &c., manufacture of.	April 21, 1863.
37, 542	Coppo, Nathan, assignor to Ezra Cope.	Cincinnati, Ohio	Injector, Giffard's.	Jan. 27, 1863.
38, 469	Coppo, Giuseppe Mateo.	Paris, France.	Falling machines.	May 12, 1863.
39, 551	Corbett, C. E.	Corbettville, N. Y.	Lamps, coal-oil.	Aug. 18, 1863.
40, 609	Corbin, J. S.	Ann Arbor, Mich.	Gates.	Nov. 17, 1863.
39, 552	Corbett, Philip H.	Manchester, Pa.	Spark extinguishers for locomotives.	Aug. 18, 1863.
40, 554	Corbett, Philip H.	West Manchester, Pa.	Locomotives, draught regulator for.	Nov. 10, 1863.
40, 555	Corbett, Philip H.	West Manchester, Pa.	Gear, bevelled, machine for cutting teeth of. (Extension.)	Nov. 10, 1863.
	Corliss, George H.	Providence, R. I.	Engines, steam, cut-off and working valves of. (Ex-tension.)	Mar. 9, 1863.
	Corliss, George H.	Providence, R. I.	Engines, steam, cut-off and working valves of. (Ex-tension.)	Mar. 9, 1863.
	Corliss, George H.	Providence, R. I.	Engines, steam, cut-off and working valves of. (Ex-tension.)	Mar. 9, 1863.
	Corliss, George H.	Providence, R. I.	Engines, steam, cut-off and working valves of. (Ex-tension.)	Mar. 9, 1863.
	Corliss, George H.	Providence, R. I.	Engines, steam, cut-off and working valves of. (Ex-tension.)	Mar. 9, 1863.
38, 561	Cornelius, Robert	Philadelphia, Pa.	Gas regulators.	May 19, 1863.
38, 562	Cornelius, Robert	Philadelphia, Pa.	Electricity, lighting gas by.	May 19, 1863.
38, 563	Cornick, Tully R.	Philadelphia, Pa.	Electricity, lighting gas by.	May 19, 1863.
39, 276	Corse, Albert C., and Jacob Shaver. (See Shaver & Corse.)	Cap-au-Gris, Mo.	Cultivators.	July 21, 1863.
40, 439	Coswin, D. S.	Riverhead, N. Y.	Boring machine.	Nov. 3, 1863.
37, 414	Cosgrove, Franklin K., and Rudolph Westerman.	Fort Wayne, Ind.	Fences.	Jan. 30, 1863.
38, 564	Cotant, Zephariah R.	Greenwich Station, Ohio	Bolts and rivets, apparatus for clipping.	May 19, 1863.
40, 442	Cottrell, Jesse D., assignor to Ebenezer D., and George Draper.	Mallard, Mass.	Looms.	Oct. 27, 1863.
40, 397	Cotton, Edward	Washington, D. C.	Arms, artificial.	Oct. 27, 1863.
	Courtney, Henry B., and W. H. Swift. (See Wells, Chas. H., assignor.)			
40, 020	Courtois, Charles	Volcano, Cal.	Drills, rock.	Sept. 22, 1863.
39, 553	Cowan, Samuel	Bloomfield, Iowa	Cultivators.	Aug. 18, 1863.
40, 091	Cowan, Samuel	Bloomfield, Iowa	Flax brake and awing-l-r.	Sept. 29, 1863.
39, 858	Cowles, John	Portland, Maine	Bar, machine for roasting.	Sept. 15, 1863.
38, 153	Covings, George	South Falls, N. Y.	Cylinder polisher.	April 14, 1863.

38, 565	Cowling, George	Seneca Falls, N. Y.	Metallic surfaces, machine for finishing.	May 19, 1863.
38, 566	Cowles, James A.	Chicago, Ill.	Jars, preserve, clamp for closing.	April 29, 1863.
37, 678	Cowles, L. D.	Armadia, Mich.	Harness tugs, clamp for.	Feb. 17, 1863.
40, 911	Cowles, L. D.	Armadia, Mich.	Harness tugs, clamp for.	Dec. 15, 1863.
40, 912	Cowles, L. D.	Armadia, Mich.	Harness tugs, clamp for.	Dec. 15, 1863.
40, 122	Cox, Edward	Point Pleasant, Ohio	Planters, seed.	July 7, 1863.
	Cox, John, and John A. Throop. (See Throop & Cox.)			
	Cox, Samuel A., deceased, by George P. Cox, administrator and assignee through means assignments of said decedent.	Malden, Mass.	Railroad chairs, wrought iron, machine for bending the lips of.	Aug. 25, 1863.
1, 822	Craig, William	Brooklyn, N. Y.	Stove, cooking, gas.	Oct. 6, 1863.
40, 822	Craig, William	Brooklyn, N. Y.	Planters, corn.	Dec. 8, 1863.
38, 470	Cram, John	Urban, Ill.	Table or stool, camp.	May 12, 1863.
39, 980	Cram, John, assignor to self and John S. Cram.	Boston, Mass.	Clothes washer and wringer.	Sept. 15, 1863.
40, 443	Cranda, Lucius, assignor to self and Eliphaz Lyon.	Plainfield, N. Y.	Crutches.	Oct. 27, 1863.
40, 245	Crane, Absoem	Altoona, Pa.	Sausage stuffer.	Oct. 13, 1863.
37, 610	Crane, Alanson	Fortress Monroe, Va.	Fire extinguishers.	Feb. 10, 1863.
	Crane, Andrew W., and Otho W. Stanford. (See Stanford & Crane.)			
38, 374	Crane, Calvin D.	Fort Wayne, Ind.	Calculators, tax.	May 5, 1863.
1, 491	Crane, John H.	Charlestown, Mass.	Bed, spring.	June 9, 1863.
38, 443	Crane, Martin H., assignor to Crane, Breed & Co.	Cincinnati, Ohio	Burial cases, metallic.	May 5, 1863.
38, 154	Crane, Richard T.	Chicago, Ill.	Radiators, steam.	April 14, 1863.
	Crane, Rufus E. (See Hicks, Lucien E., assignor.)			
38, 812	Crane, Wellsly W.	Auburn, N. Y.	Boilers, steam.	June 9, 1863.
	Crawford, A., and F. G. Tucker & Crawford. (See Tucker & Crawford.)			
38, 730	Crawford, Benjamin	Alleghany, Pa.	Locomotives, feed-water heater for.	June 2, 1863.
39, 123	Crawford, Benjamin	Pittsburg, Pa.	Boilers, locomotive.	July 7, 1863.
40, 913	Creamer, George W.	Fillmore, Pa.	Tires, wheel, apparatus for lifting and removing.	Dec. 15, 1863.
38, 155	Creamer, H. M.	Brooklyn, N. Y.	Corkscrews, holding frame for.	April 14, 1863.
	Cresson, Clement. (See Witell, George L., assignor.)			
	Cresson, Clement. (See Witell, George L., assignor.)			
	Cresson, Clement. (See Witell, George L., assignor.)			
1, 735	Cridge, E. J.	Troy, N. Y.	Stove, plates of a.	Mar. 17, 1863.
	Crisp, Wm. R., and Rowland Cromwell. (See Cromwell & Crisp.)			
40, 978	Crispin, Silas, assignor to Thomas Poultney	New York, N. Y.	Cartridge, metallic primed.	Dec. 15, 1863.
	Crispin, Silas, and Thomas J. Rodman. (See Rodman & Crispin.)			
37, 611	Critcherson, John	Boston, Mass.	Sweeping machines, street.	Feb. 10, 1863.
40, 388	Crittenden, Lyman B.	Cincinnati, Ohio	Pumps.	Oct. 20, 1863.
1, 415	Crocker, Samuel L.	Taunton, Mass.	Nail or spike, yellow metal.	Feb. 24, 1863.
	Crocker, Samuel L.	Taunton, Mass.	Nail or spike, yellow metal.	April 9, 1863.
37, 543	Crocker, Samuel L.	Norwich, Conn.	Corks and bungs, machinery for cutting.	Jan. 27, 1863.
	Crombie, Wm. R., dec'd, by Jerehiah Leavens, administrator			
	Crombie, Samuel C., et al. (See Stevens, B. D., assignor.)			
38, 655	Crombie, Samuel C., et al. (See Stevens, B. D., assignor.)	Washington, D. C.	Registers, omnibus and car.	May 26, 1863.
1, 732	Cromwell, B. C., assignor to self, S. D. Greenleaf, C. F.	Skowhegan, Maine.	Pump.	Mar. 10, 1863.
	Cromwell, B. C., assignor to self, S. D. Greenleaf, C. F.			
1, 733	Cromwell, B. C., assignor to self, S. D. Greenleaf, C. F.	Skowhegan, Maine.	Pump top.	Mar. 10, 1863.

List of patentees of inventions, designs, and reissues, 1863.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
40, 024	Croudal, A. B.	New York, N. Y.	Mattresses, pillows, &c., stuffing for.	Sept. 22, 1863
39, 096	Crook, James E.	Poughkeepsie, N. Y.	Water elevators.	June 30, 1863
40, 340	Crook, Munson C., and Sydney W. Palmer.	Auburn, N. Y.	Washing machine.	Oct. 20, 1863
40, 347	Crooks, William.	St. Paul, Minn.	Railroad trucks, guides for.	Oct. 13, 1863
38, 153	Crosby, C. O.	New Haven, Conn.	Ruffles, machine-made.	May 5, 1863
40, 718	Crosby, C. O.	New Haven, Conn.	Ruffles, band.	Dec. 1, 1863
40, 729	Crosby, C. O.	New Haven, Conn.	Ruffles, band.	Dec. 1, 1863
38, 389	Crosby, C. O., and Henry Kellogg.	New Haven, Conn.	Frilling, double.	April 28, 1863
37, 248	Cross, Nelson.	Cincinnati, Ohio.	Car brakes.	Feb. 3, 1863
39, 721	Cross, Partner R.	New York, N. Y.	Tents.	Sept. 1, 1863
40, 914	Crossell, Franklin M.	Lowell, Ind.	Fluid, washing.	Dec. 15, 1863
37, 266	Crossman, C. P.	Piermont, N. Y.	Laucha, door.	Jan. 13, 1863
39, 889	Crow, Jas. N., and Julius G. Pohle. (See Pohle & Crow.)	West Warren, Mass.	Bottle, ester.	Sept. 15, 1863
40, 740	Crow, Thomas N., and James J. Piggott. (See Piggott & Crowell.)	Mott Haven, Conn.	Dancer, automatic.	Dec. 1, 1863
38, 949	Crowell, Jacob B.	Greencastle, Pa.	Mature distributors.	June 23, 1863
40, 023	Crowfoot, Abel.	Chicago, Ill.	Ratchet tube cutter.	Sept. 22, 1863
38, 656	Crozier, Owen R. L., and M. P. A.	Paris, France.	Plaster, hand lights for protecting.	May 26, 1863
38, 655	Cruikshank, Robert, assignor to self, Daniel B. Cole, and W. H. Archibald.	Salem, N. Y.	Milk racks.	May 19, 1863
39, 631	Culp, George W. D., and W. J. Keeney.	Allenaville, Ind.	Harvester cutter bar connexion.	Aug. 25, 1863
38, 290	Culver, Ephraim, and Thomas J. Pomeroy.	Shelburne and East Hampton, Mass.	Fasteners, window ash.	April 28, 1863
38, 277	Cummings, D. Jr.	New York, N. Y.	Looking-glass and match holder.	July 21, 1863
39, 890	Cummings, George L.	New York, N. Y.	Scales, coin and letter. (Antedated February 2, 1863.)	Sept. 15, 1863
37, 902	Cummings, John F., and Henry D.	New York, N. Y.	Jack, carriage.	Mar. 17, 1863
40, 945	Cummings, Nathaniel. (See Bourne, William, assignor.)	Fremont, N. Y.	Separators, grain.	Dec. 22, 1863
40, 463	Cummins, Simon A.	Vienna, N. J.	Reaping machines.	Nov. 3, 1863
38, 034	Curtis, Thomas H.	Webster, N. H.	Splints, surgical.	Mar. 31, 1863
40, 677	Curtis, F.	Newburyport, Mass.	Plugs, safety, fardole.	Nov. 24, 1863
38, 345	Curtis, William Joseph.	England.	Propeller, screw.	May 19, 1863
37, 314	Cushing, A.	St. John's, New Brunswick.	Sawing machines for slicing, splitting, and resawing lumber.	Jan. 6, 1863
37, 315	Cushing, A.	St. John's, New Brunswick.	Saw mills.	Jan. 6, 1863
38, 376	Dabney, G. A.	San Jose, Cal.	Washing machine.	May 5, 1863
38, 567	Daboll, Celadon L.	New London, Conn.	Lamp-burners, wick-tubes for.	May 19, 1863
38, 657	Daboll, Celadon L.	New London, Conn.	Lamps, construction of chimneys for. (Antedated March 1, 1863.)	May 25, 1863
38, 658	Dale, J. D.	Rochester, N. Y.	Sewing machines.	May 26, 1863
38, 214	Dalton, George F.	Flatbush, N. Y.	Musical instruments, device for carrying off water from.	April 21, 1863
40, 160	Danforth, D. A., and D. G. Payne.	Elkhart, Ind.	Stamp-extractor.	Oct. 6, 1863

40, 741	Daniel, Charles.	Rigel, Mo.	Harrows, rotary.	Dec. 1, 1863
37, 738	Daniel, Phylander.	Leroy, N. Y.	Legs, artificial, supports for.	Feb. 24, 1863
40, 218	Danks, Melancthon W.	Fulton, N. Y.	Saw-mills, head-blocks for.	Oct. 13, 1863
37, 256	Dann, C.	Rushford, Minn.	Propeller, jointed scull.	Mar. 10, 1863
37, 277	Dann, Jno. A., Wm. F., and Isaac N.	New Haven, Conn.	Chair, folding.	Jan. 6, 1863
39, 340	Danner, John.	Canton, Ohio.	Clothes frame.	July 28, 1863
39, 341	Danner, John.	Canton, Ohio.	Washing machine.	Jan. 28, 1863
39, 197	Darker, William, Jr., assignor to J. B. Thompson.	Philadelphia, Pa.	Looms, circular. (Antedated July 6, 1863.)	July 7, 1863
40, 359	Darling, M. C. and K. A. (See Prosser, T. T., assignor.)	Philadelphia, Pa.	Skirt wire.	Oct. 20, 1863
38, 813	Darling, M. C. and K. A. (See Prosser, Treat T., assignor.)	Philadelphia, Pa.	Sugar, &c., pans for evaporating.	Nov. 3, 1863
40, 460	Darrow, C. B.	Orland, Ind.	Seat and cane.	Dec. 8, 1863
40, 523	Dawson, Charles H.	Cleveland, Ohio.	Mechanical movements.	Sept. 15, 1863
38, 891	Davidson, Robert H.	Greenville, Ky.	Ball, springs, &c., manufacture of.	June 9, 1863
38, 813	Davis, Abbot R.	Cambridge, Mass.	Car-couplings, railroad.	Jan. 6, 1863
38, 813	Davis, Alfred and Lorenzo D. (See Blake and Johnson, assignors. Release.)	Philadelphia, Pa.	Car-couplings, railroad.	Jan. 6, 1863
1, 371	Davis, Augustus B.	Philadelphia, Pa.	Weighting apparatus.	Feb. 3, 1863
1, 372	Davis, Augustus B.	Philadelphia, Pa.	Car springs.	Mar. 17, 1863
37, 569	Davis, Augustus B.	Philadelphia, Pa.	Filters and coolers.	Oct. 20, 1863
1, 411	Davis, G. B.	Chicago, Ill.	Crutches.	Jan. 13, 1863
37, 367	Davis, Henry G.	New York, N. Y.	Fire-arm, breech-loading.	Jan. 27, 1863
37, 514	Davis, Jarvis, assignor to Patrick Smith.	Buffalo, N. Y.	Such-holder.	Oct. 6, 1863
39, 198	Davis, Jarvis, assignor to Patrick Smith.	Buffalo, N. Y.	Car-couplings, railroad.	Oct. 20, 1863
40, 161	Davis, John.	Council Hill Station, Ill.	Castings, moulds for.	Mar. 10, 1863
40, 331	Davis, John.	Allegheny, Pa.	Planters, corn.	Nov. 17, 1863
40, 332	Davis, John.	Allegheny, Pa.	Cultivators.	Dec. 15, 1863
37, 597	Davis, John R.	Racine, Wis.	Carding machines, wool.	Aug. 4, 1863
40, 610	Davis, John R.	Bloomfield, Iowa.	Pumps.	April 28, 1863
40, 915	Davis, John R.	Wilton, N. H.	Cans and bottles, elastic cap for sealing.	Mar. 17, 1863
39, 381	Davis, Joseph.	West Chester, Pa.	Types, printing, moulds for casting.	Sept. 22, 1863
38, 291	Davis, Joseph.	Philadelphia, Pa.	Washing machine.	Aug. 25, 1863
1, 432	Davis, Rhoda, assignor through <i>me</i> nee nee's to Thomas H. Hartell and John Latchworth.	New York, N. Y.	Horseshoe machines.	Nov. 17, 1863
40, 076	Davis, R. W. and D., assignors to selves, Daniel Appleton & Co., John Perkins, and Nehemiah P. Stanton.	Providence, R. I.	Engines, steam, valve-chest for.	July 7, 1863
39, 634	Davis, Samuel.	Wilmington, Del.	Musical instruments.	Oct. 20, 1863
40, 611	Davis, S. W.	Jersey City, N. J.	Pontoon, sweet, mode of keeping.	Sept. 8, 1863
39, 125	Davis, Thomas S.	Tamiqua, Pa.	Packing device, wool.	Mar. 3, 1863
40, 333	Davis, William.	Jefferson co., Iowa.	Kettles, tea.	Aug. 18, 1863
39, 757	Davis, William and James.	Salem, Ohio.	Baking pans, covers for.	Nov. 3, 1863
37, 810	Davis, William A.	Cincinnati, Ohio.	Shovels, lifting.	Oct. 27, 1863
39, 554	Davis, William C.	Cincinnati, Ohio.	Glass presses.	Aug. 25, 1863
39, 554	Davis, W. C.	Cincinnati, Ohio.		
40, 461	Davis, W. C.	Cincinnati, Ohio.		
40, 368	Davis, William E.	Brooklyn, N. Y.		
39, 698	Davis, William Otis, assignor to self and James B. Lyon.	Pittsburg, Pa.		

List of patentees of inventions, designs, and reissues, 1863.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
39, 134	Davison, D. G., E. Pullen, and Davison, J. S. (See Rozell, John, assignor.)	Prospect Plains, N. J. Prospect Plains, N. J. Cranberry, N. J.	Levels, plumb, and squares	July 7, 1863.
40, 742	Davison, John S.	Cranberry, N. J.	Cork, air-tight.	Dec. 1, 1863.
39, 468	Day, C. T.	Newark, N. J.	Skates, fastening for.	Aug. 11, 1863.
40, 334	Day, C. T.	Newark, N. J.	Lamps.	Oct. 20, 1863.
40, 916	Day, C. T.	Newark, N. J.	Skate-fastening.	Dec. 13, 1863.
39, 892	Day, Joseph E.	Jersey City, N. J.	Sewing machines.	Sept. 15, 1863.
38, 377	Day, Theodore D.	Brooklyn, N. Y.	Skirt wire.	May 5, 1863.
37, 943	Daykin, James.	Cleveland, Ohio.	Water-levators.	Mar. 17, 1863.
39, 635	Dayton, Henry G.	Mayville, Ky.	Distilling apparatus.	Aug. 25, 1863.
39, 126	Dean, Cyrus.	Worcester, Mass.	Corsets.	July 1, 1863.
40, 713	Dean, Ruel.	St. Catharines, Canada West.	Locomotives, fire-boxes of.	Dec. 1, 1863.
40, 824	Dean, S. H.	Boston, Mass.	Railroad-truck clamps.	Feb. 17, 1863.
40, 399	Deane, Royal E.	Boston, Mass.	Ordnance, adjusting, in boring mills, apparatus for.	Dec. 27, 1863.
38, 355	Deas, Charles, assignor to Archer and Panconst.	New York, N. Y.	Stoves and ranges, cooking.	Dec. 8, 1863.
39, 680	De Bolle, John M.	New York, N. Y.	Lantern.	Apr. 24, 1863.
40, 612	Decamp, M.	Philadelphia, Pa.	Hose nozzles, valves for.	Feb. 17, 1863.
38, 885	De Chutake, Napoleon Felix Boruke.	Paris, France.	Water-wheels.	Nov. 16, 1863.
38, 731	Decker, David.	New York, N. Y.	Piano-fortes.	June 2, 1863.
39, 258	Dederick, Levi.	Albany, N. Y.	Presses, hay.	July 14, 1863.
38, 659	Deering, William.	Louisville, Ky.	Presses, hay.	May 26, 1863.
37, 278	Deeken, Gustavus V.	Nevada, Cal.	Gold from pyrites, apparatus for extracting.	Jan. 6, 1863.
37, 326	De Forest, C. H.	Birmingham, Conn.	Skirts, looped.	Jan. 13, 1863.
37, 417	De Forest, Linson, assignor to self and Thos. H. De Forest.	Birmingham, Conn.	Eyelinting machines.	Jan. 13, 1863.
37, 418	De Forest, Thomas B., assignor to self and Linson De Forest.	Birmingham, Conn.	Hooks and eyes to cards, attaching. (Ant'd June 3, '62)	Sept. 15, 1863.
39, 893	De Forest, Thomas B.	Birmingham, Conn.	Tags, machine for making.	Nov. 24, 1863.
40, 684	De Forest, Thomas B.	Birmingham, Conn.	Tugs, machine for making.	Dec. 8, 1863.
40, 827	De Forest, Thomas B.	Birmingham, Conn.	Hook, safety, self-locking, for towlines.	Feb. 17, 1863.
37, 881	De Garmo, Daniel.	Rochester, N. Y.	Sugar juices, clarifying.	Feb. 10, 1863.
37, 614	De Genhart, E. T. and E. O. (See Gosker and De- genhart.)	Paris, France.	Propeller.	April 28, 1863.
38, 292	Degges, William H.	Washington, D. C.	Rudder.	April 28, 1863.
38, 293	Degges, William H.	Washington, D. C.	Ship-building.	April 28, 1863.
38, 294	Degges, William H.	Washington, D. C.	Lamp-tubes, device for adjusting wicks in.	Jan. 27, 1863.
37, 405	Degrav, Henry N.	Newbury, N. Y.	Stoves, cooking.	July 7, 1863.
39, 127	Deisher, William S.	Hamburg, Pa.	Lamps, mechanical movements for.	Feb. 10, 1863.
37, 659	De Keruevan, F. B., assignor to Joseph H. Bulley and George A. Jones.	New York, N. Y.	Lamps, mechanical movements for.	June 9, 1863.
38, 859	De Korayevan, F. B., assignor to Joseph H. Bulley and George A. Jones.	France.	Lamps, mechanical movements for.	June 9, 1863.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
39, 382	Delamater, Cornelius H.	New York, N. Y.	Metals, machines for bending.	Aug. 4, 1863.
38, 814	Delamater, John W. (See Jacket, Edmund B., assignor.)	Brooklyn, N. Y.	Battery, revolving, sub-marine, for war vessels.	June 9, 1863.
38, 815	De Mey, F. A.	New York, N. Y.	Printing apparatus.	June 9, 1863.
39, 796	De Mey, F. A.	Newington, Conn.	Gates, automatic.	Sept. 8, 1863.
40, 949	Denio, Sylvanus A., et al. (See Smith, Franklin, assignor.)	Coleraine, Mass.	Wood for ox-bows, shaping.	Oct. 13, 1863.
40, 355	Denison, Hiram S.	Philadelphia, Pa.	Engines, steam.	Oct. 20, 1863.
38, 378	Denkman, William.	Milburn, N. J.	Filters, liquid.	May 5, 1863.
39, 383	Denney, Daniel N.	Christiana, Pa.	Rakes, horse. (Antedated April 2, 1862)	Aug. 4, 1863.
39, 894	Denney, Samuel L.	Christiana, Pa.	Ploughs, snow, for railroads. (Antedated June 18, 1862)	Sept. 15, 1863.
38, 219	Denne, Cyrus C.	Auburn, N. Y.	Harvesters, rakes for.	Apr. 21, 1863.
1, 515	Dennis, Paul.	Bemidji Heights, N. Y.	Cultivators.	Aug. 4, 1863.
38, 871	Dennison, E. W.	Rochester, N. Y.	Labels or tags.	June 9, 1863.
39, 895	Dennison, E. W.	Rochester, N. Y.	Boilers, steam. (Antedated July 15, 1863)	Sept. 15, 1863.
38, 568	De Epineuil, Lionel Tobert, and James W. Lettis	Paris, France.	Street crossings, iron.	May 19, 1863.
39, 555	De Fay, Henry W., assignor to self and Daniel E. Somes.	Washington, D. C.	Stoves, cooking, covers or shields.	Aug. 18, 1863.
37, 435	Derby, Lyman.	Jalapa, Nebraska Territory	Nuts, screw.	Jan. 20, 1863.
37, 570	D'Erlanger, Emilie, and Alexandre Friedmann. (See Fried- mann and D'Erlanger.)	New York, N. Y.	Drums, military.	Feb. 3, 1863.
38, 035	Dermont, John.	Louisville, Ky.	Bedsteads, bureau.	Mar. 31, 1863.
39, 030	De Sanno, William F., and Lebbens W. Lathrop. (See Lathrop and De Sanno.)	San Francisco, Cal.	Grunnies.	June 30, 1863.
39, 896	Devau, A. C. L.	England.	Lubricating compound.	Jan. 8, 1863.
39, 897	Devau, G. W. (See Hunt, H. C., assignor.)	Jersey City, N. J.	Cables, sub-marine. (Antedated October 16, 1862)	Sept. 15, 1863.
37, 720	Devlan, Patrick S.	Jersey City, N. J.	Projectiles, composition for packing. (Ant'd Oct. 5, '62)	Sept. 15, 1863.
37, 721	Devlan, Patrick S.	Jersey City, N. J.	Clothes-dryer.	Feb. 24, 1863.
38, 250	Devos, Daniel M.	New York, N. Y.	Paper, &c., from the husks of Indian corn, manufacture of. (Patented in Austria November 23, 1861.)	April 21, 1863.
38, 036	Dexter, Parker.	Clinton, Iowa.	Shingles, machine for bunching and pressing.	Mar. 31, 1863.
38, 036	Dey, James R.	Hudson City, N. J.	Matches, friction.	April 7, 1863.
1, 835	De Zeebe, Isaac D., assignor to Bridge, Beach & Co.	St. Louis, Mo.	Stove, parlor, plates of a.	Oct. 20, 1863.
1, 836	De Zeebe, Isaac D., assignor to Bridge, Beach & Co.	St. Louis, Mo.	Stove, cooking.	Oct. 20, 1863.
40, 032	Dibble, William H.	Middletown, Conn.	Cartridge, bullet.	Oct. 20, 1863.
38, 732	Dick, David.	Meadville, Pa.	Burning petroleum and other liquid fuel for the genera- tion of steam, and other purposes, process of. (Ante- dated May 25, 1863.)	Sept. 29, 1863.
37, 740	Dick, James M.	Buffalo, N. Y.	Ploughs.	June 2, 1863.
38, 018	Dick, James M.	Buffalo, N. Y.	Broilers.	Feb. 24, 1863.
39, 128	Dick, James M.	Buffalo, N. Y.	Hay-elevators.	July 7, 1863.

List of patentees of inventions, designs, and reissues, 1863.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
36, 974	Dickson, J., et al. (See Garlinghouse, C. B., assignor.)	New York, N. Y.	Engines, steam, valve-gear for	July 21, 1863.
36, 975	Dickson, John, and Cyrus B. Garlinghouse. (See Garlinghouse and Dickson.)	Saratoga Springs, N. Y.	Quartz crushers. (Antedated June 3, 1862.)	Sept. 15, 1863.
36, 976	Dickson, Edward N.	Saratoga Springs, N. Y.	Quartz, machinery for pulverizing and crushing. (Antedated July 25, 1862.)	Sept. 15, 1863.
36, 977	Dickson, John.	Brooklyn, N. Y.	Diamond-protector.	May 19, 1863.
36, 978	Dickson, Samuel F.	New York, N. Y.	Ruffles.	April 7, 1863.
36, 979	Dickson, Perry.	New York, N. Y.	Beehives.	May 26, 1863.
36, 980	Deltz, Samuel. (See Raymond, Timothy, assignor.)	Utica, Minn.	Motion, converting.	Mar. 24, 1863.
36, 981	Dilley, Martin A.	Mendon, Mich.	Drills, grain.	June 2, 1863.
36, 982	Dilworth, William, Jr. (See Yost, G. W. N., assignor.)	St. Louis, Mo.	Projectiles for rifled ordnance.	July 14, 1863.
36, 983	Dilworth, William, Jr. (See Yost, G. W. N., assignor.)	Newark, N. J.	Wires for marking tags, machines for twisting.	Nov. 10, 1863.
36, 984	Dilworth, William, Jr. (See Yost, G. W. N., assignor.)	Philadelphia, Pa.	Batteries, land or marine, armor-plates for.	Nov. 10, 1863.
36, 985	Dilworth, William, Jr. (See Yost, G. W. N., assignor.)	York, Pa.	Thrashers and separators.	Aug. 4, 1863.
36, 986	Dumlek, Horace E.	Stuyvesant Falls, N. Y.	Presses, paper.	May 5, 1863.
36, 987	Dingee, W. W., and A. B. Faugular.	Wilmington, Pa.	Glue-ware, annealing.	Oct. 20, 1863.
36, 988	Ditbridge, Edward, assignor to Edward D. Ditbridge.	Parisburg, Pa.	Saw-stave jointers.	June 16, 1863.
36, 989	Doane, William H.	Cincinnati, Ohio.	Saw-mills, scroll.	Mar. 10, 1863.
36, 990	Doane, William H.	Cincinnati, Ohio.	Horses, apparatus for picking.	Mar. 12, 1863.
36, 991	Dodge, James, assignor to Dodge and Black.	Buffalo, N. Y.	Cutlery, machines for grinding and polishing.	May 17, 1863.
36, 992	Dodge, John H. and L. M. Ham. (See Ham and Dodge.)	Watford, N. Y.	Grain-conveyors.	July 21, 1863.
36, 993	Dodge, Orrin C.	New York, N. Y.	Wrenches, screw.	Feb. 10, 1863.
36, 994	Dodge, Thomas H. (See Bartlett, Stephen S., assignor.)	Washington, D. C.		Sept. 15, 1863.
36, 995	Dodge, Thomas H. (See Tait, George C., assignor.)			
36, 996	Dodge, Thomas H., et al. (See Brown, Kniffen and Dodge.)			
36, 997	Dodgin, Joseph, assignor to James Edgar.	Brooklyn, N. Y.	Lamp-burner.	Aug. 18, 1863.
36, 998	Dodson, Silas.	Bloomington, Pa.	Rice, hulling and dressing.	June 16, 1863.
36, 999	Doerler, John, and P. J. Glindre. (See Glindre and Doerler.)	Bloomington, Pa.	Rice, machine for polishing.	Dec. 15, 1863.
36, 1000	Doerler, John, and P. J. Glindre. (See Glindre and Doerler.)	Lancaster, Pa.	Water-wheels.	Jan. 6, 1863.
36, 1001	Dole, W. H., and D. R. Fraser.	Hammersville, Pa.	Drying flour, reels for.	June 9, 1863.
36, 1002	Dole, W. H., and D. R. Fraser.	Chicago, Ill.	Dryers, grain.	Sept. 1, 1863.
36, 1003	Donaldson, Richard.	Mount Noto, Pa.	Kiln, lime.	May 19, 1863.
36, 1004	Doncaster, Daniel.	Prairieville, Pa.	Water-wheels.	June 16, 1863.
36, 1005	Donnelly, M. M., et al. (See Robinson, Donnelly and Krum.)	Davenport, Iowa.	Beehives.	Feb. 24, 1863.

36, 1006	Doolittle, George N.	Louisville, Ky.	Presses, hay and cotton.	June 23, 1863.
36, 1007	Doolittle, Harrison.	Alton, Ill.	Churns.	June 23, 1863.
36, 1008	Doolittle, Lafayette.	Hushville, N. Y.	Planing machine.	June 30, 1863.
36, 1009	Doolittle, Sterling. (See Hill, Bryan S., assignor.)	Buffalo, N. Y.	Burning coal oil for heating purposes, apparatus for.	Jan. 20, 1863.
36, 1010	Dopp, H. W.	Buffalo, N. Y.	Heaters, coal-oil.	July 7, 1863.
36, 1011	Dorsey, Geo. W., and Thos. Worsley. (See Worsley and Dorsey.)	Decatur, Ill.	Cultivators.	April 28, 1863.
36, 1012	Dorsey, William D.	Cleveland, Ohio.	Infestings, animals, machines for cleaning.	June 16, 1863.
36, 1013	Dortembach, Charles F.	New York, N. Y.	Washing machine.	July 21, 1863.
36, 1014	Doty, William M.	Brooklyn, N. Y.	Hats, bell-crown, forming.	Feb. 17, 1863.
36, 1015	Doubleday, William E. (See Hodgson, Thomas, assignor.)	Rochester, N. Y.	Sawing barrel heads, shingles, &c., machines for.	Mar. 10, 1863.
36, 1016	Dougherty, H. F. (See Ingersoll, Platt C., assignor.)	Rochester, N. Y.	Barrel hoops.	Sept. 1, 1863.
36, 1017	Dougherty, H. F. (See Ingersoll, Platt C., assignor.)	Rochester, N. Y.	Barrel hoops.	Oct. 13, 1863.
36, 1018	Dougherty, John H., assignor to self and Mary Ann Lowler.	Rochester, N. Y.	Barrel hoops.	Nov. 17, 1863.
36, 1019	Dougherty, John H.	Rochester, N. Y.	Hoop machine.	
36, 1020	Dougherty, John H.	Rochester, N. Y.	Skate.	Mar. 17, 1863.
36, 1021	Douglas, Alexander. (See Sherwood, Samuel S., assignor.)	Norwich, Conn.	Buckles.	July 14, 1863.
36, 1022	Douglas, Alexander. (See Sherwood, Samuel S., assignor.)	Norwich, Conn.	Engines, steam, governors for.	Sept. 8, 1863.
36, 1023	Douglas, Frank.	Norwich, Conn.	Skate fastenings.	Sept. 8, 1863.
36, 1024	Douglas, Frank.	Norwich, Conn.	Pumps.	May 5, 1863.
36, 1025	Douglas, Joseph W., assignor to W. and B. Douglas.	Middletown, Conn.	Gun-barrels, manufacture of.	April 14, 1863.
36, 1026	Douglas, R. A., assignor to Edward Robinson.	Orange, N. J.	Railway rails, method of making lap joints of.	Mar. 31, 1863.
36, 1027	Douglas, Aaron.	Pateron, N. J.	(Design).	
36, 1028	Douglas, C. F. and R. C. (See Cromwell, B. C., assignor.)	Seranton, Pa.	Railroad frogs.	April 7, 1863.
36, 1029	Douglas, C. F. and R. C. (See Cromwell, B. C., assignor.)	Seranton, Pa.	Car springs.	April 28, 1863.
36, 1030	Douglas, Daniel, 3d. (See Ellis, Charles, assignor.)	Seranton, Pa.	Car springs.	May 26, 1863.
36, 1031	Douglas, George.	Seranton, Pa.	Car springs.	Sept. 15, 1863.
36, 1032	Douglas, George.	Seranton, Pa.	Coal screens.	May 19, 1863.
36, 1033	Douglas, George W., et al. (See Harter, Douglas, Baker, and Anthony.)	Shamokin, Pa.	Whiffletrees, neck-yokes and.	Sept. 29, 1863.
36, 1034	Dow, Richard B.	Hicksville, Ohio.	Doubletrees.	June 23, 1863.
36, 1035	Dow, Albro S., assignor to self and Elijah W. Wilcox.	Hicksville, Ohio.	Hot-air registers.	Jan. 6, 1863.
36, 1036	Dowling, Thomas.	Salem, Mass.	Heaters.	Aug. 4, 1863.
36, 1037	Dowling, Thomas.	Philadelphia, Pa.	Weighting frames, platforms of.	April 21, 1863.
36, 1038	Downer, Charles.	New York, N. Y.	Hemming and tuckling guides.	May 26, 1863.
36, 1039	Downes, George W.		(Design).	
36, 1040	Downs & Co. (See Bignall, Moses C., assignor.)	Boston, Mass.	Soda water, ice, strips, &c., apparatus for.	April 28, 1863.
36, 1041	Downs & Co. (See Phillips, H. F., assignor.)	New York, N. Y.	Tackle and purchase blocks.	July 7, 1863.
36, 1042	Downs & Co. (See Phillips, H. F., assignor.)	Four Corners, Ohio.	Saccharine liquids, evaporator for.	Jan. 6, 1863.
36, 1043	Dowds, Gustavus D.	Four Corners, Ohio.	Saccharine liquids, evaporator for.	Nov. 10, 1863.
36, 1044	Drake, F. D.			
36, 1045	Drake, F. D.			

List of patentees of inventions, designs, and reissues, 1863.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
40, 462	Edmondson, Jno. B., and Jas. Carson	Manchester, England.	Tickets, railroad and other, apparatus for dating.	Nov. 3, 1863.
30, 034	Edson, N. T.	New Orleans, La.	Engines, steam.	June 30, 1863.
36, 663	Edson, Oren.	Franklinville, N. Y.	Churns, device for operating.	May 26, 1863.
39, 470	Edwards, Alfred	Chicago, Ill.	Metal tanks, sheet, construction of. (Antedated May 18, 1863.)	Aug. 11, 1863.
36, 574	Edwards, Henry F., and Wm. C. Whiting. (See Whiting and Edwards.)	New York, N. Y.	Rolls for ladies' hair.	May 19, 1863.
39, 219	Edwards, John	New York, N. Y.	Hemp machine.	July 14, 1863.
37, 957	Eckenmeyer, Rudolph.	Yonkers, N. Y.	Sewing machine guides.	Mar. 24, 1863.
39, 903	Elkenberry, Lewis.	Philadelphia, Pa.	Engines, steam, governors for. (Antedated Sept. 26, 1862.)	Sept. 15, 1863.
37, 681	Ellegren, George.	Cincinnati, Ohio.	Chimney tops.	Feb. 17, 1863.
39, 225	Eley, Philip, assignor to self and R. B. Flitts.	Philadelphia, Pa.	Manure, manufacture of. (Antedated Dec. 11, 1862.)	Aug. 11, 1863.
38, 135	Elkinton, Thomas	Philadelphia, Pa.	Silicates, alkaline, manufacture of.	July 7, 1863.
39, 471	Elliott, Hosea.	New York, N. Y.	Lamps, street, lighting.	Aug. 11, 1863.
39, 136	Elliott, William H.	Plattsburg, N. Y.	Fire-arm, breech-loading. (Antedated Jan. 23, 1863.)	July 7, 1863.
38, 157	Elliott, E.	Pottsville, Pa.	Pumps.	April 14, 1863.
39, 904	Elliott, Joseph S.	Philadelphia, Pa.	Gas metres.	Sept. 15, 1863.
38, 445	Ellis, Thomas. (See Hewitt, James, assignor.)	Gloucester, Mass.	Sail bank.	May 5, 1863.
41, 037	Ellis, Charles, assignor to self and Daniel Douglass, 3d.	Lynn, Mass.	Boot heels, machine for punching the lifts of.	Dec. 22, 1863.
40, 038	Ellis, George W., assignor to self and Luther Hill.	Lynn, Mass.	Boots and shoes, machine for nailing heels to.	Dec. 22, 1863.
38, 299	Ellis, John. (See Bates, Erastus W., assignor.)	South Carver, Mass.	Rollers, farmers'.	April 28, 1863.
40, 027	Ellis, R. F.	Jersey City, N. J.	Match sticks, manufacture of.	Sept. 22, 1863.
39, 318	Ellis, Willard C., and John N. White, assignors to Henry Reynolds.	Springfield, Mass.	Fire-arm, revolving.	July 21, 1863.
1, 228	Ellis, Willard C., and Jno. N. White, assignors to Ebenezer Hotchkiss.	New Haven, Conn.	Fire-arm, revolving. (Reissue.)	Aug. 25, 1863.
1, 529	Ellis, Willard C., and Jno. N. White, assignors to Ebenezer Hotchkiss.	New Haven, Conn.	Cartridge, metallic. (Division B of reissue.)	Aug. 25, 1863.
40, 286	Ellis, Josiah.	Pittsburg, Pa.	Hoes. (Antedated December 1, 1862.)	Dec. 8, 1863.
38, 784	Elmer, William, assignor to Andrew McKinney.	New York, N. Y.	Water-proofing cloth, leather, &c.	June 2, 1863.
38, 765	Elmer, William, assignor to Andrew McKinney.	New York, N. Y.	Leather, artificial.	June 2, 1863.
39, 387	Elmer, William.	New York, N. Y.	Gas, oil, apparatus for producing. (Antedated May 13, 1863.)	Aug. 4, 1863.
39, 368	Elmer, William.	New York, N. Y.	Gas, illuminating, producing. (Antedated May 13, 1863.)	Aug. 4, 1863.
39, 945	Elmer, William.	New York, N. Y.	Gas, illuminating, manufacture of.	Sept. 25, 1863.
40, 614	Elward, John H.	Ottawa, Ill.	Harrows.	Nov. 17, 1863.

37, 760	Elwell, Henry H.	South Norwalk, Conn.	Locks, horizontal.	Jan. 13, 1863.
39, 280	Elwert, Henry H.	South Norwalk, Conn.	Lock.	July 21, 1863.
39, 636	Emery, Christian F. (See Hader, Louis, assignor.)	West Chester, Pa.	Harvesters.	May 19, 1863.
39, 536	Ely, Alfred B. (See Harrigan, Dennis, assignor.)	Rockford, Ill.	Harvesters.	Aug. 11, 1863.
39, 539	Ely, Alfred B. (See Drew, Reuben W., assignor.)	Rockford, Ill.	Harvesters.	Aug. 18, 1863.
38, 475	Emanuel, M., Jr., and W. R. Thomas. (See Thomas and Emanuel.)	Fair Haven, Ill.	Beehives.	May 12, 1863.
38, 380	Emerson, Daniel L.	Seville, Ohio.	Clothes wringer.	May 5, 1863.
38, 891	Emerson, S. F.	Seville, Ohio.	Churns.	June 16, 1863.
40, 097	Emerson, S. F.	Seville, Ohio.	Churns.	Dec. 22, 1863.
37, 437	Emery, A. H.	New York, N. Y.	Founding.	Jan. 27, 1863.
37, 906	Emery, A. H.	New York, N. Y.	Projectile for fire-arms.	Mar. 17, 1863.
40, 228	Emery, A. H.	New York, N. Y.	Shells, percussion fuse for.	Dec. 8, 1863.
40, 038	Emmick, A. C.	Columbus, Ohio.	Casting the "Andrews and Kalboch" water-wheel.	Dec. 22, 1863.
37, 282	Engelbrecht, T. F.	New York, N. Y.	Legs, artificial.	Jan. 6, 1863.
37, 725	Engelhardt, J. A., assignor to self and George Hartman.	Brooklyn, N. Y.	Safe, money, for travellers.	Feb. 24, 1863.
37, 813	Engle, George.	St. Louis, Mo.	Harvesters.	Mar. 3, 1863.
40, 979	Engler, Rudolph. (See Eble, Michael, assignor.)	Jacksonville, Ill.	Harvesters, corn.	Dec. 15, 1863.
37, 496	English and Mersick. (See Goughly and Twichell, ass'rs.)	Williamsport, Pa.	Edging lumber, machine for.	Jan. 27, 1863.
40, 829	Eno, Stephen J., assignor to Stephen H. Eno.	Snowden, Pa.	Latches. (Antedated October 24, 1862.)	Dec. 8, 1863.
39, 724	Ericksen, G. A.	Sweet Bend, Iowa.	Cultivators.	Sept. 1, 1863.
40, 028	Ericksen, John	New York, N. Y.	Soundings, instruments for taking.	Sept. 22, 1863.
40, 830	Ericksen, John	New York, N. Y.	Vessels of war, port-stopper for.	Dec. 8, 1863.
40, 919	Ericksen, John	New York, N. Y.	Gun carriages, operating.	Dec. 15, 1863.
39, 389	Ernst, John G.	New York, N. Y.	Cold crushers.	Aug. 4, 1863.
39, 843	Esterly, George.	Hinsdale, Mass.	Looms, power, device for stopping the shuttle in.	Sept. 8, 1863.
37, 394	Esterly, George.	White Water, Wis.	Harvesting machines, header attachments to.	Jan. 13, 1863.
37, 392	Esterly, George.	White Water, Wis.	Boats and shoes, machine for lashing the uppers of.	Jan. 13, 1863.
37, 997	Ehrbridge, Martin R.	Bethel, Maine.	Shirt collars, paper. (Antedated May 15, 1863.)	May 26, 1863.
38, 664	Evans, Andrew A.	Boston, Mass.	Car springs, railroad.	Jan. 6, 1863.
37, 983	Evans, G., et al. (See Powell, Lincoln, and Evans.)	New York, N. Y.	Fire, forge.	Mar. 24, 1863.
37, 938	Evans, James W.	New Haven, Conn.	Fire, forge. (Reissue.)	Sept. 29, 1863.
1, 544	Evans, John.	New Haven, Conn.	Furnaces of steam-boilers.	April 7, 1863.
1, 447	Evans, Joseph P.	Hazleton, Pa.	Hinges, sliding.	Feb. 17, 1863.
37, 684	Evered, James M., and George C. Moore.	Oroville, Cal.	Telegraphs, acoustic.	Nov. 17, 1863.
40, 616	Evered, Wm., and J. B. Wayne. (See Wayne and Evered.)	New Orleans, La.	Telegraphs, acoustic.	Nov. 17, 1863.

List of patentees of inventions, designs, and reissues, 1863.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
33, 804	Ewer, Franklin.	Mendon Centre, N. Y.	Harvesters. (Antedated January 3, 1863)	Sept. 8, 1863.
36, 734	Ewing, Richard H.	Elizabethtown, Ohio.	Mop. (Antedated March 11, 1862)	June 2, 1863.
35, 892	Faber, Eberhard.	New York, N. Y.	Pencil, eraser, and stamp.	June 16, 1863.
40, 024	Fabrey, John and Samuel.	Boonsboro', Md.	Fancets, molasses.	Sept. 22, 1863.
38, 805	Fairbank, William H.	Broad Creek Neck, Md.	Vessels, sunken, mode of raising.	Sept. 8, 1863.
39, 281	Fairfield, Charles A.	Springfield, Mass.	Callipers.	July 21, 1863.
37, 434	Falcon, Peter E.	Cohasset, Mass.	Vessels, sunken, mode of raising.	Jan. 20, 1863.
36, 964	Fales, Daniel P.	Poultney, Vt.	Sleighs. (Antedated January 11, 1863)	June 23, 1863.
38, 725	Fancher, Jonathan S.	Newark, N. J.	Gas burners. (Antedated October 11, 1862)	Sept. 1, 1863.
40, 253	Fanchoner, Abram.	Schoolcraft, Mich.	Fences.	Oct. 13, 1863.
40, 557	Fargo, Edward S.	Dixon, Ill.	Seals, platform.	Oct. 20, 1863.
39, 903	Ferguson, James, and Charles S. Burt, assignors to James Ferguson.	Dubuque, Iowa.	Separators, grain.	June 30, 1863.
1, 566	Ferguson, James.	Dundell, Ill.	Separators, grain. (Release.)	Nov. 10, 1863.
38, 301	Fernow, Moses J.	Dubuque, Iowa.	Aluminum, alloys of.	Nov. 10, 1863.
40, 730	Fernow, Jacob, assignor to Arthur Graham.	Salem, Mass.	Rakes, horse.	April 26, 1863.
40, 537	Fernham, Sylvester G.	German Township, Ohio.	Gates.	Dec. 1, 1863.
37, 479	Fernsworth, Thomas.	East Farinham, Conn.	Washing, wringing, and wringing machines, combined.	Nov. 10, 1863.
36, 103	Fernum, Edward P.	Cleveland, Ohio.	Roofing slate.	Jan. 20, 1863.
38, 893	Farquhar, A. B., and W. W. Dingee. (See Dingee and Farquhar.)	Hamsville, Md.	Salt, apparatus for the manufacture of. (Antedated February 27, 1863)	April 7, 1863.
38, 893	Farrar, Cyrus S.	Honno, Mich.	Safes.	June 16, 1863.
36, 573	Farrington, Thomas, and Lewis White.	New York, N. Y.	Wringing machine.	May 19, 1863.
37, 524	Farrwell, James E. (See Brown, John Hamilton, assignor.)	Washington county, Vt.	Wringing machine. (Release.)	Jan. 6, 1863.
37, 860	Faulder, T. C.	Albany, N. Y.	Piano-forte action.	Mar. 10, 1863.
37, 545	Faulkner, George S., assignor to O. T. Earle.	Stafford, Conn.	Valves, steam.	Jan. 27, 1863.
37, 440	Faulkner, John.	Danville, N. Y.	Separators, grain.	Jan. 20, 1863.
38, 735	Faw, Jonathan.	Lockland, Ohio.	Paper-making machine, rag, engine of.	June 12, 1863.
1, 739	Fay, Lucian.	Cincinnati, Ohio.	Curriers' knife.	May 12, 1863.
37, 585	Fedderston, George.	Paris, France.	Buttons.	Oct. 13, 1863.
40, 254	Feldtrappe, Achille A., and Reul Dufloy.	Brooklyn, N. Y.	Kutse-cleaver.	June 2, 1863.
38, 786	Fell, Thomas M., assignor to John Mather Jones.	Brooklyn, N. Y.	Fuel, artificial. (Antedated December 4, 1863)	Dec. 13, 1863.
40, 920	Fell, Thomas M.	Salem, Mass.	Type-setting machines.	Dec. 13, 1863.
38, 955	Felt, Charles W.	New York, N. Y.	Rockets, signal. (Antedated July 29, 1863)	Aug. 25, 1863.
38, 636	Felt, George H.	New York, N. Y.	Signal codes for rockets.	Dec. 1, 1863.
40, 744	Felthousen, J. D., and W. H. Atkins. (See Atkins and Felthousen.)	New York, N. Y.	Umbrellas.	Nov. 10, 1863.
40, 558	Felke, Derrick P.	Paxton, Ill.	Printers, corn.	May 10, 1863.
38, 627	Fennor, R. R., assignor to self and W. H. Patton.			

38, 128	Fernold, Albert L., et al. (See Shumate and Warner, assignors.)	Sharon, Wis.	Churns, device for operating.	April 14, 1863.
1, 571	Ferry, George C.	Chicopee, Mass.	Hose-couplings.	Nov. 24, 1863.
39, 861	Fertig, J. P., assignor to self and J. C. Salzgeber.	St. Louis, Mo.	Remedy, anti-typhus.	Sept. 8, 1863.
40, 980	Fethney, Richard, assignor to Lewis Leigh.	Great Britain.	Spinning machines, spindle bolsters of.	Dec. 15, 1863.
40, 521	Fetrick, Frederick, Jr., assignor to William H. Fleckey.	Williamsburg, N. Y.	Skates.	Dec. 15, 1863.
40, 821	Fieckey, Frederick, Jr., assignor to William H. Fleckey.	Baltimore, Md.	Tobacco pipes.	Nov. 3, 1863.
40, 035	Fieckey, Benjamin F.	Baltimore, Md.	Tobacco smoking pipes.	Dec. 8, 1863.
1, 240	Fieckey, Benjamin F.	Sheboygan Falls, Wis.	Cultivators.	Sept. 29, 1863.
39, 300	Fieckey, Benjamin F.	Sheboygan Falls, Wis.	Drills, grain.	Sept. 29, 1863.
37, 340	Fieckey, Benjamin F.	Troy, N. Y.	Collars for ladies and gentlemen.	Nov. 3, 1863.
38, 665	Fieckey, Benjamin F.	Providence, R. I.	Ice-creper.	Aug. 4, 1863.
40, 650	Fieckey, Benjamin F.	Taunton, Mass.	Sails, shoe, machines for making.	Jan. 27, 1863.
38, 665	Fieckey, Benjamin F.	Taunton, Mass.	Null machine.	Jan. 6, 1863.
38, 665	Fieckey, Benjamin F.	Wolcott's Mills, Ind.	Punch block.	May 26, 1863.
39, 906	Fieckey, Benjamin F.	Haverstraw, N. Y.	Pipe moulding.	Sept. 22, 1863.
1, 501	Fieckey, Benjamin F.	New York, N. Y.	Brick press.	Sept. 15, 1863.
39, 637	Fieckey, Benjamin F.	New York, N. Y.	Sugar-draining apparatus.	June 21, 1863.
38, 302	Fieckey, Benjamin F.	Collins Township, Pa.	Bone-black, apparatus for revivifying.	Aug. 25, 1863.
37, 286	Fieckey, Benjamin F.	Schoolcraft, Mich.	Lampwick, adjustable.	April 28, 1863.
1, 463	Fieckey, Benjamin F.	Phillipsburg, N. J.	Seeding machine.	Jan. 6, 1863.
40, 615	Fieckey, Benjamin F.	New York, N. Y.	Pipe moulding.	April 28, 1863.
37, 745	Fieckey, Benjamin F.	Newark, N. J.	Engines, steam.	Nov. 17, 1863.
40, 617	Fieckey, Benjamin F.	Newark, N. J.	Cooking with gas, apparatus for.	Feb. 24, 1863.
38, 381	Fieckey, Benjamin F.	Alliance, Ohio.	Sewing machines, guides for.	Nov. 3, 1863.
40, 587	Fieckey, Benjamin F.	Waterford, N. Y.	Lamps and gas-burners, attachment to, for holding vessels or shades over the flame.	Nov. 17, 1863.
37, 419	Fieckey, Benjamin F.	Bridgeport, Conn.	Mowing machines, hand.	May 5, 1863.
38, 105	Fieckey, Benjamin F.	Youngstown, Ohio.	Tool for manufacturing knitting burrs.	Nov. 10, 1863.
38, 907	Fieckey, Benjamin F.	Salem, Mass.	Knitting machine burrs.	Nov. 24, 1863.
38, 894	Fieckey, Benjamin F.	Litchfield, Ill.	Files, machines for cutting.	Jan. 13, 1863.
1, 537	Fieckey, Benjamin F.	Litchfield, Ill.	Sail-plate feeders.	June 30, 1863.
38, 381	Fieckey, Benjamin F.	Brooklyn, N. Y.	Gas-meters, dry. (Antedated February 13, 1863)	Sept. 15, 1863.
40, 163	Fieckey, Benjamin F.	Brooklyn, N. Y.	Galvanic batteries, liquids for.	June 16, 1863.
37, 472	Fieckey, Benjamin F.	Philadelphia, Pa.	Galvanic batteries, liquids for. (Release.)	Sept. 15, 1863.
39, 500	Fieckey, Benjamin F.	Philadelphia, Pa.	Mark-holders for bales, &c.	April 28, 1863.
38, 320	Fieckey, Benjamin F.	Brooklyn, N. Y.	Ripping instruments.	Oct. 6, 1863.
38, 575	Fieckey, Benjamin F.	Brooklyn, N. Y.	Nightsoil for manure, preparing.	Feb. 17, 1863.
1, 534	Fieckey, Benjamin F.	Philadelphia, Pa.	Nightsoil for agricultural purposes, treating. (Antedated December 13, 1862)	Aug. 11, 1863.
38, 736	Fieckey, Benjamin F.	Philadelphia, Pa.	Cultivator, hand. (Antedated January 16, 1863)	Aug. 18, 1863.
			Chair backs, machine for dressing.	July 14, 1863.
			Sails of vessels.	Feb. 3, 1863.
			Biers.	May 19, 1863.
			Paste or dough, aerating.	Aug. 18, 1863.
			Pumps.	June 2, 1863.

List of patentees of inventions, designs, and reissues, 1863.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
40,255	Flagg, Lysander, and George D. Briggs.	Pawtucket, R. I.	Watches, lockets, &c., toy, constructing.	Oct. 13, 1863.
38,835	Flanagan, Francis F.	Newark, N. J.	Hats.	June 16, 1863.
40,680	Flanders, Joseph F.	Hoboken, N. J.	Hides, smoothing out, preparatory to tanning, machine for.	Nov. 24, 1863.
39,321	Flanders, W. A.	Shelby, Ohio.	Beehives.	July 14, 1863.
1,792	Flansburgh, John D., assignor to North, Chase and North.	Philadelphia, Pa.	Stove, plates of a.	June 30, 1863.
1,823	Chase, Sharpe and Thomson.	Philadelphia, Pa.	Stove, parlor.	Oct. 6, 1863.
40,465	Flansburgh, John D.	Philadelphia, Pa.	Stoves, cooking.	Nov. 3, 1863.
37,499	Fleischman, Levi.	Rochester, N. Y.	Trunks, device for holding clothing in.	Jan. 27, 1863.
38,637	Fletcher, Addison C.	New York, N. Y.	Heating air by exhaust steam, method of.	May 19, 1863.
39,040	Fletcher, Addison C.	New York, N. Y.	Engines, steam, condensers for.	June 30, 1863.
39,473	Fletcher, Addison C.	New York, N. Y.	Paddle wheel.	Aug. 11, 1863.
39,137	Fletcher, Henry.	Providence, R. I.	Braiding machines.	July 7, 1863.
39,138	Fletcher, Joseph.	Providence, R. I.	Braiding machines.	July 7, 1863.
40,922	Fletcher, Matthew.	Louisville, Ky.	Ration, forage.	Dec. 15, 1863.
39,991	Fleury, Anthony L., assignor to William E. Hagan.	Troy, N. Y.	Iron, manufacture of.	Sept. 15, 1863.
39,361	Flinchbaugh, Henry K.	Conestoga Centre, Pa.	Carriage wheels.	Aug. 18, 1863.
40,466	Flint, Andrew C.	Boston, Mass.	Curtain texture.	Nov. 3, 1863.
38,363	Flora, Orlando V.	Cincinnati, Ohio.	Lamps, coal-oil.	April 28, 1863.
	Flindler, Wm. H., and Samuel Smith. (See Smith and Flindler.)			
	Fogg, Jeremiah R., and Samuel Adlam, Jr. (See Adlam and Fogg.)			
38,628	Fogg, Jeremiah R., assignor to Samuel Adlam, Jr.	Portland, Me.	Lamp-chimney adjuster.	May 19, 1863.
38,793	Fogg, Luther.	Boston, Mass.	Buckle.	June 2, 1863.
1,522	Fogg, Luther, assignor to Frederick Stevens.	Boston, Mass.	Buckle. (Release.)	Aug. 11, 1863.
39,474	Folsom, Hannibal.	Milford, Mass.	Sewing machines, welt-gulde for.	Aug. 11, 1863.
38,576	Folsom, Samuel H.	East Cambridge, Mass.	Horses, shears for clipping.	May 19, 1863.
38,104	Fonda, John.	Albany, N. Y.	Saddle-tree, harness.	April 7, 1863.
37,500	Fountain, Peter.	New York, N. Y.	Gas-regulators and purifiers.	Jan. 27, 1863.
40,745	Forbes, John.	Halifax, Nova Scotia.	Skates, means for attaching.	Dec. 1, 1863.
	Forbes, Wm. S. (See Patterson, William F., assignor.)			
	Forbush, Ellakim B.	Buffalo, N. Y.	Harvesting machines, form of teeth in. (Extension.)	Nov. 10, 1863.
37,371	Ford, E. T., assignor to Walter A. Wood.	Buffalo, N. Y.	Harvesters.	Jan. 6, 1863.
39,475	Ford, E. T.	Sullivan, N. Y.	Diggers, potato. (Antedated October 28, 1862.)	Aug. 11, 1863.
37,572	Ford, James, et al. (See Poulton, Phillip, assignor.)	Brooklyn, N. Y.	Paddle wheel.	Feb. 3, 1863.
1,496	Foreman, Hugh, assignor to O. H. Burdick.	Enon, Ohio.	Harvesters, raking attachments to.	June 16, 1863.
26,638	Forrest, Joseph.	New York, N. Y.	Bone-black, revivifying.	Aug. 23, 1863.
40,467	Foreman, Joseph A.	Jamestown, Ohio.	Mills, grinding.	Nov. 3, 1863.
37,948	Fort, John J.	Oakbrook, Wis.	Car-couplings.	Mar. 17, 1863.
37,341	Foster, Carlton.	Oakbrook, Wis.	Canting or turning logs during the process of sawing them into lumber, device for.	Jan. 6, 1863.
40,681	Foster, Clinton.	Prairie, Ill.	Planters, corn.	Nov. 24, 1863.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
38,264	Foster, John W.	Reichers, Wis.	Glades, automatic.	April 28, 1863.
38,818	Foster, Joseph, and George W. Thompson. (See Thompson and Foster.)	Cleveland, Ohio.	Spikes, railroad, boat, and other, machine for making.	June 9, 1863.
37,350	Foster, Newton.	Palmyra, N. Y.	Seed and manure sowers, broadcast.	Jan. 13, 1863.
39,002	Foster, Randolph S., assignor to self, C. Walsh, and John C. Nobles.	Sing Sing, N. Y.	Locks.	June 23, 1863.
39,003	Foster, Randolph S., assignor to self, C. Walsh, and John C. Nobles.	Sing Sing, N. Y.	Locks.	June 23, 1863.
39,004	Foster, Randolph S., assignor to self, C. Walsh, and John C. Nobles.	Sing Sing, N. Y.	Locks.	June 23, 1863.
39,005	Foster, Randolph S., assignor to self, C. Walsh, and John C. Nobles.	Sing Sing, N. Y.	Locks.	June 23, 1863.
39,006	Foster, Randolph S., assignor to self, C. Walsh, and John C. Nobles.	Sing Sing, N. Y.	Locks.	June 23, 1863.
39,007	Foster, Randolph S., assignor to self, C. Walsh, and John C. Nobles.	Sing Sing, N. Y.	Locks.	June 23, 1863.
39,008	Foster, Randolph S., assignor to self, C. Walsh, and John C. Nobles.	Sing Sing, N. Y.	Locks.	June 23, 1863.
39,009	Foster, Randolph S., assignor to self, C. Walsh, and John C. Nobles.	Sing Sing, N. Y.	Locks.	June 23, 1863.
39,010	Foster, Randolph S., assignor to self, C. Walsh, and John C. Nobles.	Sing Sing, N. Y.	Locks.	June 23, 1863.
40,077	Foster, Randolph S., assignor to self, C. Walsh, and John C. Nobles.	Sing Sing, N. Y.	Locks.	Sept. 22, 1863.
40,098	Foster, Theodore.	Coxsack, N. Y.	Hay forks.	Sept. 29, 1863.
38,736	Foulds, Robert. (See Hascom, Willard, assignor.)	Factoryville, N. Y.	Ladder, step.	Sept. 1, 1863.
39,718	Fowler, Vincent, Jr.	Boston, Mass.	Stamping and drilling, machine for. (Anted'd July 13, '63).	Sept. 1, 1863.
38,929	Fowler, Joseph W., assignor to Wm. H. Osgood.	Northford, Conn.	Hooks and eyes, paper cards for.	April 21, 1863.
1,511	Fowler, F. F.	Crane Township, Ohio.	Huy, machines for gathering.	July 14, 1863.
38,522	Fowler, George B.	Chicago, Ill.	Adding machines.	July 14, 1863.
40,923	Fowler, George B.	New York, N. Y.	Hooks, clothes and hat.	Dec. 15, 1863.
37,394	Fowler, Henry R. (See Aitken, Walter, assignor.)	New York, N. Y.	Lanterns for burning coal oil.	Jan. 13, 1863.
40,401	Fowler, Miner H.	New York, N. Y.	Lanterns.	Oct. 27, 1863.
40,746	Fowler, William R.	Anne Arundel county, Md.	Fan, fly-expelling.	Dec. 1, 1863.
40,164	Fowles, George S.	New Castle, Me.	Limbs, wounded, apparatus for supporting and ventilating.	Oct. 6, 1863.
39,908	Foy, Lavinia H.	Worcester, Mass.	Corsets.	Sept. 15, 1863.
39,909	Foy, Lavinia H.	Worcester, Mass.	Corsets.	Sept. 15, 1863.
39,910	Foy, Lavinia H.	Worcester, Mass.	Skirt-supporters, corset.	Sept. 15, 1863.
39,911	Foy, Lavinia H.	Worcester, Mass.	Skirt-supporters, corset.	Sept. 15, 1863.
38,936	France, Henry, and Charles L. Knowles.	Sacramento, Cal.	Boilers, steam, setting.	June 23, 1863.
38,957	France, Henry, and Charles L. Knowles.	Sacramento, Cal.	Boilers, steam, tubular, setting.	June 23, 1863.
39,562	Francis, James B.	Lowell, Mass.	Shaft-bearings.	Aug. 18, 1863.
38,799	Francis, Joseph.	New York, N. Y.	Metal plates, corrugating.	June 2, 1863.
38,222	Francis, Samuel Ward.	New York, N. Y.	Stamps, postage, and other, machine for cancelling.	April 21, 1863.
39,639	Frank, William.	St. Louis, Mo.	Ploughs.	Aug. 25, 1863.
37,575	Franklin, Bradley W.	New York, N. Y.	Lamp, vulcanizing.	Feb. 3, 1863.
	Franklin File Company. (See Fisher, Major H., assignor.)			
	Franklin, Wm., and Henry Kelly. (See Kelly and Franklin.)			
	Fraser, D. R., and W. H. Dole. (See Dole and Fraser.)			

List of patentees of inventions, designs, and reissues, 1863.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
40, 537	Fraser, D. R., and W. H. Dole. (See Dole and Fraser.)	Chicago, Ill.	Galvanic batteries.	Nov. 3, 1863
39, 912	Fraser, Edwin J., assignor to self and E. W. Hazard.	St. Louis, Mo.	Legs, artificial.	Sept. 15, 1863
37, 851	Fravel, John.	Pontiac, Mich.	Straw-cutters.	Mar. 10, 1863
38, 223	Frederick, Solomon.	New York, N. Y.	Burners, coal-oil.	April 21, 1863
40, 682	Free, John W.	Richmond, Ind.	Washing machine.	Nov. 24, 1863
38, 896	Freeman, James Byron.	Lebanon, N. H.	Racks, sheep.	June 16, 1863
40, 037	French, John S.	San Francisco, Cal.	Drilling, rock, machines.	Sept. 29, 1863
38, 860	French, Samuel, assignor to self and Sidney Allen.	Boston, Mass.	Pockets, safety.	June 9, 1863
37, 618	Frow, John.	Meadville, Pa.	Traps, moth.	Feb. 10, 1863
1, 387	Fry, Alexander.	New York, N. Y.	Looms.	Jan. 20, 1863
40, 831	Frey, George.	New York, N. Y.	Bed bottom.	Dec. 8, 1863
37, 574	Frey, Joseph.	Battle Creek, Mich.	Grubbing machines.	Feb. 3, 1863
40, 165	Friedman, Alexander, and Emilio d'Erlanger.	Paris, France.	Sawing machine, cross-cut.	Oct. 6, 1863
39, 640	Frink, E. O., and Curran E. McDonald.	Indianapolis, Ind.	Furnace, boiler. (Patented in France June 10, 1862)	July 14, 1863
39, 223	Frink, Jonas M.	Coral, Ill.	Lock and bolt.	Aug. 25, 1863
38, 066	Frink, Jonas M.	Highland, N. Y.	Furnaces for burning bagasse.	May 26, 1863
38, 647	Frost, F. C.	Albion, Mich.	Fuel, preparing bagasse for.	Mar. 31, 1863
38, 029	Frost, Isachar, and James Monroe.	Saxtonville, Pa.	Food, vegetable, cooked.	May 26, 1863
40, 338	Fry, W. T.	Cherry Valley, Ill.	Flour from bran, machinery for separating. (Extension)	Feb. 13, 1863
40, 832	Fuller, James.	Philadelphia, Pa.	Flasks and bottles.	Oct. 20, 1863
39, 913	Fuller, D.	Cleveland, Ohio.	Wool, process for removing burrs from.	Dec. 8, 1863
37, 929	Fuller, George W.	Cleveland, Ohio.	Printing addresses on newspapers, &c., machines for.	Sept. 15, 1863
40, 629	Fuller, Jim B., assignor to self and James P. Upham.	Brooklyn, N. Y.	Lanterns, submarine.	Mar. 24, 1863
39, 476	Fuller, John C.	Cambridgeport, Mass.	Paper, &c., preparing vegetable fibre for.	Nov. 17, 1863
39, 139	Fuller, Joseph G.	Chicago, Ill.	Teeth, artificial, mounting.	Aug. 11, 1863
40, 683	Furbush, Merrill A.	Brooklyn, N. Y.	Roofing, fabric for.	July 7, 1863
37, 411	Furness, F. H., and F. R. Myers.	Philadelphia, Pa.	Looms.	Nov. 24, 1863
40, 589	Furness, F. H., and Jacob Hovey.	Cleveland, Ohio.	Baggage checks, railroad.	Jan. 20, 1863
1, 530	Furst, Conrad, David Bradley and John Lacey.	Cleveland, Ohio.	Engines, steam, platons for.	Nov. 10, 1863
38, 476	Gabel, F. A. H.	Chicago, Ill.	Rakes, horse.	Aug. 11, 1863
38, 224	Gage, Andrew. (See Tomlinson, James, assignor. Release.)	New York, N. Y.	Locks and keys.	May 12, 1863
38, 224	Gage, Charles W.	Homer, N. Y.	Boats, canal, attachment of the tow-lines of.	April 21, 1863
39, 563	Gale, Elbridge.	Pavilion, Ill.	Fences, wire.	Aug. 18, 1863
38, 040	Gale, L. D.	Washington, D. C.	Treating phosphatic guano.	Mar. 31, 1863
39, 224	Galentine, C. H.	Brooklyn Centre, Ohio.	Carriage springs.	July 14, 1863
40, 686	Galland, Samuel.	Jefferson City, Mo.	Linen for rheumatism, &c.	Nov. 24, 1863
39, 282	Ganter, George P.	New York, N. Y.	Shot, chain.	July 21, 1863
38, 105	Gardner, Charles A. (See Abbott, Oliver D., assignor.)	New York, N. Y.	Car springs, railroad. (Antedated September 20, 1862)	April 7, 1863
	Gardner, Heman.			
	Gardner, John, and John D. Flanagan. (See Flanagan and Gardner.)			

37, 862	Gardner, Perry G.	New York, N. Y.	Car springs, railroad.	Mar. 10, 1863
40, 428	Gardner, Samuel, jr.	New York, N. Y.	Projectiles, hollow, constructing.	Nov. 3, 1863
40, 402	Gardner, George.	Clarksville, N. J.	Veneer-cutting machine.	Oct. 27, 1863
40, 031	Gardner, Joseph, jr. (See Winchester, Edward S., assignor.)	Shelburne Falls, Mass.	Outlet, table.	Sept. 22, 1863
39, 283	Gardner, Joseph W.	Rochester, N. Y.	Car-coupling.	Dec. 8, 1863
39, 283	Gardner, M. C.	Osage, N. Y.	Stalls, floors for.	July 21, 1863
39, 694	Gartick, Zebulon G.	Allenaville, Ind.	Crack wrists.	June 30, 1863
38, 264	Gartinghouse, C. B., assignor to self, George B. Gartinghouse and J. Dickason.	Allenaville, Ind.	Hay-loaders.	July 14, 1863
39, 477	Gartick, Thomas.	Providence, R. I.	Spurs for horsemen's use.	Aug. 11, 1863
40, 256	Garretson, A. T.	Mount Pleasant, Iowa.	Arms, small, sighting.	Oct. 13, 1863
40, 747	Garretson, David G.	New York, N. Y.	Stencil plates, dies for cutting.	Dec. 1, 1863
38, 938	Garretson, Joel C.	Pilot Grove, Iowa.	Sugar from sorghum, manufacture of.	June 23, 1863
38, 806	Garvey, S. M.	Monticello, Ill.	Harrow, rotating.	Sept. 8, 1863
37, 442	Garvey, Benjamin.	New York, N. Y.	Lamps.	Jan. 20, 1863
38, 305	Garvey, Benjamin.	New York, N. Y.	Lamps, coal-oil.	Jan. 20, 1863
39, 641	Gates, Silvia L.	Verona, N. Y.	Hay forks, horse.	Jan. 20, 1863
37, 746	Gay, James P.	Cincinnati, Ohio.	Lubricating wagon axles, &c., composition for.	Apr. 25, 1863
38, 737	Gay, James P.	Cincinnati, Ohio.	Yarnish, black, composition for.	June 2, 1863
39, 284	Gaylord, Emerson. (See Perry, L. M., assignor. Release.)	Seymour, Conn.	Angers, hollow. (Antedated April 26, 1863)	July 21, 1863
38, 577	Gaylord, Ransom.	New York, N. Y.	Soda water, apparatus for drawing.	May 19, 1863
38, 738	Geer, William.	Douglas, Ill.	Harvesters, corn.	June 2, 1863
37, 507	Geiger, Leonard.	Hudson, N. Y.	Fire-arms, breech-loading.	Jan. 27, 1863
37, 863	Gelas, Jacob, et al. (See Penn, Gelas & Brosius.)	Granville, Ohio.	Ball, door.	Mar. 10, 1863
40, 469	Geming, Melvin A.	Granville, Ohio.	Alarm, burglar's. (Antedated October 25, 1863)	Nov. 3, 1863
37, 747	Geoghegan, Stephen J., and William Ulmer.	New York, N. Y.	Barrels, bung sockets and plugs for.	Feb. 24, 1863
1, 539	George, William E. (See Pond, Henry E., assignor.)	New York, N. Y.	Half-crumpers. (Release)	Sept. 15, 1863
39, 642	Geraghty, M. F.	Jersey City, N. J.	Fire-arms, revolving.	Aug. 25, 1863
37, 601	Gerardin, Louis D., assignor to self and Wm. Howeth.	Jersey City, N. J.	Projectiles, explosive, for ordnance.	Feb. 10, 1863
40, 470	Gerhardt, William.	New York, N. Y.	Steel, manufacture of.	Nov. 3, 1863
40, 472	Gerhardt, William.	New York, N. Y.	Iron and steel, purifying.	Nov. 3, 1863
37, 619	German, John.	Oriskany Falls, N. Y.	Dowelling machine for the use of coopers.	Feb. 10, 1863
38, 807	German, Rollin.	Buffalo, N. Y.	Puddle wheels. (Antedated July 1, 1863)	Sept. 8, 1863
40, 618	Gerner, Henry.	New York, N. Y.	Furnaces for steam-boilers.	Nov. 17, 1863
37, 365	Getty, Henry.	Brooklyn, N. Y.	Tongs, pipe.	Jan. 13, 1863
37, 620	Gibbons, James S.	New York, N. Y.	Ships of war and other batteries for defence against projectiles, construction of.	Feb. 10, 1863
38, 477	Gibbs, D. C.	Fleetville, Pa.	Saw-mills.	May 12, 1863
38, 579	Gibbs, John.	Brooklyn, E. D., N. Y.	Curtains, window, fixtures for. (Ant'd March 18, 1863)	May 19, 1863
1, 741	Gibbs, Samuel W., assignor to Black and Wright.	Albany, N. Y.	Stove.	Mar. 24, 1863
38, 608	Gibson, Charles D.	New York, N. Y.	Light, head, reflectors.	May 26, 1863
38, 140	Gibson, Charles Dana.	New York, N. Y.	Ventilating railroad cars.	July 7, 1863
34, 769	Gibson, Charles D., assignor to Charles S. S. Lepox.	New York, N. Y.	Car springs.	Sept. 1, 1863
	Gibson, Charles D., and Richard Vose. (See Vose and Gibson.)			
39, 527	Gibson, James J., and William H. Sutton. (See Sutton and Gibson.)	Syracuse, N. Y.	Engine, steam, cylinders.	Aug. 11, 1863
	Gilson, Samuel D., assignor to self and Joseph Hall.			

List of patentees of inventions, designs, and reissues, 1863.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
38, 603	Gifford, Ira M. (See Harrah and Jones, assignors.)	Rander, Pa.	Carriage wheels.	May 26, 1863.
38, 106	Gilbert, George W.	New York, N. Y.	Harbor defenses, submarine.	April 7, 1863.
39, 643	Gilbert, John S.	Lockport, N. Y.	Cans, fruit, closing.	Aug. 25, 1863.
	Gilbert, N. S.			
	Giles, E. F. (See Taylor, John J., assignor.)			
	Gillilan, Wm., and J. Christman. (See Christman and Gillilan.)			
40, 999	Gill, John	New York, N. Y.	Cribbage boards, &c.	Dec. 22, 1863.
39, 011	Gill, Joseph R., and Jas. Hanchett. (See Hanchett and Gill.)	Philadelphia, Pa.	Cars, railway, safety-guard for.	June 23, 1863.
	Gillen, Thomas, assignor to self, Thomas M. Coleman and William Wilson, Jr.			
39, 041	Gillette, Edward C.	San Francisco, Cal.	Heating apparatus. (Antedated February 21, 1863.)	June 30, 1863.
39, 727	Gillingham, H. R.	Jersey City, N. J.	Smoke-stacks.	Sept. 1, 1863.
40, 924	Gillis, Edgar D. (See Howard, S. S., assignor.)	Woodland, Wis.	Oil, compound, for burning and lubricating. (Antedated November 2, 1863.)	Dec. 15, 1863.
	Gilman, R. A.			
38, 670	Gillmore, James T.	Palmsville, Ohio.	Stone, machinery for dressing or working.	May 26, 1863.
37, 909	Gillmore, Orville.	Raynham, Mass.	Shoes, machine for arranging nails for use in machines for nailing.	Mar. 17, 1863.
39, 883	Gilpatrick, C. L.	Lewiston, Me.	Butter-works.	Sept. 8, 1863.
38, 671	Gilroy, Washington L.	Philadelphia, Pa.	Cars, rolling shoes for replacing. (Anted. March 13, '63)	May 26, 1863.
40, 723	Gilson, S. D., assignor to self and Joseph Hall.	Syracuse, N. Y.	Pumps, force.	Nov. 24, 1863.
39, 042	Gindre, P. J., and John Doerler.	Cincinnati, Ohio.	Ovens.	June 30, 1863.
40, 473	Girard, Thomas H.	Batavia, N. Y.	Harness pad-former or mould.	Nov. 3, 1863.
40, 474	Giroud, Victor.	New York, N. Y.	Clocks, marine.	Nov. 3, 1863.
39, 225	Glesenger, Samuel.	Alleghany, Pa.	Churns.	July 14, 1863.
38, 819	Glasgow, Henry C.	Chicago, Ill.	Car-coupling. (Antedated December 25, 1862.)	June 9, 1863.
39, 141	Glass, Heman.	Honeye Falls, N. Y.	Wringing machine.	July 7, 1863.
38, 672	Gleason, Elliott F.	New York, N. Y.	Lamps, taper-holder for lighting.	May 26, 1863.
37, 910	Gleason, F. A.	Rome, N. Y.	Dovetailing, mitre, machines for.	Mar. 17, 1863.
	Gilman, C. Henry. (See Hunzinger, George, assignor.)			
38, 553	Glover, Robert, assignor to self and David Negley.	Grayville, Ill.	Harvesters.	May 12, 1863.
	Glover, Wm. H. H., and Israel Peck. (See Peck and Glover.)			
	Glover, W. H. H., and Israel Peck. (See Peck and Glover.)			
	Godfrey, Benjamin D. (See Savels, I. N. C., assignor.)			
38, 364	Godfrey, Benjamin D. (See Budding, Benjamin Q., ass'r.)	Portsmouth, Va.	Levers, engine.	April 28, 1863.
39, 564	Godwin, Thomas W.	Portsmouth, Va.	Levers, engine.	Aug. 18, 1863.
40, 032	Godwin, Thomas W.	Portsmouth, Va.	Oil cups for machinery.	Sept. 22, 1863.
40, 475	Godwin, Thomas W.	Portsmouth, Va.	Lubricators.	Nov. 3, 1863.
40, 560	Godwin, Thomas W.	Portsmouth, Va.	Lubricators.	Nov. 10, 1863.
37, 662	Goodyear, George, assignor to self and William Bailey.	Philadelphia, Pa.	Corn-shellers.	Feb. 10, 1863.
38, 673	Gooway, William H.	Albany, N. Y.	Stoves.	May 26, 1863.
39, 391	Goff, Darius, and Darius L., et al. (See Wood, John B., ass'r.)	Batavia, Ill.	Pumps.	Aug. 4, 1863.
	Goland, John.			

40, 476	Golley, Samuel. (See Healy, Richard, assignor.)	Goshen, N. Y.	Swine, implement for catching.	Nov. 3, 1863.
37, 686	Goldsmith, Louis, and Noah Gregory, Jr.	South Weymouth, Mass.	Clothes-drying apparatus.	Feb. 17, 1863.
37, 864	Golightly, Henry Smith, and Charles S. Twitche.	New Haven, Conn.	Chair, folding.	Mar. 10, 1863.
40, 210	Golightly, H. S., and C. S. Twitche, assignors to English and Merrick.	New Haven, Conn.	Chair, arm, folding.	Oct. 6, 1863.
40, 704	Goodale, Samuel D., assignor to L. C. and D. C. Goodale.	Cincinnati, Ohio.	Stereoscopic apparatus.	Dec. 1, 1863.
40, 358	Goodale, E. A.	Philadelphia, Pa.	Stair-rod fastening.	Oct. 20, 1863.
	Goodman, Allen, and Warren Hale. (See Hale and Goodman, Reissue.)	North Dana, Mass.	Piano-forte legs.	Oct. 6, 1863.
40, 166	Goodman, Thomas, and Charles Jackson. (See Jackson and Goodrem.)	Providence, R. I.	Spade, fork, hoe, and rake, combined.	June 23, 1863.
39, 012	Goodrem, Thomas, assignor to John Barnes.	Chester, Mass.	Mark-holder for bales, &c.	April 28, 1863.
38, 365	Goodrich, Henry, and.	Roston, Mass.	Lantern, fishing.	Feb. 10, 1863.
37, 621	Goodrich, Joseph.	Muscodas, Wis.	Cork-cutting machine.	Oct. 27, 1863.
40, 444	Goodrich, Joseph and Chas., et al. (See Nobles, S. H., ass'r.)	Norwich, Conn.	Ordnance, field, mounting.	Sept. 15, 1863.
	Goodspeed, Isaac, assignor to self, A. A. Goodspeed, E. F. Stevens, and A. Newbury.	Powhatan, Ohio.	Boot and shoe soles.	Jan. 6, 1863.
39, 914	Goodyear, William F.	New York, N. Y.	Straps, rubber, elastic, manufacture of.	May 26, 1863.
37, 287	Goodyear, Charles, Jr.	New York, N. Y.	Whip socket, India-rubber.	June 16, 1863.
38, 674	Goodyear, Charles, Jr.	New York, N. Y.	Straw-cutters.	Feb. 17, 1863.
38, 297	Goodyear, Charles, Jr. (See Webster, William, assignor.)	Rochester, N. Y.	Registering marine logs.	Dec. 8, 1863.
37, 687	Gordon, Alexander.	New York, N. Y.	Printing presses.	Sept. 29, 1863.
40, 834	Gordon, Alexander.	Brooklyn, N. Y.	Printing press. (Reissue.)	Nov. 24, 1863.
40, 099	Gordon, George P.	Brooklyn, N. Y.	Pedomotive, infant's.	Aug. 4, 1863.
1, 572	Gordon, George P.	Bangor, Me.	Saddles, pack.	July 21, 1863.
39, 352	Gordon, Joseph, and A. Degenhart.	Cincinnati, Ohio.	Railroad chairs.	April 14, 1863.
38, 285	Goslin, Benjamin F.	Cincinnati, Ohio.	Railroad chairs, machines for making.	Dec. 1, 1863.
38, 159	Gossin, Benjamin F.	Cincinnati, Ohio.	Ventilators for shop windows.	May 26, 1863.
40, 745	Gouge, H. A.	Brooklyn, N. Y.	Brick machine.	Mar. 31, 1863.
38, 675	Gould, D. W.	Independence, Iowa.	Mortising machines, power.	June 16, 1863.
38, 041	Gould, George W.	Norwich, Conn.	Moulding machine feed.	July 14, 1863.
38, 298	Gould, Lyman.	Norwich, Conn.	Weaving corsets. (Patented in France October 6, 1860.)	Jan. 27, 1863.
39, 226	Goullond, B. J., assignor to Solomon and Adolph Ottenheimer.	Paris, France.	Looms for weaving corsets. (Patented in France October 6, 1860.)	Jan. 27, 1863.
37, 546	Goullond, B. J., assignor to Solomon and Adolph Ottenheimer.	Paris, France.	Cultivating machines.	May 26, 1863.
37, 547	Grabbe, C. G.	Greenfield, Mich.	Ploughs, drain.	May 26, 1863.
38, 676	Grabbe, C. G.	Greenfield, Mich.	Straw-cutters.	June 23, 1863.
38, 677	Grabbe, C. G.	Greenfield, Mich.		
38, 939	Gracie, John, and Charles Lockhart. (See Lockhart and Gracie.)	Yonkers, N. Y.	Fire-arm, revolving.	Nov. 24, 1863.
	Graham, Arthur. (See Farnwall, Jacob, assignor.)	Rockford, Ill.	Plumbers.	Jan. 20, 1863.
40, 687	Graham, Edward H.	New York, N. Y.	Dyeing the corners of railroad seats, &c., composition for.	July 7, 1863.
37, 473	Graham, Freeman, assignor to Ralph Emerson, Jr.			
39, 199	Grandelle, Aimable A., assignor to Thomas Brown.			
	Grandy, H. E., and A. B. Southwick. (See Southwick and Grandy.)			

List of patentees of inventions, designs, and reissues, 1863.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
39, 992	Grandy, H. E., and Sargent O. Morse, ass'ts to the Whipple File Manuf'g Co.	Ballardvale, Mass.	File blanks, machinery for grading the edge of.	Sept. 15, 1863.
1, 747	Grainger, Albert.	Medford, Mass.	Pan medallion. (Design. Antedated April 15, 1863.)	April 21, 1863.
37, 396	Granger, R. D.	New York, N. Y.	Stoves, cooking.	Jan. 13, 1863.
37, 960	Grant, Frederic T.	Albany, N. Y.	Turning irregular forms, lathe for.	Mar. 24, 1863.
40, 835	Grath, Charles.	Augusta, Me.	Lubricating composition for.	Dec. 8, 1863.
38, 306	Gratrix, Robert H.	New York, N. Y.	Dyeing wool, silk, &c., with aniline colors.	April 28, 1863.
37, 622	Gratz, R. H., & Co. (See Lloyd, Chas. C., assignor.)	Rochester, N. Y.	Reelives.	Feb. 10, 1863.
39, 728	Graves, John H.	London, England	Pumps. (Antedated March 11, 1863.)	Sept. 1, 1863.
39, 565	Gray, A. G.	St. Louis, Mo.	Oils and fats, apparatus for rendering.	Aug. 18, 1863.
37, 749	Gray, Carroll E.	Hudson, Wis.	Weather-strips, mode of operating.	Feb. 24, 1863.
38, 960	Gray, James B.	Hudson, Wis.	Lamp-burners.	June 23, 1863.
41, 000	Gray, John.	Pittsburg, Pa.	Separators, grain.	Dec. 22, 1863.
39, 644	Gray, Lyman.	Milwaukee, Wis.	Boats, manufacture of.	Aug. 23, 1863.
40, 403	Gray, N. A.	Cleveland, Ohio.	Ploughs, steam.	Oct. 27, 1863.
38, 830	Gray, Ralph, and Robert Hemingray	Covington, Ky.	Jars, fruit, caps for.	June 9, 1863.
38, 160	Gray, Solomon S.	Boston, Mass.	Shirt-collars, paper.	April 14, 1863.
38, 961	Gray, Solomon S.	Boston, Mass.	Shirt-collars.	June 23, 1863.
38, 580	Gregg, Isaac, and Henry Moser, assignors to Isaac Gregg.	Pittsburg, Pa.	Bricks and tiles, machines for heating untempered clay for.	May 19, 1863.
38, 629	Gregg, Richard.	Philadelphia, Pa.	Brick machine.	May 19, 1863.
39, 566	Gregg, Geo. W., and Elias W. Seymour, (See Seymour and Gregory.)	Pittsburg, Pa.	Sheep, stock for shearing.	Aug. 18, 1863.
1, 454	Gregory, Willis L., assignor to self and G. Landon, Jr.	Amsterdam, N. Y.	Skates.	April 14, 1863.
38, 383	Gregory, W. L.	Amsterdam, N. Y.	Water-wheels.	May 5, 1863.
39, 286	Green, Charles, et al. (See Wilson, Green and Wilson.)	Nashua, N. H.	Mowing machines.	July 21, 1863.
1, 737	Green, John P., and Levi W. Buxton.	Wappinger's Falls, N. Y.	Floor oil-cloth.	Mar. 17, 1863.
38, 581	Green, Geo., assignor to Deborah, A. S., and N. B. Powers.	Great Bend, Pa.	Ploughs.	May 19, 1863.
39, 478	Green, Loure.	Hradford, Pa.	Dumping wagons.	Aug. 11, 1863.
40, 100	Green, R. W.	Croton Falls, N. Y.	Axle-boxes for vehicles.	Sept. 29, 1863.
39, 729	Green, Samuel F.	Kinzua, Pa.	Beelives.	Sept. 1, 1863.
40, 477	Green, Wellington.	Providence, R. I.	Box for case-hardening.	Nov. 3, 1863.
39, 025	Greene, Chauncey O., and Frederick A. Sheldon. (See Ham, Robert, assignor.)	Christiansburg, Iowa.	Varnish, water-proof, for paper, cloth, &c.	June 30, 1863.
37, 298	Greene, Jonathan H., assignor to James B. Hodgskin.	Amsterdam, N. Y.	Fabrics, knit, tubular, machinery for drying and finishing.	Jan. 6, 1863.
38, 282	Greene, William K., Jr., and Wm. M. Pawling.	Hugan's Mills, N. Y.	Drying grain, kilns for.	May 5, 1863.
	Greenleaf, Abner, Jr., and Thom. O. Vico.	Brooklyn, N. Y.		
	Greenleaf, S. D., et al. (See Cromwell, H. O., assignor. Design.)	Now Haven, Conn.		

37, 342	Greenleaf, S. D., et al. (See Cromwell, H. O., assignor. Design.)	Silver Creek, N. Y.	Engines, steam, valve gear of.	Jan. 6, 1863.
39, 268	Greenlee, Edmund.	Sumnerhill, Pa.	Copper ware, machinery for dressing heading for.	July 21, 1863.
37, 573	Greenough, John James.	New York, N. Y.	Paper-bag machine.	Feb. 3, 1863.
40, 257	Greenough, J. J., and Marian J. Wellman. (See Wellman and Greenough.)	Mokena, Ill.	Drills, grain.	Oct. 13, 1863.
38, 446	Grey, John, and John D., assignors to themselves and Thomas Grey.	Pittsburg, Pa.	Iron, sheet, hollow ware, manufacture of.	May 5, 1863.
37, 865	Grice, Joseph. (See Long, Robert H., assignor.)	Danville, N. Y.	Churns.	Oct. 27, 1863.
1, 509	Griffin, John F. (See Ludlow, W. D., assignor. Reissue.)	Philadelphia, Pa.	Horseshoes, machines for making nails for.	July 21, 1863.
39, 479	Griffin, John F. (See Sellers, Theodore, assignor. Reissue.)	Logansport, Ind.	Wrenches.	Mar. 10, 1863.
39, 645	Griffith, T. F.	New York, N. Y.	Spoons, sheet metal.	July 7, 1863.
38, 646	Grimes, William C.	Tiffin, Ohio.	Fire-arms, breech-loading.	Aug. 11, 1863.
38, 447	Griscom, W. M. (See Harbater, John, assignor.)	Tiffin, Ohio.	Fire-arms, revolving.	Aug. 25, 1863.
37, 542	Groezinger, Gustavus. (See Wager, Rudolph, assignor.)	Tiffin, Ohio.	Fire-arms, breech-loading.	Aug. 25, 1863.
38, 447	Grojan, Florian.	New York, N. Y.	Sewing machines.	May 5, 1863.
37, 542	Gross, Henry.	Tiffin, Ohio.	Sewing machines.	May 5, 1863.
38, 447	Grote, Frederick W., assignor to self and Claus O. Tiefen.	New York, N. Y.	Beelives.	July 7, 1863.
38, 142	Grover, W. O.	Boston, Mass.	Carriages, body, loop for. (Antedated August 19, 1863.)	July 7, 1863.
38, 699	Gruber, John A.	West Union, Iowa.	Hydrant valves.	Aug. 25, 1863.
37, 786	Guad, Channey H., assignor to David A. Burr.	Troy, N. Y.	Leather, machine for raising, creasing, and licking.	Feb. 24, 1863.
40, 561	Guernsey, James W., assignor to self and H. A. Guernsey.	Tioga, Pa.	Skirts, hoop, frames for forming.	Nov. 10, 1863.
38, 821	Guest, Charles W.	Dexter, Mich.	Grates, fire.	June 9, 1863.
38, 043	Gulton, J. H. (See Eagles, Edwin, assignor.)	New York, N. Y.	Steering apparatus.	June 30, 1863.
37, 543	Gunnib, James F. J.	Morgantown, Va.	Gas, apparatus for carburetting.	Jan. 27, 1863.
38, 357	Guseman, W. D.	New York, N. Y.	Gas, illuminating, manufacture of.	April 28, 1863.
37, 289	Gwynn, Stuart, assignor to Geo. Odiorne.	White Plains, N. Y.	Gas, water, apparatus for making.	Jan. 6, 1863.
1, 504	Gwynne, W. H.	White Plains, N. Y.	Gas, water, process of making. (Division of reissue.)	June 30, 1863.
1, 505	Gwynne, W. H.	White Plains, N. Y.	Gas, illuminating, manufacture of.	July 14, 1863.
38, 227	Gwynne, W. H.	White Plains, N. Y.	Gas from steam and hydro-carbons, carburetting. (Antedated January 19, 1863.)	July 28, 1863.
38, 342	Gwynne, W. H.	White Plains, N. Y.	Gas, water, method of producing.	Aug. 4, 1863.
38, 393	Gwynne, W. H.	White Plains, N. Y.	Gas, water, manufacture of.	Aug. 11, 1863.
38, 480	Gwynne, W. H.	White Plains, N. Y.	Gas, coal, manufacture of.	Dec. 15, 1863.
40, 925	Habel, Ed., and Edmund Suckow. (See Suckow and Habel.)	New York, N. Y.	Kettles or stoves, covers for.	April 28, 1863.
1, 750	Hadden, John I.	Philadelphia, Pa.	Brewing with malze.	Dec. 8, 1863.
40, 836	Haecker, Ludwig.	Attenburg, Hungary.	Beer-cooler.	Jan. 20, 1863.
37, 443	Haeffner, Valentine.	Dobbs Ferry, N. Y.	Ploughs, gang.	Feb. 24, 1863.
37, 750	Haeger, Jacob.	Shiloh, Ill.	Plough, gang.	April 14, 1863.
38, 161	Haeger, Jacob.	Shiloh, Ill.	Ploughs.	May 12, 1863.
38, 478	Hafer, Jacob.	Bedford, Pa.	Stoves.	Oct. 27, 1863.
40, 405	Hager, John.			
	Hagan, William E. (See Fleury, Anthony L., assignor.)			

List of patentees of inventions, designs, and reissues, 1863.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
39, 647	Hagenmeyer, Gebhard.	Big River, Cal.	Saw-mills, head-blocks for.	Aug. 25, 1863.
1, 521	Haight, Harrison. (See Hilborn, Jacob, assignor.) Hales, William. Hales, Wm., and John G. Treadwell. (See Treadwell and Hales, Release.) Hales, William, and John G. Treadwell. (See Treadwell and Hales.) Haines, Jonathan. Haines, Jonathan. Hairs, J. J. (See Briggs, John, assignor.) Haldeman, Isaac. Hale, Henry J., and Henry J., Jr. Hale, Lorenzo, and A. Goodman. (See Goodman and Hale.) Hale, Noah E. Hale, Noah E. Hale, Warren, and Allen Goodman, assignors to themselves, Lorenzo Hale, and John W. Goodman. Haley, John, et al. (See Puckard, Caleb H., assignor.) Hall, Albert. Hall, Albert. Hall, Ashman. Hall, A. W., assignor to self and B. W. Robinson. Hall, Edward, and Joseph L. Hall, George. Hall, George W. Hall, Jerrilo R. Hall, Joseph. (See Gibson, Samuel D., assignor.) Hall, Joseph. (See Gibson, S. D., assignor.) Hall, Joseph L. Hall, Levi. Hall, William. Halley, Edward, assignor to Patrick Kennedy. Halligan, Thomas J. Halligan, Thomas J. Halsted, Charles M. Halsted, G. H. Halvorson, Halvor, assignor to Charles Spear. Halvorson, Halvor, assignor to Charles Spear. Ham, L. M., and John H. Dodge. Ham, Robert, assignor to Fred. A. Sheldon and C. O. Greene. Hamaker, A. B. Hamann, August. (See Hornebaum, Louis, assignor.) Hamill, Alexander. Hamilton, Gibson.	Albany, N. Y.	Harvesting machines. (Extension). Harvesting machines. (Disclaimer). Washing machine. Dovetailing machine. Roving, machines for making. Drawing machines, applying pressure to the top-rollers of. (Release). Irregular surfaces in wood, machinery for shaping. (Release). Fire-arms, revolving. Cartridges, metallic. Washing machine. Ploughs, steam. Safes, fire-proof. Harvesters, rakes for. Legs, artificial. (Antedated December 27, 1862). Shingle machine. Locks. Hame-tug. Locks. Lock and latch, door. Sewing machine. Sewing-machine shuttles. Filters. Lamp, air-jacket of a. (Design). Projectiles for ordnance. Shells, explosive. Wagon. Stove-plate. Mills, grinding, regulator for. (Antedated Aug. 14, '63). Lubricating, composition for. Umbrellas. (Antedated December 16, 1862).	Aug. 11, 1863.
38, 307	Hair, J. J. (See Briggs, John, assignor.)	Pekin, Ill.	Harvesting machines. (Extension).	Mar. 26, 1863.
37, 812	Haldeman, Isaac.	Pekin, Ill.	Harvesting machines. (Disclaimer).	Mar. 26, 1863.
37, 504	Hale, Henry J., and Henry J., Jr.	Bacrus, Ohio.	Washing machine.	April 28, 1863.
1, 391	Hale, Lorenzo, and A. Goodman. (See Goodman and Hale.)	Indianapolis, Ind.	Dovetailing machine.	Mar. 3, 1863.
1, 400	Hale, Warren, and Allen Goodman, assignors to themselves, Lorenzo Hale, and John W. Goodman.	Nashua, N. H.	Roving, machines for making.	Jan. 27, 1863.
37, 961	Haley, John, et al. (See Puckard, Caleb H., assignor.)	Nashua, N. H.	Drawing machines, applying pressure to the top-rollers of. (Release).	Feb. 3, 1863.
38, 915	Hall, Albert.	North Dana, Mass.	Irregular surfaces in wood, machinery for shaping. (Release).	Feb. 10, 1863.
38, 343	Hall, Albert.	Danville, Iowa.	Fire-arms, revolving.	Mar. 24, 1863.
38, 290	Hall, Ashman.	Danville, Iowa.	Cartridges, metallic.	Sept. 15, 1863.
38, 796	Hall, A. W., assignor to self and B. W. Robinson.	Danville, N. Y.	Washing machine.	Sept. 15, 1863.
38, 779	Hall, Edward, and Joseph L.	St. Louis, Mo.	Ploughs, steam.	July 28, 1863.
1, 550	Hall, George.	Cincinnati, Ohio.	Safes, fire-proof. (Extension).	April 21, 1863.
38, 789	Hall, George W.	Baltimore, Md.	Harvesters, rakes for.	Aug. 21, 1863.
38, 789	Hall, George W.	Lyndonville, N. Y.	Legs, artificial. (Antedated December 27, 1862).	June 2, 1863.
38, 789	Hall, George W.	Brunswick, Me.	Shingle machine.	June 2, 1863.
38, 384	Hall, Joseph. (See Gibson, Samuel D., assignor.)	Cincinnati, Ohio.	Locks.	Oct. 6, 1863.
38, 143	Hall, Joseph. (See Gibson, S. D., assignor.)	Cincinnati, Ohio.	Locks.	May 5, 1863.
38, 770	Hall, Levi.	Hartsville, Me.	Hame-tug.	July 7, 1863.
38, 740	Hall, William.	Brookline, Mass.	Locks.	Jan. 6, 1863.
38, 740	Halley, Edward, assignor to Patrick Kennedy.	Braunford, Ct.	Lock and latch, door.	Sept. 1, 1863.
40, 630	Halligan, Thomas J.	New York, N. Y.	Sewing machine.	June 2, 1863.
40, 630	Halligan, Thomas J.	New York, N. Y.	Sewing-machine shuttles.	June 18, 1863.
40, 630	Halsted, Charles M.	Troy, N. Y.	Filters.	Nov. 17, 1863.
40, 142	Halsted, G. H.	New York, N. Y.	Lamp, air-jacket of a. (Design).	Jan. 13, 1863.
40, 524	Halvorson, Halvor, assignor to Charles Spear.	Cambridge, Mass.	Projectiles for ordnance.	Sept. 29, 1863.
39, 345	Halvorson, Halvor, assignor to Charles Spear.	Cambridge, Mass.	Shells, explosive.	Nov. 3, 1863.
1, 838	Ham, L. M., and John H. Dodge.	Boston, Mass.	Wagon.	July 28, 1863.
38, 648	Ham, Robert, assignor to Fred. A. Sheldon and C. O. Greene.	Troy, N. Y.	Stove-plate.	Nov. 3, 1863.
38, 648	Hamaker, A. B.	Satunga, Pa.	Mills, grinding, regulator for. (Antedated Aug. 14, '63).	Aug. 25, 1863.
38, 822	Hamann, August. (See Hornebaum, Louis, assignor.)	Baltimore, Md.	Lubricating, composition for.	June 9, 1863.
38, 822	Hamill, Alexander.	New York, N. Y.	Umbrellas. (Antedated December 16, 1862).	Sept. 8, 1863.
38, 822	Hamilton, Gibson.	New York, N. Y.	Umbrellas. (Antedated December 16, 1862).	Sept. 8, 1863.

39, 804	Hamilton, Joseph F.	Pittsburg, Pa.	Engines, steam, cut-off valve-gear for.	July 14, 1863.
39, 805	Hamilton, Joseph F.	Pittsburg, Pa.	Engines, steam, variable cut-off valve-gear for.	July 14, 1863.
39, 806	Hamilton, Joseph F.	Pittsburg, Pa.	Engines, steam, slide-valves for.	July 28, 1863.
37, 751	Hamilton, Robert.	Franklin, Ind.	Sugar-evaporator.	Feb. 24, 1863.
37, 814	Hamilton, R. J.	Chicago, Ill.	Sugar-boxes for cut-wheels.	Mar. 3, 1863.
38, 385	Hamilton, William.	Chicago, Ill.	Journal-boxes for dressing.	May 5, 1863.
38, 479	Hamilton, William.	Albany, Pa.	Axle-boxes, machinery for dressing.	May 12, 1863.
38, 982	Hamlin, E. C.	South Paris, Mo.	Excavating machines.	June 23, 1863.
40, 107	Hammond, A.	Pavilion, N. Y.	Engines, locomotive lubricator for. (Anted'd Dec. 27, '62).	Oct. 6, 1863.
37, 444	Hammond, Peter.	Jacksonville, Ill.	Casting chilled rollers, moulds for.	Jan. 20, 1863.
40, 688	Haneberr, James, and Joseph R. Gill.	Cattletown, N. Y.	Condensers, surface.	Nov. 24, 1863.
40, 621	Hancock, A. J., and W. L. Oliver. (See Oliver and Hancock.)	Charleston, Ill.	Washing machine.	Nov. 17, 1863.
37, 914	Hankinson, and Lucas Kohler.	Millersburg, Ind.	Flax-breaking machines.	Mar. 17, 1863.
40, 926	Hankinson, Gustavus A.	Manahocking, N. J.	Noe-bag, automatic.	Dec. 15, 1863.
37, 576	Hannay, Peter. (See Howell, Charles, assignor.)	Lynn, Mich.	Ladders, fruit.	Feb. 3, 1863.
40, 406	Hannum, Henry A.	Cazenovia, N. Y.	Beehives.	Oct. 27, 1863.
40, 927	Hansbrow, Thomas.	San Francisco, Cal.	Amalgamator.	Dec. 15, 1863.
39, 862	Hansell, Barnett, John McCann, and Samuel McCambridge.	Philadelphia, Cal.	Pumps.	Sept. 8, 1863.
40, 749	Hanson, Thomas.	Philadelphia, Pa.	Cloth, apparatus for cutting.	Dec. 1, 1863.
39, 649	Hauey, Thomas.	New York, N. Y.	Engine, direct-acting.	Aug. 25, 1863.
37, 291	Harddon, L. P.	Elm, N. Y.	Slave machine.	Jan. 6, 1863.
39, 441	Harder, John, assignor to W. M. Griscom.	Independence, Iowa.	Grain-distributors.	Aug. 4, 1863.
40, 680	Hardaway, Moore.	Reading, Pa.	Jars, fruit, and other vessels, closing.	Nov. 24, 1863.
1, 485	Hardemann, John Locke, assignor through mesne assignments to William N. Whiteley.	St. Louis, Mo.	Horse-shoe machines.	May 26, 1863.
1, 486	Hardeman, John Locke, assignor through mesne assignments to William N. Whiteley.	Springfield, Ohio.	Harvesting machines.	May 26, 1863.
39, 200	Harder, Jacob.	Springfield, Ohio.	Harvesting machines.	July 14, 1863.
38, 862	Harder, Minard.	Lock Haven, Pa.	Presses, balling.	June 9, 1863.
38, 592	Geo. W. Douglas.	Cobbleskill, N. Y.	Threshing machines.	May 19, 1863.
39, 568	Hiram Becker, and David Anthony, assignors to Reuben and Minard Harder.	Cobbleskill, N. Y.	Pavements, &c., composition for.	Aug. 18, 1863.
39, 254	Harder, Peter.	Cobbleskill, N. Y.	Pumps, valves for.	July 14, 1863.
40, 034	Hardick, Charles B., and John.	Worcester, N. Y.	Shells, explosive, for ordnance.	Sept. 22, 1863.
40, 168	Harding, Thomas, assignor to Thompson D. Hart.	Danville, Pa.	Iron, machines for shearing.	Oct. 6, 1863.
41, 001	Hardy, Anson.	Brooklyn, N. Y.	Stills, oil. (Antedated September 25, 1863).	Dec. 22, 1863.
39, 569	Hardy, Charles A.	Springfield, Ohio.	Chair, folding.	Aug. 18, 1863.
39, 570	Hardy, Peter J.	Boston, Mass.	Stockings. (Antedated March 1, 1863).	Nov. 24, 1863.
40, 724	Harlow, John L., and Henry Speer. (See Speer and Harlow.)	Pittsburg, Pa.	Stockings. (Antedated March 12, 1863).	Dec. 8, 1863.
40, 882	Harmon, Emanuel.	New York, N. Y.	Locks.	Dec. 15, 1863.
40, 928	Harold, Thos. Geo., assignor to self and John W. Klesam.	Washington, D. C.	Car-replacers for railroads.	June 30, 1863.
39, 046	Harold, Thos. Geo., assignor to self and John W. Klesam.	Washington, D. C.	Reapers, binding attachments for.	Dec. 22, 1863.
41, 002	Harper, John M. (See Mershon, Ralph S., assignor.)	Brooklyn, N. Y.	Grain-blenders.	June 30, 1863.
39, 097	Harper, Robert.	Brooklyn, N. Y.	Cars, railroad, signal bell and brake-attachment for.	July 7, 1863.
39, 144	Harrah, W. D., and H. P. Jones, assignors to themselves and Ira M. Gifford.	Chelsea, Mass.	Shoe-fastening.	
	Harrab, William D.	Davenport, Iowa.		
	Harrigan, Dennis, assignor to Alfred B. Ely.	Davenport, Iowa.		
	Harrington, E. C.	Winchester, Mass.		
		Fair Plains, Mich.		

List of patentees of inventions, designs, and reissues, 1863.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
37, 869	Reinisch, R.	Newark, N. J.	Sheets	Feb. 17, 1863.
38, 013	Reiske, Mathew, and Martin Nudd, assignors to David R. Burton.	Rochester, N. Y.	Skates	June 23, 1863.
38, 916	Reisenbuttel, John Frederick.	Brooklyn, N. Y.	Rolling-pin	Sept. 15, 1863.
40, 931	Reiser, Samuel.	New York, N. Y.	Pantalon straps	Dec. 15, 1863.
38, 011	Hemlingray, Robert, and Ralph Gray. (See Gray and Hemlingray.)	Blackman, Mich.	Stump extractors	Mar. 24, 1863.
37, 690	Hendee, J. Harrington.	Buffalo, N. Y.	Lamps	Feb. 17, 1863.
38, 742	Henderson, Albert N.	Buffalo, N. Y.	Lamp burner	June 2, 1863.
1, 806	Henderson, Albert N.	Albany, N. Y.	Stoves	June 30, 1863.
38, 908	Henderson, Joseph C.	Baltimore, Md.	Pumps	April 28, 1863.
40, 838	Hendrick, James A.	Providence, Pa.	Tools, machine for grinding and polishing. (Antedated November 21, 1863.)	Dec. 8, 1863.
37, 505	Henry, Frank.	Bridgeport, Conn.	Sewing machines, bemming, tucking, and folding guide for.	Jan. 27, 1863.
38, 797	Henry, J. L., assignor to Richard P. Henry.	Long Old Fields, Md.	Projectiles, explosive, concussion fuze for.	June 2, 1863.
1, 796	Hensel, Henry W.	Philadelphia, Pa.	Blind binding. (Design.)	July 7, 1863.
1, 797	Hensel, Henry W.	Philadelphia, Pa.	Blind binding. (Design.)	July 7, 1863.
1, 798	Hensel, Henry W.	Philadelphia, Pa.	Blind binding. (Design.)	July 7, 1863.
1, 824	Hensel, H. W.	Philadelphia, Pa.	Blind binding. (Design.)	Oct. 6, 1863.
1, 825	Hensel, H. W.	Philadelphia, Pa.	Blind binding. (Design.)	Oct. 6, 1863.
1, 826	Hensel, H. W.	Philadelphia, Pa.	Blind binding. (Design.)	Oct. 6, 1863.
1, 827	Hensel, H. W.	Philadelphia, Pa.	Blind binding. (Design.)	Oct. 6, 1863.
38, 929	Hensel, H. W., and L. D. Valleton, assignors to H. W. Hensel.	Philadelphia, Pa.	Looms, jacquard. (Antedated May 23, 1863.)	June 16, 1863.
40, 932	Hepburn, James.	Mokelumne Hill, Cal.	Ores, apparatus for concentrating.	Dec. 15, 1863.
38, 044	Herder, William C.	Miami Town, Ohio.	Gates, farm	June 30, 1863.
40, 035	Herder, William C.	Miami Town, Ohio.	Black-board and map case	Sept. 22, 1863.
38, 825	Hermance, William G.	West Sandlake, N. Y.	Oil, compound, for burning and lubricating	June 9, 1863.
40, 933	Herrshoff, James H.	Bristol, R. I.	Treating dish water for use in dyeing, &c., mode of.	Dec. 15, 1863.
39, 045	Herron, James P.	Washington, D. C.	Paper, folding and ruling	June 30, 1863.
38, 147	Herron, James P.	Washington, D. C.	Stamps, postage, device for preserving	July 7, 1863.
39, 614	Herry, James P., assignor to self and Daniel E. Somes.	Washington, D. C.	Boots and gaiters	Aug. 18, 1863.
41, 005	Hervey, Horace L.	Windsor, Vt.	Plotting instruments	Dec. 22, 1863.
40, 211	Heston, William. (See Dunham, Chester, assignor.)	Clinton, Mass.	Skate fastenings	Oct. 6, 1863.
38, 917	Hewett, David. (See Smith & Brown, ass'rs. Design.)	Carmichael, Pa.	Washing and wringing machine	Sept. 15, 1863.
38, 109	Hewitt, John.	Seneca Falls, N. Y.	Clod crusher	April 7, 1863.
38, 826	Hewitt, Silas.	Newark, N. J.	Lamp tops	June 9, 1863.
40, 632	Hewitt, Frederic.	New Orleans, La.	Sewing machine	Nov. 17, 1863.
40, 230	Heyer, W. D.	Columbus, Ohio.	Tags, adhesive, for filling papers	Oct. 13, 1863.
38, 046	Heywood, Simon.	Claremont, N. H.	Shingle machine	June 30, 1863.
38, 563	Hibbert, S., et al. (See Lawton, Hibbert, and Rhodes.)			

37, 691	Hickok, Samuel Sherman.	Marlboro', N. J.	Diggers, points.	Feb. 17, 1863.
40, 478	Hicks, Isaac.	Hartford, Wis.	Stump extractor.	Nov. 3, 1863.
40, 102	Hicks, James M.	Boston, Mass.	Pencil, slate, sharpeners.	Sept. 29, 1863.
38, 263	Hicks, Enclen E., assignor to self and Rufus E. Crane.	New York, N. Y.	Inkstands	June 9, 1863.
37, 962	Hicks, Willet.	Trenton, N. J.	Jar, fruit	Mar. 24, 1863.
37, 445	Hicks, William Cleveland.	New York, N. Y.	Presses, drop	Jan. 20, 1863.
1, 533	Hidden, Enoch.	New York, N. Y.	Ships, side lights for	Sept. 8, 1863.
40, 479	Hidden, E. S.	New York, N. Y.	Deck light	Nov. 3, 1863.
38, 563	Higgins, James.	U. S. Army	Tents, ventilating top-piece for	May 19, 1863.
40, 934	Higgins, Thomas, and Samuel A. Bell. (See Bell and Higgins.)	Walnut Fork, Iowa.	Sugar evaporators	Dec. 15, 1863.
38, 319	Higham, Elias T., assignor to self and D. Higham.	Philadelphia, Pa.	Shade, window, hangings	July 21, 1863.
37, 912	Higley, Aaron.	Warren, Ohio.	Corn-shellers	Mar. 17, 1863.
37, 623	Hilborn, Jacob, assignor to Harrison Haight.	San Francisco, California	Washing machine	Feb. 10, 1863.
38, 080	Hill, A. M., assignor to Charles A. Miller.	Braintree, Conn.	Locks	Mar. 31, 1863.
38, 500	Hill, Bryon S., assignor to self and Sterling Doolittle.	Watburg, Pa.	Washing machine	July 7, 1863.
38, 571	Hill, Edward A.	Galesburg, Ill.	Galvanic batteries. (Antedated April 9, 1863.)	Aug. 18, 1863.
38, 918	Hill, G. B.	New York, N. Y.	Fuel, means of using hydro-carbon oil as	Sept. 15, 1863.
38, 535	Hill, George J., assignor to Sanford, Harroun & Co.	Buffalo, N. Y.	Stamp, band	May 12, 1863.
38, 164	Hill, George J., and Wm. H. Baker. (See Baker and Hill.)	Providence, R. I.	Shoestrings, tagged braid for	April 14, 1863.
38, 309	Hill, James.	Providence, R. I.	Shoestrings, mode of pointing tags of	April 28, 1863.
1, 417	Hill, Levi L.	New York, N. Y., (formerly of Greenport, N. Y.)	Carburetted air	Feb. 24, 1863.
1, 416	Hill, Levi L.	New York, N. Y., (formerly of Greenport, N. Y.)	Fluids, burning	Feb. 24, 1863.
1, 497	Hill, Levi L., assignor to Wyman R. Barrett.	Hudson, N. Y.	Gas, illuminating, making	June 16, 1863.
38, 137	Hill, Luther. (See Ellis, George W., assignor.)	New York, N. Y.	Light and heat, producing, and applying the same	April 7, 1863.
40, 480	Hill, S. L.	Williamsburg, N. Y.	Boxes, machine for making	Nov. 3, 1863.
40, 691	Hill, William.	New York, N. Y.	Saddle, side, trees	Nov. 24, 1863.
39, 316	Hillman, John J.	Boston, Mass.	Funnel measures. (Antedated March 1, 1863.)	July 28, 1863.
1, 870	Hills, George.	Plainville, Conn.	Clock dial	Dec. 1, 1863.
38, 225	Hills, James H.	Burlington, Vt.	Car-couplings	April 21, 1863.
37, 343	Hills, L. M.	New Haven, Conn.	Radiators, steam	Jan. 6, 1863.
1, 471	Hills, L. M., and E. S. Wright. (See Wright & Allen, ass'rs.)			
39, 099	Hills, L. M., and E. S. Wright. (See Wright & Allen, ass'rs.)			
1, 471	Hilton, Samuel F., assignor to self and Wm. D. Hilton.	Providence, R. I.	Leather and other substances, cement for uniting. (Reissue.)	May 5, 1863.
39, 099	Hinchman, C. C., assignor to self and J. M. and J. K. Hinchman.	Clarksboro', N. J.	Saws, reciprocating, table for	June 30, 1863.
38, 165	Hindemeyer, James, and Theophilus Ogden. (See Ogden and Hindemeyer.)	Norwalk, Ohio	Friction wheels for driving machinery	April 14, 1863.
39, 559	Hinkley, Jonas.	Syracuse, N. Y.	Churns	Aug. 11, 1863.
40, 692	Homan, Egbert, assignor to John Rankin.	Battle Creek, Mich.	Lubricating axes	Nov. 24, 1863.
38, 480	Hinsdelwood, Robert, and Charles A. A. Durling.	New York, N. Y.	Leather, &c., water-proof cement for	May 12, 1863.
37, 592	Hise, Henry.	Ottawa, Ill.	Cocks, gauge	Jan. 6, 1863.
38, 631	Hise, Henry.	Ottawa, Ill.	Buckles, harness and trace	Aug. 25, 1863.
38, 732	Hiert, B. F.	Norton Hills, N. Y.	Hay forks, horse	Sept. 1, 1863.

List of patentees of inventions, designs, and reissues, 1863.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
39, 047	Hitchcock, Alonzo.	New York, N. Y.	Boilers, steam.	June 30, 1863
40, 103	Hitchcock, Alonzo.	Chicago, Ill.	Quartz crushers.	Sept. 23, 1863
41, 006	Hitchcock, Alonzo.	New York, N. Y.	Doors, mode of hanging. (Antedated Dec. 13, 1863).	Dec. 22, 1863
37, 397	Hitchcock, Robert.	Watertown, N. Y.	Clocks by currents of air, winding.	Jan. 13, 1863
40, 229	Hjerpe, J. W.	Stockholm, Sweden.	Matches, friction, manufacturing.	Oct. 13, 1863
38, 372	Hoadley, J. M.	Derby, Conn.	Needles, crochet. (Antedated January 17, 1863).	Aug. 16, 1863
	James, assignor.)			
40, 751	Hogg, Robert, and Henry A. Shipman. (See Pomeroy, James, assignor.)	Rensselaer, N. Y.	Churn, power.	Dec. 1, 1863
37, 963	Hogg, Warren G.	Hosack, N. Y.	Screens, grain.	Mar. 24, 1863
	Hoard, J. W., and Geo. B. Wiggin. (See Wiggin & Hoard.)			
39, 772	Hoard, J. W., and George B. Wiggin. (See Wiggin and Hoard.)	Providence, R. I.	Steam traps.	Sept. 1, 1863
	Phineas D. Wesson.			
	Hobart, B., and Son. (See Rhodes, John C., assignor.)			
	Hobart, C. H., and Asher Merwin. (See Merwin & Hobart.)			
	Hobbs, George, and Dwight Tracy. (See Tracy & Hobbs.)			
	Hodge, Nehemiah.			
	Hodges, Charles E., and Nathaniel D. Silsbee. (See Ordway, John M., assignor.)			
39, 615	Hodgson, James B. (See Greene, Jonathan H., ass't.)	Brooklyn, N. Y.	Composition for lining lead pipes and other purposes. (Antedated May 12, 1862).	Aug. 18, 1863
	Hodgson, Thos., assignor to self and W. E. Doubleday.			
	Hoe, R. March. (See Marloni and Chandre, assignors.)			
40, 202	Hoeftner, Otto, and Charles Schnepf.	Philadelphia, Pa.	Liquors, malt, apparatus for cooling.	Oct. 13, 1863
40, 481	Hofhelms, Reuben.	Dover, Pa.	Harvesters.	Nov. 3, 1863
37, 735	Hoffman, Austin D.	Bellville, Mich.	Measures, board.	Feb. 24, 1863
40, 795	Hoffman, Henry, assignor to Charles Weble.	New York, N. Y.	Windows, &c., blinds for.	Dec. 1, 1863
38, 481	Hoffman, George.	Scott Bar, Cal.	Pick, milking.	May 12, 1863
40, 038	Hogg, Alexander.	Rutland, Ohio.	Beehives.	Sept. 22, 1863
38, 043	Hoggson, Samuel J.	New Haven, Conn.	Stamp, hand, self-linking.	Mar. 31, 1863
	Hogness, M. G., and Caspar Krogh. (See Krogh & Hogness, Reissue.)			
39, 048	Holington, Chester.	Seward, Ill.	Box-cutting machine.	June 30, 1863
37, 398	Hoke, Seth.	Union City, Ind.	Filles, machines for cutting.	Jan. 13, 1863
	Holbrooke, Wm. H., and Augustus H. Tait. (See Tait and Holbrooke.)			
40, 036	Holcomb, Asahel E.	Naples, N. Y.	Roofs, hipped, shingling.	Sept. 22, 1863
41, 017	Holcomb, Henry.	Painesville, Ohio.	Furnaces, hot-air.	Dec. 22, 1863
37, 964	Hollerft, Henry, and C. S. Smith.	Medina, Pa.	Diggers, potato.	Mar. 24, 1863
38, 743	Hollerft, Henry, and Canby S. Smith.	Chester Valley, Pa.	Car platform, railroad.	June 2, 1863
40, 410	Hollerft, Henry, and C. S. Smith.	Woburn, Mass.	Car trucks, railroad, safety attachments to.	Oct. 27, 1863
40, 212	Holden, Luther and Stoughton B., assignors to selves, J. C. Seelye, and L. L. Holden.		Sewing machine.	Oct. 6, 1863

39, 652	Hollen, Stephen Briggs.	Madison, Pa.	Car seats, railroad.	Aug. 28, 1863
39, 573	Hollenworth, James C. O.	Brooklyn, N. Y.	Grates for furnaces.	Aug. 18, 1863
38, 110	Hollingsworth, Jehu, and Ralph S. Merabon. (See Merabon and Hollingsworth.)	Cincinnati, Ohio.	Ordnance.	April 7, 1863
40, 752	Holley, George W.	Niagara, N. Y.	Iron from corrosion, preserving.	Dec. 1, 1863
37, 624	Hollowell, J. G.	Canandaigua, N. Y.	Sewing machines.	Feb. 10, 1863
39, 239	Holly, Hirdell.	Lockport, N. Y.	Pumps.	July 14, 1863
39, 501	Holly, Henry W., and Alva F. Smith, ass'ts to Alva F. Smith.	Norwich, Conn.	Wringing machines, rollers for.	July 7, 1863
39, 014	Holly, Solomon T., assignor to Frederick H. Manny.	Rockford, Ill.	Harvesters.	June 23, 1863
40, 837	Holman, Calvin J.	Oshkosh, Wis.	Sawing machine.	Dec. 8, 1863
37, 719	Holmes, Booth and Hayden. (See Hayden, Hiram W., ass't.)	Buffalo, N. Y.	Hoop driving and crozing machine.	Feb. 17, 1863
37, 720	Holmes, Edward, assignor to E. and B. Holmes.	Buffalo, N. Y.	Stave-dressing machine.	Feb. 17, 1863
38, 226	Holmes, Reuben G.	Clayville, N. Y.	Water-wheels.	April 21, 1863
39, 813	Holmes, Reuben G.	Worcester, Mass.	Clothes-wringer. (Antedated January 21, 1863).	Sept. 8, 1863
39, 814	Holmes, Reuben G.	Worcester, Mass.	Clothes-wringer. (Antedated April 22, 1863).	Sept. 8, 1863
39, 291	Holmes, Thomas.	Washington, D. C.	Bodies, dead, receptacles for. (Antedated July 4, '63).	July 21, 1863
38, 564	Holt, Horace assignor to Wm. W. Seombe.	Brooklyn, N. Y.	Stamp, hand.	June 9, 1863
39, 231	Hood, H. G.	Madison, Ind.	Fences.	July 14, 1863
37, 797	Hood, Joel.	Millwaukee, Wis.	Scrapers, snow.	Feb. 24, 1863
1, 592	Hook, Albert H., assignor through mesne assignments to William Stanley.	New York, N. Y.	Sewing machine. (Reissue.)	Dec. 15, 1863
40, 935	Hooker, Henry T.	Skaneateles, N. Y.	Cultivators.	Dec. 15, 1863
	Hoole, James H. (See Magee, T. J., assignor.)			
	Hoopes, Joshua W. (See Kockufellow, Samuel, assignor.)			
37, 399	Hope, J.	Castleton, Vt.	Stoves, camp.	Jan. 13, 1863
38, 744	Hopkins, George P.	Albion, N. Y.	Stoves, cooking.	Jan. 2, 1863
40, 465	Hopkins, Joseph W., assignor to self and James Clayton.	Brooklyn, N. Y.	Engines, steam, valves for.	Oct. 27, 1863
40, 467	Hopkins, Joseph W., assignor to self and James Clayton.	Brooklyn, N. Y.	Pump valves.	Oct. 27, 1863
38, 482	Hopson, O. L., and H. P. Brooks.	Waterbury, Conn.	Huckles.	May 12, 1863
	Horn, Edwin H.	Boston, Mass.	Lamps, camphene.	Feb. 4, 1863
38, 964	Horn, Jonathan F.	Boston, Mass.	Washing machine.	June 23, 1863
40, 936	Horn, Lorenzo.	Wolboro', N. H.	Clothes dryer.	Dec. 15, 1863
	Hornet, George W. (See Merrill, James S., assignor.)			
38, 900	Hornet, John M.	San Jose Mission, Cal.	Washing machine.	June 16, 1863
39, 919	Horsford, Eben N.	Cambridge, Mass.	Safe, fire-proof. (Antedated July 27, 1863).	Sept. 15, 1863
39, 920	Horsford, Eben N.	Cambridge, Mass.	Safes or chests, fire-proof.	Sept. 15, 1863
39, 921	Horsford, Eben N.	Cambridge, Mass.	Safes, fire-proof, composition for filling.	Sept. 15, 1863
39, 922	Horsford, Eben N.	Cambridge, Mass.	Safe, fire-proof, composition for filling.	Sept. 15, 1863
39, 923	Horstmann, Wm. H., and Henry J. Belrens.	New York, N. Y.	Lime, neutral sulphite of, manufacture and use of.	Sept. 15, 1863
40, 411	Hoskin, Robert.	Brooklyn, N. Y.	Cartridges, machine for making. (Antedated Mar. 24, '62).	Oct. 27, 1863
	Hoteckiss, Alf., et al. (See Ellis & White, ass'ts. Reissue.)			
37, 692	Hoteckiss, Bennett.	New Haven, Conn.	Presses, drop.	Feb. 17, 1863
38, 924	Hoteckiss, Bennett.	New Haven, Conn.	Hammer, trip, atmospheric.	Sept. 15, 1863
40, 482	Hoteckiss, Bennett.	New Haven, Conn.	Blowers.	Nov. 3, 1863
37, 756	Hoteckiss, H. B. and Charles A. (See Smith, Babcock, and Hoteckiss.)	Sharon, Conn.	Shells, percussion fuze for.	Feb. 24, 1863
38, 166	Hough, Joseph.	Buckingham, Pa.	Car brakes, railroad.	April 14, 1863
38, 680	House, Edward P.	Washington, D. C.	Window sash shutters and sash, mode of securing and operating.	May 26, 1863

List of patentees of inventions, designs, and reissues, 1863.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
39, 015	House, James A. and Henry A., assignors to themselves and Augustus G. Seaman.	Brooklyn, N. Y.	Belt-tighteners	June 23, 1863
39, 442	House, James A. and Henry A., assignors to themselves and Augustus G. Seaman.	Brooklyn, N. Y.	Sewing machines	Aug. 4, 1863
39, 443	House, James A. and Henry A., assignors to themselves and Augustus G. Seaman.	Brooklyn, N. Y.	Sewing machines	Aug. 4, 1863
39, 444	House, James A. and Henry A., assignors to themselves and Augustus G. Seaman.	Brooklyn, N. Y.	Sewing machines	Aug. 4, 1863
39, 445	House, James A. and Henry A., assignors to themselves and Augustus G. Seaman.	Brooklyn, N. Y.	Sewing machines	Aug. 4, 1863
1, 366	House, Mark W.	Cleveland, Ohio.	Baths, electric.	Jan. 13, 1863
38, 369	House, Mark W.	Cleveland, Ohio.	Baths, electric	May 5, 1863
39, 733	House, Mark W.	Cleveland, Ohio.	Electricity, remedial application of	Sept. 1, 1863
38, 527	Houshaur, John	Washington, D. C.	Hedstead, folding	June 9, 1863
40, 623	Houston, John	Lake Village, N. H.	Churns	Nov. 17, 1863
39, 573	Hovey, Jacob	Chicago, Ill.	Lamps, case for a ratchet wheel for	Aug. 18, 1863
38, 111	Hovey, Jacob, and F. H. Furness. (See Furness & Hovey.)	Cleveland, Ohio.	Spark-arresters	April 7, 1863
38, 745	Howard, Ansel, Jr.	Randolph, Vt.	Trays, wooden, machine for shaping	June 2, 1863
39, 252	Howard, C. W.	Hannington, N. J.	Fire-arm, breech-loading	July 14, 1863
40, 039	Howard, E. F.	Boston, Mass.	Ordnance, machinery for finishing rim bases of	Sept. 22, 1863
39, 965	Howard, George C., and Isaac N. Wilfong.	Philadelphia, Pa.	Hay elevating forks	Mar. 24, 1863
39, 925	Howard, James L.	Hartford, Ct.	Ventilators, railroad car	Sept. 15, 1863
39, 734	Howard, N. H.	Beloit, Wis.	Huckles, tug	Sept. 1, 1863
40, 078	Howard, S. S., assignor to Edgar D. Gilla.	Milton, N. Y.	Mills, grinding	Sept. 22, 1863
39, 253	Howarth, John	Salem, Mass.	Pipes, cement, machine for making	July 14, 1863
37, 913	Howe, Anna Beula. (See Lemercier, Eugene, assignor.)	New York, N. Y.	Sewing machines	Mar. 27, 1863
37, 506	Howe, Benjamin J. C.	Syracuse, N. Y.	Lamps, mica chimney for	Jan. 17, 1863
38, 041	Howe, Elbridge G.	Millburg, Mass.	Trowels, plastering	Mar. 31, 1863
37, 693	Howe, Elias Jr. (See McCurdy, James S., assignor.)	Brookfield, Mass.	Book trees	April 18, 1863
40, 263	Howe, John C.	Worcester, Mass.	Fire-arm, revolving	Feb. 17, 1863
39, 926	Howe, Manley, and Henry R. Stevens.	Boston, Mass.	Dyes or colors, preparation of	Oct. 13, 1863
37, 322	Howell, Charles, assignor to Peter Hannay.	Fort Plain, N. Y.	Horse-shoe	Sept. 15, 1863
38, 390	Howell, D. B.	Cleveland, Ohio.	Quartz, &c., machines for pulverizing	Jan. 6, 1863
38, 391	Howell, J. P.	New York, N. Y.	Dress, fastenings for ornaments on	May 5, 1863
38, 746	Howell, John S.	Washingtonville, N. Y.	Fles, horse-tooth	May 5, 1863
38, 483	Howell, Ogden. (See Kane, Thomas M., assignor.)	Portsmouth, N. H.	Engines, steam, valves of	June 2, 1863
39, 481	Howells, Joseph Charles	Washington, D. C.	Hook-eyes for wearing apparel and other purposes	May 12, 1863
39, 482	Howells, Joseph Charles	Washington, D. C.	Moulds with vulcanizable gums, filling	Aug. 11, 1863
37, 604	Howes, David. (See Krausch, C. W. Theodore, assignor.)	Washington, D. C.	Pockets, secret, of wearing apparel	Aug. 11, 1863
	Howes, Seth C.	South Chatham, Mass.	Planer, bench	Feb. 17, 1863

40, 483	Howes, Seth C.	South Chatham, Mass.	Planer for bending, moulding, &c. (Antedated Oct. 24, '63)	Nov. 3, 1863
37, 815	Howith, J. C. G.	Copenhagen, Denmark	Gas, composition for purifying	Mar. 3, 1863
39, 227	Howland, Edward F.	Worcester, Mass.	Car coupling	Sept. 15, 1863
39, 523	Howland, Gardner, and J. B. Palmer. (See Palmer & Howland. Release.)	Brunswick, N. Y.	Alkalies, waste, recovering	Aug. 25, 1863
39, 994	Howland, William M., and John H. Loekey. (See Keyes, Horatio, assignor. Release.)	Philadelphia, Pa.	Match box. (Antedated March 12, 1863)	Sept. 15, 1863
40, 037	Howson, Henry, assignor to William F. Warburton.	New York, N. Y.	Coffee roasters	Sept. 22, 1863
40, 562	Hoyt, Samuel	New York, N. Y.	Sugar evaporator	Nov. 10, 1863
40, 563	Hoyt, Samuel	New York, N. Y.	Boilers, steam	Nov. 10, 1863
38, 045	Hubbard, Francis M.	Protection, N. Y.	Dampers	Mar. 31, 1863
38, 322	Hubbard, F. M.	Protection, N. Y.	Fuel-tugs, saw	May 5, 1863
39, 624	Hubbard, Gilbert	Sandfield, Mass.	Faucets, measure	Aug. 25, 1863
40, 723	Hubbard, Joab H.	Hartford, Conn.	Fuel, artificial	Dec. 1, 1863
37, 757	Hubbard, Moses G., and Andrew J. Smith	Syracuse, N. Y.	Spinner, driving power for	Feb. 24, 1863
39, 635	Hubbard, Walter, et al. (See Bradley, Nathaniel L., assignor.)	Brooklyn, N. Y.	Hay-ladders	Aug. 25, 1863
37, 344	Hubbell, William L.	Hagerstown, Md.	Steam and water power, combination of	Jan. 6, 1863
37, 816	Huffer, Abraham	Cincinnati, Ohio	Sawing bevels, machines for	Mar. 3, 1863
37, 757	Hughes, Hutson E.	Oxford, Pa.	Cars, railroad, coupling head for	Feb. 24, 1863
38, 257	Hughes, Robert M., assignor to self, J. A. Blake, and H. Wood.	Rochester, N. Y.	Stoves and grates, aprons for	April 21, 1863
39, 483	Hule, H. R.	Haywards, Cal.	Ploughs, gang	Aug. 11, 1863
40, 040	Huleu, Lewis, and Thomas Bell. (See Bell & Huleu.)	Vienna, N. J.	Washboards, rubber attachment for	Sept. 22, 1863
39, 398	Hull, John S.	Cincinnati, Ohio	Blowpipes	Aug. 4, 1863
39, 399	Hull, John S.	Cincinnati, Ohio	Lamp-burners	Aug. 4, 1863
39, 400	Hull, John S.	Cincinnati, Ohio	Lamp-burners	Aug. 4, 1863
37, 446	Hull, Liveras.	Charlestown, Mass.	Lamp-burners	Jan. 20, 1863
37, 866	Hull, Liveras.	Charlestown, Mass.	Caoutchouc, &c., into strips and threads, machine for cutting	Mar. 10, 1863
39, 928	Hull, Maurice C. (See Taggart, John, assignor.)	Charlestown, Mass.	Caoutchouc, or India-rubber	Sept. 15, 1863
1, 466	Hull, Stephen, assignor to self and Wm. Van Anden	New York, N. Y.	Grates, fireplace	April 28, 1863
38, 401	Hull, Stephen, assignor to self and Isaac W. White.	Poughkeepsie, N. Y.	Harvesters, cutters for	Aug. 4, 1863
41, 040	Hull, Stephen, assignor to self and Wm. Van Anden	Poughkeepsie, N. Y.	Harvesters	Dec. 29, 1863
40, 754	Humphreys, John D.	Great Britain	Engine, steam, governors	Dec. 1, 1863
38, 167	Hungerford, Henry	New York, N. Y.	Soaps, colors, &c., apparatus for stirring and mixing	April 14, 1863
38, 823	Hunt, G. G.	Quincy, Ill.	Stoves	June 9, 1863
39, 402	Hunt, G. G.	Quincy, Ill.	Furnaces for steam boilers	Aug. 4, 1863
39, 929	Hunt, G. W.	Muscatine, Iowa	Ploughs	Sept. 15, 1863
37, 690	Hunt, H. C., assignor to self and G. W. Devin.	Ottumwa, Iowa	Lamp-burners	Oct. 13, 1863
40, 564	Hunt, Richard G.	New York, N. Y.	Gas purifiers, wooden stoves for	Jan. 13, 1863
37, 400	Hunt, Solomon	Danville, Ind.	Bars, sheet metal	Dec. 8, 1863
40, 529	Hunt, Thomas Sterry.	Monreal, Canada East	Inks, bank-note and note, compositions for	Oct. 20, 1863
40, 340	Hunter, Andrew	Solano county, Cal.	Separators, grain	

List of patentees of inventions, designs, and reissues, 1863.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
40, 412	Hunter, C. F.	Adrian, Mich.	Blts in their sockets, devices for holding	Oct. 27, 1863.
38, 168	Hunter, J. Morrison.	New York, N. Y.	Shoes, device for inserting the gores of	April 14, 1863.
39, 484	Huntington, M. (See Stiles, David L., assignor.)	Silver Creek, N. Y.	Bran duster.	May 12, 1863.
39, 995	Huntley, William W., and Alpheus Babcock.	Brooklyn, N. Y.	Chair, folding and reclining. (Antedated Dec. 14, 1862).	Sept. 15, 1863.
37, 507	Hurd, Charles H. (See Andrews, William H., assignor.)	Brooklyn, N. Y.	Presses, tobacco.	Jan. 27, 1863.
37, 508	Huse, William W.	Brooklyn, N. Y.	Pressing and cutting tobacco, machine for.	Jan. 27, 1863.
37, 509	Huse, William W.	Brooklyn, N. Y.	Tobacco, machine for drying.	Jan. 27, 1863.
40, 109	Hussey, Daniel.	Brooklyn, N. Y.	Spinning machines, flyers for.	Oct. 6, 1863.
38, 965	Hussey, David G.	Nantucket, Mass.	Hakes, barge.	June 23, 1863.
39, 815	Huston, Hugh.	Cannonsburg, Pa.	Awl, pegging, holder and extractor	Sept. 8, 1863.
1, 542	Hutchings, Charles H.	Rochester, N. Y.	Separators, grain. (Reissue.)	Sept. 23, 1863.
37, 579	Hutchinson, C. B.	Auburn, N. Y.	Grinding and pressing grapes, apples, &c.	June 3, 1863.
1, 706	Hutchinson, James, assignor to Jonathan E. Whipple	Three Rivers, Mich.	Floor cloths.	Dec. 8, 1863.
40, 840	Hutchinson, John.	Lansingburg, N. Y.	Grain cleaners.	Sept. 22, 1863.
40, 079	Hutelmair, George, assignor to self and Henry P. Mueller.	Alleghany, Pa.	Leather, tanned, machine for oiling	June 2, 1863.
38, 747	Hutton, Franklin A.	Washington, D. C.	Linbaling fluid.	Aug. 18, 1863.
39, 575	Hyatt, Isiah S., and John W., Jr.	Chicago, Ill.	Ice creeper.	Feb. 10, 1863.
37, 025	Hyde, Ambrose.	Lima, N. Y.	Fastenings, shutter	May 26, 1863.
38, 681	Hyde, Anna Maria. (See Searfoss, Amos H., assignor.)	New York, N. Y.	Gauging rods for liquor casks.	Sept. 22, 1863.
40, 041	Hyde, Daniel C.	Newark, N. J.	Rockets, war.	Sept. 22, 1863.
40, 042	Hyde, J. Burrows.	Newark, N. J.	Rockets, press for charging.	Sept. 22, 1863.
37, 966	Hyde, J. Burrows.	Troy, N. Y.	Stoves.	Mar. 24, 1863.
40, 104	Hyde, James R.	Troy, N. Y.	Stoves, cooking.	Sept. 29, 1863.
40, 484	Hyde, O. R.	East Cleveland, Ohio.	Sewing machines, devices for oiling thread in	Nov. 3, 1863.
41, 041	Hyers, Benjamin S., assignor to self, Stephen Roney, and Theodore Deyo.	Pekin, Ill.	Separators, grain.	Dec. 22, 1863.
38, 485	Ingalls, A.	Independence, Iowa.	Drill, grain.	May 12, 1863.
39, 656	Ingalls, Alonzo W.	Buchanan, Mich.	Washing machine.	Aug. 25, 1863.
30, 446	Ingalls, Henry R., and Milton J. Palmer. (See Palmer & Ingalls.)	New Bedford, Mass.	Tanks, oil.	Aug. 4, 1863.
37, 345	Ingalls, Joseph.	Milton, Ind.	Drills, grain.	Jan. 6, 1863.
38, 966	Ingersoll, James.	Grafton, Ohio.	Bridges, turn.	June 21, 1863.
38, 928	Ingersoll, Platt C., assignor to self and H. F. Dougherty.	Green Point, N. Y.	Presses, hay and cotton, mode of fastening doors of	June 16, 1863.
39, 365	Ingersoll, Platt C., assignor to self and H. F. Dougherty.	Green Point, N. Y.	Presses, hay and cotton.	July 28, 1863.
38, 486	Ingersoll, Shion.	Stamford, Conn.	Clutches.	May 12, 1863.
1, 744	Ingham, John, and John Firth. (See Firth & Ingham. Reissue.)	Centre Cambridge.	Stove, cook's. (Design).	Mar. 31, 1863.
	Ingham, Anson, and George H. Phillips.	Troy, N. Y.		
	Ingham, Anson, and William H. and George H. Phillips. (See Phillips & Johnson, assignors.)			

1, 820	Ingraham, Elias.	Bristol, Conn.	Clock case.	Sept. 29, 1863.
37, 447	Irving, Benjamin.	New York, N. Y.	Skates.	Jan. 30, 1863.
40, 024	Irwin, John H., assignor to self and John F. Griffin.	Chicago, Ill.	Lanterns.	Nov. 17, 1863.
39, 148	Isham, George R.	Burlington, Vt.	Bill and currency holder.	July 7, 1863.
40, 664	Iake, Antoni.	Lancaster, Pa.	Redhead, extension.	Nov. 10, 1863.
37, 937	Jackson, Charles, and Thomas Goodrem, assignors to Charles Jackson.	Providence, R. I.	Fire-arms, breech-loading.	Mar. 17, 1863.
39, 347	Jackson, George, and George Campbell.	Coboes, N. Y.	Knitting machine burrs.	July 28, 1863.
37, 448	Jackson, George R. (See Burnett & Bellamy, assignors.)	Rochester, N. Y.	Cars, railroad, bumpers and draw-head springs for	Jan. 20, 1863.
38, 228	Jackson, Joel C.	Cleveland, Ohio.	Driving propeller screws, mode of.	April 21, 1863.
1, 418	Jacobs, Cornelius.	Columbus, Ohio.	Saccharine juices, pans for evaporating and clarifying. (Reissue.)	Feb. 24, 1863.
40, 004	Jacobs, Hiram S.	Portland, Oregon.	Wheel-dressing machine.	Sept. 15, 1863.
1, 419	Jadwin, Orlando H.	Carbondale, Pa.	Inkstands.	Feb. 24, 1863.
39, 049	Jager, John P.	Eureka, Wis.	Threaders.	June 30, 1863.
40, 044	Jahrara, Jacob.	Buffalo, N. Y.	Faucets and vents.	Sept. 22, 1863.
1, 406	Jaloureau, Alfred Fauvin, assignor to Thurlow Weed and Philo S. Shelton.	Albany, N. Y.	Pipes, cement, water-proof, process of manufacturing. (Reissue.)	Feb. 17, 1863.
1, 407	Jaloureau, Alfred Fauvin, assignor to Thurlow Weed and Philo S. Shelton.	Albany, N. Y.	Pipes, water, or air-proof, from bituminous cement. (Division 2 of reissue.)	Feb. 17, 1863.
1, 408	Jaloureau, Alfred Fauvin, assignor to Thurlow Weed and Philo S. Shelton.	Albany, N. Y.	Pipes, bituminous cement, machinery for the manufacture of. (Division 3 of reissue.)	Feb. 17, 1863.
40, 213	Jamain, Pierre, assignor to self and James M. Tripp.	Bordeaux, France.	Fortifications, field, constructing.	Oct. 6, 1863.
38, 393	Jann, John.	Trenton, N. J.	Watches.	May 5, 1863.
39, 403	Jasper, Gustavus A., assignor to the Union Sugar Refinery	New Windsor, Md.	Harvesting machines.	Aug. 4, 1863.
38, 457	Jasper, Gustavus A.	Charlestown, Mass.	Sugar, purifying and elevating.	Jan. 27, 1863.
40, 043	Jasper, Gustavus A.	Boston, Mass.	Sugar, cube, apparatus for the manufacture of.	May 12, 1863.
41, 048	Jasper, Gustavus A.	Charlestown, Mass.	Sugar, machine for crushing and forming it into blocks.	Sept. 22, 1863.
40, 105	Jeffers, Milton C.	Charlestown, Mass.	Sugar, &c., in waste liquids, apparatus for detecting.	Dec. 22, 1863.
39, 657	Jenkins, Welcome.	New York, N. Y.	Adding machines.	Sept. 29, 1863.
38, 488	Jenkins, Frederick G.	Manchester, N. H.	Spinning frames, ring.	Aug. 25, 1863.
38, 682	Jenkins, G.	New York, N. Y.	Wood of lead pencil, cutter bend for.	May 12, 1863.
38, 489	Jenks, Barton H.	Queensburg, N. Y.	Press, fruit.	May 26, 1863.
38, 534	Jenks, Barton H., and John Shinn, assignors to Barton H. Jenks.	Bridgesburg, Pa.	Looms. (Antedated December 4, 1861).	May 12, 1863.
39, 970	Jenks, Lemuel P.	Boston, Mass.	Shot, hot, compound sabot for. (Antedated Oct. 2, 1862).	Sept. 15, 1863.
40, 841	Jenks, Lemuel P., assignor to Levi L. Tower.	Boston, Mass.	Inkstand.	Dec. 6, 1863.
39, 404	Jennings, H. H.	New Haven, Ct.	Metal planing, gauge for.	Aug. 4, 1863.
38, 202	Jennings, John, assignor to S. and J. Myers.	Birmingham, England.	Spectacles.	April 21, 1863.
40, 625	Jennings, J. G., and A. C. Bacon. (See Bacon & Jennings.)	North Hempstead, N. Y.	Tadders for animals.	Nov. 17, 1863.
1, 763	Jerome, S. H.	New Haven, Ct.	Cluck case.	June 16, 1863.
37, 695	Jewett, R. H.	Mount Sterling, Ill.	Ships and other batteries, defensive armor for.	Feb. 17, 1863.
39, 658	Jewett, R. H.	Versailles, Ill.	Sewing machines, stitch for. (Antedated March 1, 1863).	Aug. 25, 1863.
39, 816	Jewett, R. H.	Mount Sterling, Ill.	Harbors and river channels, means for defending. (Antedated April 29, 1861).	Sept. 8, 1863.
39, 050	Jincks, Melvin.	Steuben county, N. Y.	Churn-dashers.	June 30, 1863.
38, 829	Johnson, A. W.	Auburn, N. Y.	Skate.	June 9, 1863.
37, 420	Johnson, Benjamin A., assignor to self and Earl Blossom.	North Auburn, Maine.	Ploughs, snow, railroad.	Jan. 13, 1863.

List of patentees of inventions, designs, and reissues, 1863.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
38, 490	Johnson, Elizabeth, et al. (See Morrow, W. T., assignor.)	Brooklyn, N. Y.	Hooks for ox chains. (Antedated November 7, 1861.)	May 12, 1863.
38, 491	Johnson, Frank G.	Brooklyn, N. Y.	Water meters.	Nov. 3, 1863.
40, 485	Johnson, Frederick N. (See Lund, Oliver, assignor.)	Philadelphia, Pa.	Boilers, locomotive.	May 19, 1863.
38, 584	Johnson, George F.	Marshall, Iowa	Sheep-shears.	Oct. 6, 1863.
40, 170	Johnson, Giles B. (See Bayley, George D., assignor.)			
	Johnson, Jeremiah, Jr. (See Brown, Hiram W., assignor. Release.)			
38, 491	Johnson, Jeremiah, et al. (See Brown, Israel F., assignor.)	Brooklyn, N. Y.	Projectiles, explosive.	May 12, 1863.
38, 229	Johnson, Job.	Brooklyn, N. Y.	Track-clearers.	April 21, 1863.
37, 663	Johnson, Job, and Joseph Barber Bolton.	Brooklyn, N. Y.	Piston and other rods, packing for.	Feb. 10, 1863.
38, 296	Johnson, Joseph B., assignor to John B. Nichols.	Roxbury, Mass.	Channelling tools.	July 28, 1863.
39, 149	Johnson, Luther F.	Lyons, Mass.	Skate.	July 7, 1863.
39, 817	Johnson, Luther A.	Buffalo, N. Y.	Laths for turning billiard balls.	Sept. 8, 1863.
40, 413	Johnson, Moses.	San Francisco, Cal.	Bedsteads, invalid.	Oct. 27, 1863.
40, 755	Johnson, Moses.	Colebrook, N. H.	Tethering animals, device for.	Dec. 1, 1863.
37, 967	Johnson, Moses A.	Colebrook, N. H.	Boilers, steam, covering for.	Dec. 24, 1863.
38, 683	Johnson, William H.	Lowell, Mass.	Ordnance, discharging. (Antedated February 9, 1863.)	May 26, 1863.
40, 626	Johnson, William H., and Geo. H. Phillips. (See Phillips and Johnson.)	Milwaukee, Wis.	Leather, cloth, &c., machines for cutting objects from.	Nov. 17, 1863.
41, 010	Johnston, James J.	Allegany, Pa.	Land, apparatus for rendering.	Dec. 22, 1863.
39, 051	{ Johnston, James J., and James E. Weaver.	Allegany, Pa.	Hulling barley, &c., machine for. (Antedated Mar. 6, 1863.)	June 30, 1863.
41, 009	Johnston, Samuel.	Temperanceville, Pa.	Harvesters, rakes for.	Dec. 22, 1863.
	Johnston, Thos., and S. E. Blake. (See Blake & Johnston. Release.)	Buffalo, N. Y.		
40, 565	Johnston, Wm. S., Jr. (See Turner, Enos, assignor.)			
40, 106	Jolly, Samuel.	Ripley, Ohio.	Drills, grain.	Nov. 10, 1863.
40, 107	Jones, A. F.	Douglas, Mass.	Registers for account books.	Sept. 29, 1863.
40, 045	Jones, Charles N.	Galway, N. Y.	Hoe, planting.	Sept. 29, 1863.
40, 045	Jones, F.	Prescott, Wis.	Breast straps, roller attachment for.	Sept. 22, 1863.
37, 346	Jones, George.	Peekskill, N. Y.	Window-sashes, device for tightening.	Jan. 6, 1863.
40, 556	Jones, George A.	New York, N. Y.	Lamps.	Nov. 10, 1863.
	Jones, Geo. A., and Joseph H. Bailey. (See De Keravenan, F. B., assignor.)			
	Jones, Geo. A., and Joseph H. Bailey. (See De Keravenan, F. B., assignor.)			
38, 684	Jones, H. P., and H. C. Berlin. (See Berlin & Jones, Design.)			
40, 265	Jones, John F.	Rochester, N. Y.	Paper, cylinder moulds for making.	May 26, 1863.
	Jones, John F.	Rochester, N. Y.	Paper and paper boards, machine for making.	Oct. 13, 1863.

39, 447	Jones, John Mather. (See Fell, Thomas M., assignor.)	St. Louis, Mo.	Bridges, truss.	Aug. 4, 1863.
37, 580	Jones, Jonathan L., assignor to self and Jas. V. Westlake	Laporte, Ind.	Sewing machines.	Feb. 3, 1863.
40, 486	Jones, N.	Laporte, Ind.	Harrows, snap.	Nov. 3, 1863.
37, 626	Jones, Richard W.	Syracuse, N. Y.	Ploughs.	Feb. 10, 1863.
40, 842	Jones, Robert.	Waynesburg, Ohio.	Diggers, potato.	Dec. 8, 1863.
40, 853	Jones, William.	St. Louis, Mo.	Harvesters.	Dec. 22, 1863.
40, 046	Jones, W. Davidson.	Hagaman's Mills, N. Y.	Water elevators.	Sept. 22, 1863.
39, 045	Joslyn, Benjamin F.	Stonington, Ct.	Fire-arms, revolving. (Antedated May 26, 1863.)	Aug. 4, 1863.
39, 046	Joslyn, Benjamin F.	Stonington, Ct.	Fire-arms, revolving.	Aug. 4, 1863.
39, 047	Joslyn, Benjamin F.	Stonington, Ct.	Fire-arms, breech-loading.	Aug. 4, 1863.
40, 756	Josse, Louis Pierre.	Paris, France.	Separators, grain. (Patented in France Nov. 25, 1862.)	Dec. 1, 1863.
39, 150	Joubert, Jean Pierre.	Paris, France.	Knapsack, tent, and litter combined.	July 1, 1863.
39, 576	Jouvin, Jean Pierre.	France.	Yessels, iron-plated and other, preserving.	Aug. 18, 1863.
39, 348	Jozand, Claude Andre.	France.	Injectious, apparatus for.	July 26, 1863.
37, 721	Juckett, Edmund B., assignor to self and J. W. De Lamar	New Haven, Ct.	Hose couplings.	Feb. 17, 1863.
40, 381	Judd, Edward M., assignor to Hubert L. Judd.	New Britain, Ct.	Chain fixture.	Oct. 30, 1863.
39, 052	Judd, Morton.	New Britain, Ct.	Fasteners, snap.	June 30, 1863.
39, 659	Judd, Oliver S.	New Britain, Ct.	Hooks, snap.	Aug. 25, 1863.
39, 577	Judd, William S.	Clanhausen, Minn.	Pumps.	Aug. 18, 1863.
39, 234	Judevine, Josiah, and Zebulon Shaw.	Roxbury, Wis.	Crain-binders.	Aug. 14, 1863.
37, 627	Judge, Arthur J.	Baltimore, Md.	Lubricators.	July 10, 1863.
38, 353	Judson, Anson, assignor to self and Lem. and F. W. Beers	Brooklyn, N. Y.	Lamps, coal oil.	Feb. 10, 1863.
38, 492	Jakes, Wesley L.	Brooklyn, N. Y.	Lamp chimneys.	April 21, 1863.
39, 408	Jargens, Jurgen L.	Covington, Ky.	Vessels-of-war.	May 12, 1863.
	Justice, Philip F. (See Shaw, Thomas, assignor.)	Isle of Férar.		Aug. 4, 1863.
	Kaestner, Charles. (See Wagner, Amsbent H., assignor.)			
	Kaestner, Charles and August. (See Wagner, Amsbent H., assignor.)			
40, 757	Kammett, George.	New York, N. Y.	Saws, endless.	Dec. 1, 1863.
40, 981	Kane, Thomas M., assignor to self and Ogden Howell.	Goshen, N. Y.	Jacks, lever.	Dec. 15, 1863.
40, 143	Katzenmayer, John N., assignor to self and Wm. P. Molo.	New York, N. Y.	Plants, roots of, for useful purposes, preparation of the.	Sept. 29, 1863.
1, 751	Kaufman, Ernest.	Philadelphia, Pa.	Pitcher, ice. (Design.)	April 28, 1863.
1, 576	Kaufman, Ernest.	Philadelphia, Pa.	Tea-set, metal. (Design.)	Dec. 15, 1863.
37, 347	Kavanaugh, Luke.	Waterford, N. Y.	Knitting machine slaters, blades for.	Jan. 6, 1863.
39, 053	Keating, John M. D.	New York, N. Y.	Envelope machine.	June 30, 1863.
1, 498	Kedzie, John.	New York, N. Y.	Filters.	June 16, 1863.
38, 394	Keck, Joseph.	Rochester, N. Y.	Plough elevators.	May 5, 1863.
40, 047	Keck, Thomas.	Waterloo, N. Y.	Haversacks.	May 22, 1863.
37, 510	Keeler, Samuel.	New York, N. Y.	Mills, &c., apple.	Jan. 27, 1863.
38, 901	Keen, Morris L., and Wm. F. Ladd. (See Wait and Burgess, assignors. Release.)	Lancaster, Pa.	Paper pulp, boiler for making.	June 16, 1863.
	Keen, Morris L., and Wm. F. Ladd. (See Wait and Burgess, assignors. Release.)			
40, 627	Keeney, W. J., and G. W. D. Culp. (See Culp & Keeney.)	New Orleans, La.	Soap, machine for pressing.	Nov. 17, 1863.
38, 310	Keller, J. H.	Sublette, Ill.	Washing machine.	April 28, 1863.
	Keller, Paul, and Joshua Rogers.			
	Kelley, Oliver S., et al. (See Harris, D. K., and John K., assignors. Release.)			
37, 293	Kellogg, Abel N.	Baraboo, Wis.	Printers' press.	Jan. 6, 1863.
	Kellogg, C. A., and H. B. West. (See West and Kellogg.)			

List of patentees of inventions, designs, and reissues, 1863.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
40, 540	Kellogg, Ebenezer C. C., assignor to self and J. C. Campbell Kellogg, Henry, and C. O. Crosby. (See Crosby & Kellogg.)	Hartford, Ct.	Ordnance, repeating.	Nov. 3, 1863.
40, 557	Kelly, Henry, and William Franklin.	Decorah, Iowa.	Mill, fanning.	Dec. 15, 1863.
40, 591	Kelly, John M. (See Munfel, David, assignor.)	Clinton, Ill.	Planters, seed. (Antedated November 2, 1861.)	Sept. 15, 1863.
37, 581	Kelly, Oliver S., et al. (See Whiteley, Foster, and Kelly.)	Pemberton, N. J.	Lamps.	Feb. 3, 1863.
40, 541	Kelly, Samuel J.	Pemberton, N. J.	Grotes.	Oct. 20, 1863.
40, 414	Kelly, William H.	Lysander, N. Y.	Cultivator teeth.	Oct. 27, 1863.
37, 758	Kendall, Hoses. (See Symonds, Thomas, assignor.)	San Francisco, Cal.	Gold miners' washing pan.	Feb. 24, 1863.
38, 046	Kennedy, Thomas, sr.	Hartford, Ct.	Horseshoes, &c., metal for.	Mar. 31, 1863.
38, 047	Kennedy, Patrick. (See Halley, Edward, assignor.)	Hartford, Ct.	Horseshoes, mould for casting.	Mar. 31, 1863.
38, 395	Kennedy, Thomas. (See Munger, W. T., assignor.)	Livermore, Maine.	How, &c., fastening.	May 5, 1863.
38, 735	Kennedy, Eliza.	Edina, Mo.	Mills, grinding.	Sept. 1, 1863.
38, 932	Kenoyer, Benjamin.	Brooklyn, N. Y.	Journal boxes. (Antedated February 2, 1863.)	Sept. 15, 1863.
38, 530	Kenyon, William, and Alexander Menzies.	New York, N. Y.	Bungs, bushes for.	June 9, 1863.
38, 407	Kerr, James.	Southwark, England.	Fire-arms, revolving.	Aug. 4, 1863.
38, 367	Kersey, John J., assignor to self and Robert L. McChellan.	Beairstown, Pa.	Windlasses.	July 28, 1863.
40, 080	Kershaw, John G. (See Ruschhaupt, Fred. M., assignor.)	New York, N. Y.	Lamps, cond-ol.	Sept. 22, 1863.
38, 311	Ketchum, A. C., assignor to Wm. P. Pettigill and S. T. McDougall.	Winchendon, Mass.	Motion, mode of converting.	April 28, 1863.
37, 401	Ketchum, Stephen C.	Millwaukie, Wis.	Vessels, sunken, mode of raising.	Jan. 13, 1863.
37, 582	Kettler, Frederic.	Millwaukie, Wis.	Motive-power.	Feb. 3, 1863.
1, 513	Keyes, Horatio, assignor to John H. Loekey and William M. Howland.	Leominster, Mass.	Apple-paring machine.	July 21, 1863.
37, 915	Kidder, K. P.	Burlington, Vt.	Beehives.	Mar. 17, 1863.
38, 748	Kidwell, John L.	Georgetown, D. C.	Composition for disinfecting and purifying hospitals, camps, &c.	June 2, 1863.
40, 343	Killian, Jacob.	Marshall, Iowa.	Fences, portable.	Oct. 20, 1863.
40, 309	Killian, R. B., assignor to C. Aultman & Co.	Canton, Ohio.	Threshing cylinders, teeth for.	Oct. 13, 1863.
39, 785	Kimball, George P., assignor to self and W. H. Knight.	San Francisco, Cal.	Carrage couplings.	Sept. 1, 1863.
39, 578	Kimball, Hiram A.	Philadelphia, Pa.	Limbs, artificial.	Aug. 18, 1863.
37, 988	Kimney, Philip, and Jacob O. Clute. (See Clute & Kimney.)	Philadelphia, Pa.	Dovetailing and relishing sash, machinies for.	Mar. 24, 1863.
40, 171	King, George L.	Perth Amboy, N. J.	Easel, artists.	Oct. 6, 1863.
40, 725	King, H. A., and Jacob Loughmaster, assignors to H. A., N. H., and A. A. King.	Seal, Ohio.	Beehives.	Nov. 24, 1863.

37, 817	King, John F. H.	Richmond, N. Y.	Bams, battery, maries.	Mar. 3, 1863.
38, 151	King, Julius.	Hoboken, (formerly of Bordentown, N. J.)	Cut-off, adjustable.	Mar. 3, 1863.
38, 396	King, Samuel U.	Windsor, Vt.	Bit-stock.	July 7, 1863.
1, 409	King, Theodore E.	Ashtabula, Ohio.	Fences.	May 5, 1863.
38, 773	Kingsbury, Gilbert J.	Rochester, N. Y.	Stoves, coal. (Additional imp. Sept. 18, 1860. Reissue.)	Feb. 17, 1863.
40, 683	Kingsbury, John W., assignor to self and L. M. Kollock.	New Bedford, Mass.	Horsehoe blanks, rolls for.	Sept. 1, 1863.
1, 380	Kingsford, Thomson.	Owego, N. Y.	Starch, machinery for the manufacture of.	Nov. 24, 1863.
1, 381	Kingland, Joseph, jr.	Franklin, N. J.	Paper pulp, machinery for grinding.	Jan. 6, 1863.
37, 698	Kinman, Nathan.	Franklin, N. J.	Paper pulp, process of grinding.	Jan. 6, 1863.
37, 698	Kinman, Nathan.	Cambria, N. Y.	Flour-pickers.	Oct. 28, 1863.
1, 492	Kinley, Lyman.	Cambridgeport, Mass.	Hammers, trip.	Feb. 10, 1863.
1, 493	Kirby, Wm. A., assignor to self and David M. Osborne.	Buffalo, N. Y.	Harvesting machines.	June 9, 1863.
1, 494	Kirby, Wm. A., assignor to self and David M. Osborne.	Buffalo, N. Y.	Harvesting machines.	June 9, 1863.
1, 495	Kirby, Wm. A., assignor to self and David M. Osborne.	Buffalo, N. Y.	Harvesting machines.	June 9, 1863.
40, 108	Kirchhof, Charles.	Newark, N. J.	Alarm chime-bells for horses.	Sept. 20, 1863.
38, 003	Kirk, S. W., assignor to self and E. C. Stotsenburg.	Coatesville, Pa.	Iron, cast, purifying.	Mar. 24, 1863.
1, 390	Kirkham, W. S., assignor to Charles A. Miller.	Philadelphia, Pa.	Locks and latches.	Jan. 27, 1863.
40, 758	Kirkman, John.	Peoria, Ill.	Wagons, carriages, &c., constructing.	Dec. 1, 1863.
38, 585	Kissam, John W. (See Harold, Thos. George, assignor.)	Philadelphia, Pa.	Metal boxes.	May 19, 1863.
38, 749	Kite, John L., assignor to James S. Mason & Co.	Lowell, Mass.	Brakes, friction.	June 2, 1863.
40, 048	Klason, Richard.	Lowell, Mass.	Cotton lappers, brakes to.	Sept. 22, 1863.
40, 049	Klason, Richard.	Lowell, Mass.	Carding, machines for preparing cotton and other fibrous material for.	Sept. 22, 1863.
40, 343	Klason, William.	Lowell, Mass.	Fire extinguishers.	Oct. 20, 1863.
37, 867	Kleeman, Carl A.	Erfurt, Prussia.	Lamps.	Mar. 10, 1863.
37, 759	Klein, John F.	Trenton, N. J.	Head, apparatus for determining the form and size of the, and adapting the hat thereto.	Feb. 24, 1863.
40, 415	Kleppinger, Wm. C., and Harrison Trumbower. (See Miller, Josiah, assignor.)	Philadelphia, Pa.	Jars and bottles, stopper for.	Oct. 27, 1863.
40, 416	Kline, A.	New York, N. Y.	Animals from stalls, device for releasing. (Antedated Oct. 10, 1863.)	Oct. 27, 1863.
40, 660	Knapp, A. G., assignor to Jesse A. Locke, S. G. B. Coombs, and David H. Priest.	Newton Centre, Mass.	Pumps, rotary.	Nov. 17, 1863.
38, 750	Knickerbocker, Lafayette.	Philadelphia, Pa.	Card-board, apparatus for cutting.	June 2, 1863.
38, 112	Kniffen, L. G., et al. (See Taylor, George H., assignor.)	Brooklyn, N. Y.	Pipes, cement and metallic, combination.	April 7, 1863.
38, 579	Knight, Henry.	Brooklyn, N. Y.	Tile, drain, machine.	Aug. 18, 1863.
38, 579	Knight, W. H. (See Kimball, George P., assignor.)	Brooklyn, N. Y.		
	Knowles, Charles L., and Henry France. (See France & Knowles.)			
37, 760	Knowles, Charles L., and Henry France. (See France & Knowles.)	Warren, Mass.	Looms, fancy.	Feb. 24, 1863.
38, 580	Knowles, Lucius J.	Boston, Mass.	Hose couplings.	Aug. 18, 1863.
38, 588	Knowles, Willard.	Lyon, Michigan.	Ladders.	May 19, 1863.

List of patentees of inventions, designs, and reissues, 1863.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
40, 344	Knowlton, John L.	Bordentown, N. J.	Sawing machine.	Oct. 20, 1863
40, 345	Knox, Melvin W.	Sheridan, N. Y.	Railroad chair and splice, combined, securing	Nov. 10, 1863
38, 397	Koch, Philip.	New Haven, Ct.	Nuts, machine for making.	May 5, 1863
40, 698	Kratz, Aaron.	Plumsteadville, Pa.	Hay-hooks, horse	Nov. 17, 1863
38, 446	Kratz, Oscar H., assignor to Ferdinand F. Mangelsdorf.	Leipsic, Saxony.	Gas engines.	Aug. 4, 1863
37, 818	Krausch, C. W. Theodore.	Chicago, Ill.	Cars, railroad, machine for moving.	Mar. 3, 1863
37, 808	Krausch, C. W. Theodore.	Chicago, Ill.	Lamps and lantern burners.	Mar. 10, 1863
37, 809	Krausch, C. W. Theodore.	Chicago, Ill.	Driers, grain.	Mar. 10, 1863
38, 048	Krausch, C. W. Theodore.	Chicago, Ill.	Drying, grain, apparatus.	Mar. 31, 1863
38, 004	Krausch, C. W. Theodore, assignor through <i>meine</i> assign- ments to self and David Howes.	Chicago, Ill.	Elevator, grain.	Mar. 24, 1863
37, 696	Krause, Frederick C.	New York, N. Y.	Composition, porous stone for filtering and other purposes.	Feb. 17, 1863
37, 788	Krauser, Daniel, assignor to self, Henry P. Stichter, and Lewis C. Thompson.	Pottsville, Pa.	Ice caulk.	Feb. 24, 1863
39, 818	Krenner, Jonathan, and Daniel M. Swartz. (See Swartz & Krenner.)	Kroghville, Wis.	Docks, dry.	Sept. 8, 1863
37, 392	Krogh, Casper.	Kroghville, Wis.	Vessels, sunken, mode of raising.	Feb. 3, 1863
40, 266	Kronschroeder, H. H. and J. F. G.	Hanover	Gas leaders.	Oct. 13, 1863
37, 475	Krum, D. H., et al. (See Robinson, Donnelly & Krum.)			
40, 699	Kuehn, John, assignor to J. J. Figgott and Henry Kenzie.	Belleville, Ill.	Presses.	Jan. 20, 1863
40, 907	Kuehn, William.	Lively, Ill.	Ploughs, gang.	Nov. 17, 1863
39, 464	Kuene, G. J. N. Cole, and D. F. Rath.	Fond du Lac, Wis.	Horse-powers.	Oct. 13, 1863
40, 550	Kuhle, Richard.	St. Louis, Mo.	Iron, smoothing.	Aug. 11, 1863
39, 819	Kupfer, Charles H.	Hoboken, N. J.	Lamp burners.	Sept. 22, 1863
40, 500	Kurth, Henry.	East New York, N. Y.	Tobacco smoking pipes.	Sept. 8, 1863
40, 508	Lacey, John, et al. (See Furst, Bradley & Lacey. Release.) Lacey, John, and George Lissander. (See Lissander & Lacey.)	Orwell, Ohio	Churns.	May 19, 1863
38, 567	Lackwider, John P. and Frank. (See Watson, John J., assignor.)	New York, N. Y.	Mouldings, gilt, imitation, manufacture of.	May 19, 1863
38, 568	Ladd, Charles H. (See Salter, Moses S., assignor.)			
38, 567	Ladd, H. R.			
38, 568	Ladd, Hermann W.			
38, 569	Ladd, Wm. F., and Morris L. Keen. (See Watt & Bur- ges, assignors. Release.)			
38, 570	Ladd, Wm. F., and Morris L. Keen. (See Watt & Bur- ges, assignors. Release.)			
40, 508	Laederich, Charles Eugene.	St. Amier, Switzerland	Watches, winding and setting. (Patented in France May 19, 1862.)	Nov. 10, 1863

40, 051	Lafayette, Augustus.	Battle Creek, Mich.	Guns, removing spikes from.	Sept. 22, 1863
37, 348	Ladd, J. A.	Albion, N. Y.	Brick machines.	Jan. 6, 1863
39, 922	La France, Truckson S.	Elmira, N. Y.	Valves, governor.	July 21, 1863
39, 923	Lafreniere, Oliver.	New York, N. Y.	Bedstead and table combined. (Antedated Jan. 12, 1862.)	Sept. 15, 1863
39, 152	Lagowitz, Samuel.	Newark, N. J.	Bag, carpet, frame.	July 7, 1863
40, 630	Laird, John P.	Altoona, Pa.	Locomotives, fire-boxes for.	Nov. 17, 1863
38, 230	Lakey, C. D.	Londonville, Ohio.	Trusses.	April 21, 1863
40, 588	Lakin, Taylor D.	Hancock, N. H.	Water-wheel.	Oct. 13, 1863
37, 511	Lamb, Alfred, John, and Charles.	Jeffersonville, N. Y.	Churns, device for operating.	Jan. 27, 1863
39, 934	Lamb, Isaac W.	Detroit, Mich.	Knitting machines.	Sept. 2, 1863
1, 490	Lamb, Noyes D., assignor to self and Ansel Clark.	Norwich, Ct.	Alarm whistles.	June 2, 1863
40, 487	Lamb, Thomas B.	Hamilton, Mich.	Cap, percussion, holder.	Nov. 3, 1863
39, 935	Lambert, Thomas S.	Peekskill, N. Y.	Studs. (Antedated Oct. 11, 1862.)	Sept. 13, 1863
40, 172	Lambert, Thomas S.	Peekskill, N. Y.	Boilers.	Oct. 6, 1863
40, 173	Lambert, Thomas S.	Peekskill, N. Y.	Rack, bat.	Oct. 6, 1863
40, 174	Lambert, Thomas S.	Peekskill, N. Y.	Sieves, cooking.	Oct. 6, 1863
40, 345	Lambert, Thomas S.	Peekskill, N. Y.	Carrages, till couplings for.	Oct. 20, 1863
40, 843	Lambert, Thomas S.	Peekskill, N. Y.	Ventilating railroad cars. (Antedated Dec. 4, 1863.)	Dec. 8, 1863
40, 844	Lambert, Thomas S.	Peekskill, N. Y.	Walls of buildings, mode of fueling.	Dec. 8, 1863
40, 845	Lambert, Thomas S.	Peekskill, N. Y.	Wringing machines, roller for.	Dec. 8, 1863
40, 382	Lambert, Thomas S., assignor to James O. Wood.	Peekskill, N. Y.	Head, coverings for the.	Oct. 20, 1863
38, 751	Landon, G., Jr. (See Gregory, Willis L., assignor. Release.)	Philadelphia, Pa.	Carriage bodies, hanging.	June 2, 1863
39, 256	Lano, Edward.	Northampton, Mass.	Sewing machines.	July 14, 1863
37, 449	Lange, Adolph.	Saxony	Watch cases.	Jan. 20, 1863
37, 583	Langholz, A. H.	Chicago, Ill.	Bridles.	Feb. 3, 1863
39, 176	Langholz, A. H.	Chicago, Ill.	Spurs, riding.	June 30, 1863
1, 484	Langstroth, Lorenzo L.	Oxford, Ohio.	Beehives.	May 26, 1863
38, 050	Langworthy, Robert.	Brooklyn, N. Y.	Trusses, herald.	Mar. 31, 1863
40, 053	Lamphear, Norman.	Monmouth, Ill.	Jewelry, &c., guns, apparatus for ornamenting.	Sept. 22, 1863
39, 153	Larchar, E. H.	New York, N. Y.	Lampwicks.	July 7, 1863
38, 169	La Row, Franklin.	Hamilton, Ohio.	Medicines, bog cholera.	April 14, 1863
38, 398	Larry, M. P.	Windham, Maine.	Tires, apparatus for upsetting.	May 14, 1863
38, 170	Lashar, Conrad B.	New York, N. Y.	Lamps.	April 14, 1863
40, 694	Lashar, Conrad B.	New York, N. Y.	Railroad switches. (Antedated Nov. 9, 1863.)	Nov. 24, 1863
37, 450	Lasserre, Valentin.	Paris, France.	Roofs.	Jan. 20, 1863
40, 446	Lathrop, Lebbens W., and Wm. P. De Sanno, assignors to selves, Wm. H. Myers, and John McDowell, Jr.	Philadelphia, Pa.	Sewing machines.	Oct. 27, 1863
39, 154	Latta, Alexander B.	Cincinnati, Ohio.	Lamps.	July 7, 1863
40, 938	Laub, G. H.	Macomb, Ill.	Mills for crushing sugar-cane.	Dec. 15, 1863
38, 312	Laurent, Eugene Joseph.	France.	Trimming, machine for making.	April 24, 1863
39, 906	Law, Stephen D., and Edward P. Curtis. (See Barnes, Edmund F., assignor.)	East Morristown, N. Y.	Planing machines, pressure blocks for. (Antedated Dec. 14, 1862.)	Sept. 15, 1863
38, 902	Lawler, Mary Ann. (See Dougherty, John R., assignor.)	Troy, N. Y.	Ash-pans. (Antedated April 7, 1863.)	June 16, 1863
38, 967	Lawrence, Edward F., et al. (See Wallace, Thos., et al.)	Troy, N. Y.	Stoves, cooking.	June 23, 1863
37, 870	Lawrence, John, assignor to Alfred T. Serrell.	Cold Spring, N. Y., and Jersey City, N. J.	Ordnance, chambered trunnions for discharging.	Mar. 10, 1863
40, 631	Lawson, James A.	Great Britain	Potato washer.	Nov. 17, 1863

List of patentees of inventions, designs, and reissues, 1863.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
36, 368	Lavelle, William H., assignor to self and Ang. G. Seaman.	Brooklyn, N. Y.	Kettles, tea.	July 28, 1863
36, 371	Lee, M. Cary.	Philadelphia, Pa.	Bank notes, &c., device to prevent counterfeiting.	April 21, 1863
37, 349	Leach, Alton.	Utica, N. Y.	Lamps, coal oil.	Jan. 6, 1863
37, 637	Leach, Charles, et al. (See Polinton, Philip, assignor.)	Columbia, Ohio.	Oliment, mercurial, ultrated.	Feb. 17, 1863
37, 512	Leacock, John H.	Boston, Mass.	Fire-arms, back sights for.	Jan. 27, 1863
37, 512	Leavens, Jedediah, administrator, &c. (See Crocker, Wm. R., decedent.)	Cleveland, Ohio.	Carriage hub.	Jan. 29, 1863
37, 451	Leavitt, Charles.	Cleveland, Ohio.	Casting propeller wheels, mould boxes for.	Jan. 6, 1863
37, 295	Lechler, William, and J. K. Schupp.	Cleveland, Ohio.	Engines, steam, piston valves for.	Aug. 11, 1863
39, 485	Lecky, Robert H.	Alleghany, Pa.	Propelling and steering apparatus.	Sep. 15, 1863
39, 836	Lecky, Robert H.	McClure, Pa.	Spiles, sap.	July 7, 1863
39, 155	Le Count, J. M., and G. R. Hoyt.	Hartford, Wis.	Bottle. (Design.)	Oct. 13, 1863
1, 831	Lediard, Charles.	Brooklyn, N. Y.	Soup, composition for.	May 26, 1863
38, 085	Lee, Eliza E.	Cambridge, N. Y.	Moulding machines.	Oct. 13, 1863
40, 369	Lee, Henry A.	Worcester, Mass.	Vehicles, wheel, locks for.	Aug. 18, 1863
39, 5-1	Lee, J. H.	Leavenworth, Kansas.	Wagon-brakes, operating.	Dec. 1, 1863
40, 759	Lee, James H.	Galesburg, Ill.	Washing and wringing machine.	Jan. 20, 1863
37, 432	Lee, Joel.	Bolivar, Ohio.	Ordinance, breech-loading.	May 19, 1863
38, 638	Lee, John.	Taunton, Mass.	Tobacco-cutters.	Jan. 6, 1863
37, 284	Lee, Samuel.	Rosindale, Wis.	Beehives.	Aug. 25, 1863
39, 660	Lee, Walter M.	Philadelphia, Pa.	Ventilators for buildings. (Antedated Dec. 14, 1862.)	Sep. 15, 1863
39, 937	Leeds, Joseph.	Bloomington, Ill.	Sugar evaporators.	Mar. 17, 1863
40, 760	Leffel, J. C.	Shelbina, Mo.	Planters, corn.	Dec. 1, 1863
37, 916	Leffingwell, John G.	Newark, N. J.	Lamp chimneys, mode of elevating.	Mar. 17, 1863
37, 913	Legg, Caleb J.	Penn Yan, N. Y.	Corn-shellers.	Sep. 22, 1863
40, 083	Legg, W. A.	Quebec, Canada.	Electrotype, pans for backing.	Aug. 4, 1863
39, 410	Leggo, W. A.	Morristown, Pa.	Gunpowder, composition for.	Jan. 6, 1863
37, 296	Leibert, Henry.	Clinton Station, N. J.	Cultivator.	April 14, 1863
38, 171	Leigh, Alfred.	Clinton Station, N. J.	Drills, grain.	Oct. 13, 1863
40, 370	Leigh, Glendon.	Buffalo, N. Y.	Paucets.	Dec. 15, 1863
40, 939	Leitch, John.	Reichstadt, Bohemia.	Design on textile fabrics, &c., mode of producing.	April 14, 1863
38, 198	Leitenberger, Edward, assignor to Augustus G. Seibler.	Reichstadt, Bohemia.	Root forms.	July 21, 1863
39, 253	Leland, L. N.	Grafton, Mass.	Wells, device for cutting.	July 21, 1863
39, 294	Leland, L. N.	Grafton, Mass.	Boots and shoes, for use with machines for screwing on soles and heels of, apparatus for holding and supporting.	Feb. 10, 1863
37, 896	Leuerler, Eugene, assignor to Annae Remis Howe.	Paris, France.	Stamp extractors.	Dec. 15, 1863
40, 940	Lemm, Hiram.	Leonidas, Mich.		
39, 235	Lenox, Charles S. S. (See Gibson, Charles D., assignor.)	Paris, France.	Boring rock, tool for.	July 14, 1863
39, 736	Lenox, Charles S. S. (See Vose & Gibson, assignors.)	Leominster, Mass.	Vehicles, attaching breech to thills of. (Antd Nov. 19, 1862.)	Sep. 1, 1863
39, 235	Lenox, Charles S. S. (See Vose, Richard, assignor.)			
39, 736	Leuchot, Rudolph.			
39, 736	Leslie, La Roy N., and Thurston Richardson.			

39, 295	Litchworth, John, and Thomas R. Hartell. (See Davis, Maria, assignor. Release.)	Janesville, Wis.	Hook, snap.	July 21, 1863
38, 686	Latta, James W., and Lionel Torbert D'Epinieul. (See D'Epinieul & Latta.)	Providence, R. I.	Printing and ornamenting India-rubber.	May 28, 1863
38, 453	Lewis, George H.	Philadelphia, Pa.	Zinc, manufacture of.	May 12, 1863
38, 346	Lewis, George T.	German Flap, N. Y.	Telegraphs, switches for.	Oct. 20, 1863
38, 732	Lewis, James.	Iowa City, Iowa.	Carriage brakes.	June 2, 1863
39, 226	Lewis, William F.	Watertown, Conn.	Sewing machines, device for preventing retrograde motion in.	July 14, 1863
38, 733	Lewis, William K.	Boston, Mass.	Desiccating vegetables, apparatus for.	June 2, 1863
39, 661	Lichter, C. F.	Chicago, Ill.	Boat, collapsible.	Aug. 25, 1863
39, 496	Liebrich, Conrad.	Philadelphia, Pa.	Padlocks.	Aug. 11, 1863
37, 453	Liebrich, C., and L. Ulling.	Philadelphia, Pa.	Belt fastener.	Jan. 30, 1863
37, 380	Lichter, Jacob H.	Freedom Township, Ill.	Horse-powers.	Jan. 6, 1863
40, 468	Lighter, Samuel K.	Hamilton, Ohio.	Harvesters.	Nov. 3, 1863
40, 638	Lightfoot, Benjamin H.	Philadelphia, Pa.	Leather, tanned, treating.	Nov. 17, 1863
41, 011	Lightfoot, Benjamin H.	Philadelphia, Pa.	Leather, tanned, coloring.	Dec. 22, 1863
38, 569	Lightfoot, John.	England.	Dyeing and printing black color on fabrics with aniline compounds.	May 19, 1863
39, 494	Lighthall, William A.	New York, N. Y.	Engines, steam, refrigerator for.	May 12, 1863
40, 571	Lilly, Samuel D.	Ripley, Ohio.	Fork, tobacco.	Oct. 13, 1863
40, 569	Lillendahl, W. A. (See Warth, Albin, assignor.)	Castle Creek, N. Y.	Water elevators.	Nov. 10, 1863
41, 012	Lining, John.	Philadelphia, Pa.	Trap, animal.	Dec. 22, 1863
39, 487	Lincoln, Charles D., et al. (See Powell, Lincoln and Evans.)	Malden, Mass.	Arms, artificial.	Aug. 11, 1863
37, 943	Lincoln, Marvin.	Cold Water, Mich.	Harvesters, wheels for.	Mar. 24, 1863
38, 754	Lincoln, Perles.	Watertown, Conn.	Lantern globes.	June 2, 1863
1, 410	Lindley, Charles P.	New York, N. Y.	Projectiles for rifled ordnance, banding.	Feb. 17, 1863
1, 411	Linder, Edward.	New York, N. Y.	Cartridges for small arms. (Division two of release.)	Feb. 17, 1863
40, 695	Linton, John L. (See Shaw, Thomas, assignor.)	Mansfield, Ohio.	Threshers.	Nov. 24, 1863
39, 054	Lippy, David, and James S. Bradley.	Chicago, Ill.	Tools for grinding, holders for.	June 30, 1863
1, 425	Liscander, George, and John Lacey.	Albany, N. Y.	Stoves. (Release.)	Mar. 3, 1863
1, 426	Littlefield, Daniel G. (See Langdon, Leander W., ass't.)	Albany, N. Y.	Stoves. (Release.)	Mar. 3, 1863
1, 427	Littlefield, Dennis G.	Albany, N. Y.	Stoves. (Release.)	Mar. 3, 1863
1, 478	Littlefield, Dennis G.	Albany, N. Y.	Stoves. (Release.)	May 19, 1863
1, 479	Littlefield, Dennis G.	Albany, N. Y.	Stoves. (Release.)	May 19, 1863
1, 504	Littlefield, Dennis G.	Albany, N. Y.	Stoves, coal.	Dec. 22, 1863
1, 516	Littlefield, Dennis G.	Albany, N. Y.	Stoves, fire pots for.	Aug. 4, 1863
39, 582	Littlefield, Dennis G.	Albany, N. Y.	Stoves, coal.	Aug. 18, 1863
38, 113	Littleton, George.	Cleveland, Ohio.	Printers ink-rollers.	April 7, 1863
39, 286	Livemore, Benjamin.	Hartland, Vt.	Printing, band, device for.	July 21, 1863
1, 452	Livingston, Abby A. (See George, W. F., assignor. Release.)	New York, N. Y.	Saw frames, wood.	April 14, 1863
38, 448	Livingston, William H.	Philadelphia, Pa.	Gas meters, dry.	May 5, 1863
40, 144	Lloyd, Charles C., assignor to self and R. H. Gratz & Co.	Philadelphia, Pa.	Cork cutting machine.	Sep. 29, 1863
	Lloyd, George, ass't to Edward Borle and Alex. Mackle.	Philadelphia, Pa.		

List of patentees of inventions, designs, and reissues, 1863.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
36, 480	Mallory, James E., and Gelston Sanford. (See Sanford & Mallory.)	South Bend, Ind.	Washing machine.	Aug. 11, 1863.
36, 623	Mallory, James E., and Gelston Sanford. (See Sanford & Mallory.)	Watertown, Conn.	Hats.	Sept. 8, 1863.
36, 737	Mallory, James E., and Gelston Sanford. (See Sanford & Mallory.)	Batavia, N. Y.	Fasteners, such.	Sept. 1, 1863.
36, 496	Mallory, James E., and Gelston Sanford. (See Sanford & Mallory.)	Charlestown, Mass.	Boots and shoes, machinery for cutting the soles of.	May 12, 1863.
36, 114	Mallory, James E., and Gelston Sanford. (See Sanford & Mallory.)	St. Morgan, Ill.	Crushing and stripping sugar cane.	April 7, 1863.
37, 629	Mallory, J. H.	Marion, N. Y.	Locks in tin plate, forming.	Feb. 10, 1863.
40, 640	Mallory, William H.	Marion, N. Y.	Apple-parer.	Nov. 17, 1863.
37, 412	Mallory, William S.	Danville, Pa.	Ships and other batteries, defensive armor for.	Jan. 13, 1863.
40, 638	Mallory, James W.	West Meriden, Conn.	Looms.	Nov. 24, 1863.
1, 518	Mann, Bela A., assignor through mesne assignments to Jedediah Wilcox.	Menden, Conn.	SKirts, ladies', machines for clasping hoops to. (Release.)	Aug. 4, 1863.
40, 272	Mann, George, Jr.	Ottawa, Ill.	Boilers, steam, water-gauge for. (Antedated Sept. 25, '63).	Oct. 13, 1863.
37, 352	Mann, Henry F.	Laporte, Ind.	Projectiles, securing soft metal packing to.	Jan. 6, 1863.
36, 832	Mann, Jonathan, and McDonald, Alexander.	Walham, Mass.	SKirts, hoop.	June 9, 1863.
40, 849	Manning, G. S.	Cambridge, Mass.	Slinging accoutrements, mode of.	Dec. 8, 1863.
36, 297	Manning, William N.	Detroit, Mich.	Vehicles, wheel.	July 21, 1863.
36, 534	Manning, William N.	Rockport, Mass.	Escapements. (Antedated Feb. 25, 1862).	May 19, 1863.
36, 969	Manny, Frederick H. (See Holly, Solomon T., assignor.)	Rockford, Ill.	Harvesters.	June 23, 1863.
36, 970	Manny, Frederick H.	Rockford, Ill.	Harvesters.	June 23, 1863.
36, 053	Manny, John P.	Rockford, Ill.	Harvesters.	Mar. 31, 1863.
36, 054	Manny, John P.	Rockford, Ill.	Harvesters.	Mar. 31, 1863.
40, 762	Mannow, Mary. (See Emerson, D. L., assignor.)	Sacramento, Cal.	Press, fruit.	Dec. 1, 1863.
36, 653	Mansfield, George A.	Melrose, Mass.	Chairs for invalids. (Antedated Dec. 21, 1861).	Aug. 25, 1863.
36, 292	Mansfield, M. H., et al. (See Staman, John K., assignor.)	Lancaster, Pa.	Bedstead.	April 14, 1863.
36, 313	Maple, William H.	Chariton, Iowa.	Planters, corn.	April 28, 1863.
36, 298	March, Ruehart P.	Norritown, Pa.	Bread-cutting machine.	July 21, 1863.
37, 238	Marchbank, John.	Lansburg, N. Y.	Printing floor-cloths, &c.	Jan. 6, 1863.
36, 314	Marcher, Robert J.	New York, N. Y.	Mouldings, wooden, or strips for the frames of mirrors, pictures, &c., manufacture of.	April 28, 1863.
36, 905	Marcher, Robert J.	New York, N. Y.	Potteryware, moulding.	June 16, 1863.
40, 055	Marcher, Robert J.	New York, N. Y.	Mouldings, &c., apparatus for applying metal leaf to.	Sept. 22, 1863.

36, 350	Marry, John J., assignor to Edward Miller	Meriden, Conn.	Lamp-burners.	July 21, 1863.
40, 021	Martinet, Hippolyte, and Francis Noel Chandra, assignors to Richard Marsh Hoe.	Paris, France.	Printers' galleys.	Sept. 22, 1863.
36, 412	Markham, A. S.	Monmouth, Ill.	Cultivators.	Aug. 4, 1863.
40, 418	Markham, A. S.	Monmouth, Ill.	Planters, corn.	Oct. 27, 1863.
40, 110	Markille, Thomas R.	Winchester, Ill.	Washing machines.	Sept. 23, 1863.
40, 783	Marks, Amasa A.	New York, N. Y.	Lamps, artificial.	Dec. 1, 1863.
36, 116	Marsden, John.	England.	Nuts, bolts, &c., manufacturing.	April 7, 1863.
36, 823	Marsh, Isaac.	Milton, Pa.	Composition for forming cement, tiles, pipes, pavements, building blocks, &c.	June 9, 1863.
37, 620	Marsh, Griggs.	Lewisburg, Pa.	Harvesters.	Feb. 10, 1863.
37, 631	Marsh, James S. E., and C. C. Sharkley and Peter Beaver.	Lewisburg, Pa.	Harvesters.	Feb. 10, 1863.
37, 463	Marsh, Sylvester.	Chicago, Ill.	Drying grain, malt, &c.	Jan. 13, 1863.
37, 632	Marsh, Sylvester.	Chicago, Ill.	Drying grain, &c., apparatus for.	Feb. 10, 1863.
36, 775	Marsh, Albert, et al. (See Mignault, Southwick, Spoford, and Marshall.)	Lawrence, Mass.	File blanks, machine for stripping.	Sept. 1, 1863.
37, 761	Marsh, Herbert.	Ballardville, Mass.	Pie stamp.	Feb. 24, 1863.
40, 176	Marshall, Loomis G.	Dracut, Mass.	Drill, rock.	Oct. 6, 1863.
36, 906	Marshall, Loomis G., assignor to self and Andrew Cochran.	Philadelphia, Pa.	Furnaces for reducing and smelting ores.	June 16, 1863.
36, 786	Marshall, Loomis G., assignor to self and Andrew Cochran.	Philadelphia, Pa.	Furnaces for desulphurizing ores.	Sept. 1, 1863.
40, 541	Marshall, Loomis G., and Andrew Cochran. (See Budd, William, assignor.)	Philadelphia, Pa.	Railway chairs and cross-ties, iron.	Nov. 3, 1863.
40, 490	Marshall, Moses.	Lowell, Mass.	Looms for weaving figured fabrics. (Release.)	April 24, 1860.
	Marshall, Moses.	Lowell, Mass.	Looms for weaving figured fabrics. (Extension.)	Dec. 8, 1863.
	Marston, William W. (See Bidwell, James, assignor.)	New York, N. Y.	Cartridge, metallic, primed.	Nov. 3, 1863.
41, 013	Martin, G. P., et al. (See Edgill, Martin, Kellogg, and Alexander.)	Waukegan, Ill.	Car brakes for railroads. (Antedated Sept. 24, 1863).	Dec. 22, 1863.
36, 870	Martin, Seth, and Charles F. Macy. (See Macy and Martin.)	Allegany, Pa.	Rollers, steam, feed-water heaters for.	June 9, 1863.
36, 173	Martin, Warrick, et al. (See Ambler, Augustine L., assignor.)	New York, N. Y.	Skates.	April 14, 1863.
40, 799	Martin, William S.	New York, N. Y.	Safes, fire-proof, protecting the walls of, from corrosion.	Dec. 1, 1863.
40, 800	Martin, Charles H.	New York, N. Y.	Safes, fire-proof, composition for filling.	May 19, 1863.
36, 295	Martin, Walter K.	New York, N. Y.	Patient elevators.	July 21, 1863.
36, 299	Marx, Ernst.	Newark, N. J.	Hat blocks.	June 30, 1863.
36, 028	Mason, Jacob H.	Louisville, Conn.	Drums.	Oct. 6, 1863.
40, 177	Mason, James S., & Co. (See Kite, John L., assignor.)	Philadelphia, Pa.	Felted machine.	Aug. 25, 1863.
36, 664	Mast, P. P., and J. H. Thomas. (See Thomas and Mast.)	Boston, Mass.	Piano-fortes.	May 26, 1863.
36, 667	Matteson, E. E.	Nevada, Cal.	Water wheels, centrifugal. (Antedated March 12, 1863).	Jan. 29, 1863.
37, 454	Matthews, John. (See Muller, Carl, assignor.)	Sheburne Falls, Mass.	Sinks.	

List of patentees of inventions, designs, and reissues, 1863.

No.	Name.	Residence.	Invention or discovery.	Date.
39, 257	Mayall, Thomas J.	Roxbury, Mass.	Hose or tubing.	July 14, 1863.
39, 258	Mayall, Thomas J.	Roxbury, Mass.	Hose or tubing, elastic, manufacture of.	July 14, 1863.
40, 421	Mayall, Thomas J.	Roxbury, Mass.	Pontoon.	Oct. 27, 1863.
40, 491	Mayall, Thomas J.	Roxbury, Mass.	Rubber, waste, restoring. (Antedated Oct. 29, 1863.)	Nov. 3, 1863.
40, 699	Mayall, Thomas J.	Roxbury, Mass.	Molding or banding, machine.	Nov. 24, 1863.
40, 700	Mayall, Thomas J.	Roxbury, Mass.	Fulling mule.	Nov. 24, 1863.
40, 764	Maydole, James H.	Eaton, N. Y.	Card agitator. (Antedated July 2, 1863.)	Dec. 1, 1863.
37, 514	Mayer, Andrew.	New York, N. Y.	Sugar moulds.	Jan. 27, 1863.
40, 348	Mayer, Charles.	New York, N. Y.	Trunks.	Oct. 20, 1863.
39, 157	Mayher, John.	East Hampton, Mass.	Oil cans.	July 7, 1863.
37, 404	Mayhew, Theophilus.	Poughkeepsie, N. Y.	Lamps, feeders for.	July 13, 1863.
37, 702	Mayhugh, James P.	Ledersburg, Md.	Clothes-frame.	Feb. 24, 1863.
39, 823	Maynard, Edward.	Washington, D. C.	Cartridge, metallic.	Sept. 8, 1863.
40, 111	Maynard, Edward.	Washington, D. C.	Cartridges.	Sept. 29, 1863.
40, 112	Maynard, Waldo, and Charles R. Thayer. (See Underwood and Hurt, assignors.)	Washington, D. C.	Cartridges, metallic.	Sept. 29, 1863.
38, 686	McBurney, Charles.	Roxbury, Mass.	Boots and shoes, moulds for vulcanizing rubber soles for.	May 26, 1863.
40, 319	McBurney, Charles.	Roxbury, Mass.	Strap for drop-presses.	Oct. 13, 1863.
1, 567	McBurney, Charles.	Roxbury, Mass.	Boots and shoes, India-rubber soles for. (Division B of release.)	Dec. 8, 1863.
1, 568	McBurney, Charles.	Roxbury, Mass.	Boots and shoes, India-rubber soles for. (Release.)	Dec. 8, 1863.
38, 224	McCarte, Arthur.	Norristown, Pa.	Pumps.	April 21, 1863.
42, 273	McClain, Melville.	Pennapolis, Maine.	Means of attaching.	Oct. 13, 1863.
38, 012	McClanahan, S.	Warren, Ill.	Beehives.	Mar. 24, 1863.
37, 830	McClellan, Robert L. (See Kersey, John J., assignor.)	Washington, D. C.	Hydrants.	Mar. 3, 1863.
38, 534	McClelland, John.	Louisville, Ky.	Dental plates.	Aug. 11, 1863.
38, 315	McClelland, J. A.	Philadelphia, Pa.	Stamp, hand.	April 28, 1863.
39, 940	McClement, George.	Slug Slug, N. Y.	Projectile for many-chambered gun. (Antedated Nov. 1, 1862.)	Sept. 15, 1863.
38, 596	McCormick, J. H.	St. Louis, Mo.	Harvesters.	May 19, 1863.
38, 907	McCormick, J. J.	Brooklyn, E. D., N. Y.	Skates.	June 16, 1863.
38, 788	McCormick, Michael P., assignor to Lewis R. Case.	New York, N. Y.	Ventilating and illuminating ribers, mode of.	June 2, 1863.
39, 350	McConnell, William P.	Washington, D. C.	Gas, illuminating, manufacture of.	July 28, 1863.
38, 931	McCullough, J. J. (See McDaniel, Delaplaine, assignor.)	Brooklyn, N. Y.	Sewing machines.	June 16, 1863.
37, 321	McCurdy, James S., assignor to Elias Howe, Jr.	New Castle county, Del.	Method, sheet, for transportation, packing.	Jan. 6, 1863.
37, 322	McDaniel, Delaplaine, assignor to self and J. J. McCullough.			

38, 316	McDonald, Alexander, and Jonathan Mann. (See Mann and McDonald.)	Dubuque, Iowa.	Wrenches, screw.	April 28, 1863.
37, 455	McDonald, A. Y.	Longville, Ky.	Rollers, steam.	Jan. 20, 1863.
39, 100	McDonald, Curran E., and E. Otis Frink. (See Frink and McDonald.)	Louisville, Ky.	Engines, steam, arrangement of valves for.	June 30, 1863.
39, 263	McDonald, G. B.	Lambertville, N. J.	Locomotives, variable exhaust for.	Aug. 18, 1863.
38, 317	McDonald, Green B., assignor to self and Dennis Long.	Philadelphia, Pa.	Grates.	April 28, 1863.
38, 518	McDonald, S. T., and William F. Pettigill. (See Ketchum, A. C., assignor.)	Philadelphia, Pa.	Stoves.	April 28, 1863.
39, 263	McDowell, John, Jr., et al. (See Lathrop and De Sano, assignors.)	Des Moines, Iowa.	Seeding machines.	Jan. 6, 1863.
38, 317	McDowell, Richard.	Cincinnati, Ohio.	Pumps.	May 26, 1863.
38, 318	McDowell, William L.	Cincinnati, Ohio.	Car-sent lock.	Sept. 29, 1863.
38, 318	McDowell, William L.	Cincinnati, Ohio.	Laup-barrier.	Aug. 4, 1863.
38, 318	McDowell, William L.	Cincinnati, Ohio.	Shells, explosive fuse for. (Antedated October 14, 1863.)	Oct. 20, 1863.
1, 746	McEne, Frederick.	New York, N. Y.	Goblet.	April 21, 1863.
40, 114	McEne, T. C.	Pittsburg, Pa.	Diving apparatus.	Sept. 29, 1863.
39, 941	McEne, T. C.	Dunkirk, N. Y.	Fire-arms, sight for.	Sept. 15, 1863.
38, 630	McEne, T. C.	Buck Valley, Pa.	Varnish for pictures.	May 26, 1863.
38, 712	McEne, T. C.	Brooklyn, N. Y.	Planing machine, rotary cutter for.	May 26, 1863.
38, 971	McEne, T. C.	Philadelphia, Pa.	Millstone bush.	June 20, 1863.
38, 236	McEne, T. C.	Harmonburg, Pa.	Supporter, window-sash.	April 21, 1863.
38, 236	McEne, T. C.	New Philadelphia, Pa.	Buckle gag-runner.	Nov. 17, 1863.
38, 401	McEne, T. C.	Jan-ville, Wis.	Water elevators.	May 3, 1863.
39, 342	McEne, T. C.	North Vernon, Ind.	Projectiles, rifled. (Antedated October 16, 1862.)	Sept. 15, 1863.
40, 830	McEne, T. C.	Lexington, Ky.	Excavators.	Dec. 8, 1863.
39, 260	McEne, T. C.	Mexico, Mich.	Wagons, hold-backs for.	July 11, 1863.
39, 450	McEne, T. C.	Easton, Pa.	Cultivators.	Aug. 4, 1863.
39, 943	McEne, T. C.	New Haven, Conn.	Ploughs.	Sept. 15, 1863.
39, 738	McEne, T. C.	Ottawa, Ill.	Propeller, duck's foot.	Sept. 1, 1863.
40, 214	McEne, T. C.	Brushland, N. Y.	Cheese turning apparatus.	Oct. 6, 1863.
39, 994	McEne, T. C.	Washington, D. C.	Mark or label, incorrodible, for bales of cotton, &c.	Sept. 15, 1863.
37, 841	McEne, T. C.	Kilbourne, Ohio.	Harness, rotary.	March 3, 1863.
38, 673	McEne, T. C.	Troy, N. Y.	Horseshoes, machines for making.	June 9, 1863.
1, 764	McEne, T. C.	New York, N. Y.	Tea and coffee service.	June 16, 1863.
40, 701	McEne, T. C.	Aubany, N. Y.	Hay forks, self-tightening bands for.	Nov. 24, 1863.
38, 957	Mellen, Dustin F., assignor to self and J. C. Wilder.	Manchester, N. H.	Bobbin winders. (Antedated September 7, 1862.)	Sept. 15, 1863.

List of patentees of inventions, designs, and reissues, 1863.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
37, 604	Meller, Charles H. (See McKintley, David, assignor.)	Lowell, Mass.	Plasters, adhesive.	Feb. 3, 1863.
38, 972	Melvin, Joshua	Chelmsford, Ohio.	Kettles, tea.	June 21, 1863.
37, 423	Menke, Barney H., assignor to Chamberlain & Co. Menale, Louis, and George Comings. (See Comings and Menale.)	Cincinnati, Ohio.	Kettles, tea.	Jan. 13, 1863.
38, 824	Menzies, Alexander, and William Kenyon. (See Kenyon and Menzies.)	Georgetown, N. Y.	Hide, machine for handling.	Sept. 8, 1863.
37, 324	Merrill, J. D., assignor to E. W. Vail.	Ashburnham, Mass.	Chair, folding.	Jan. 6, 1863.
38, 631	Merrick, Silas	New Brighton, Pa.	Ventilators, railroad car.	May 26, 1863.
38, 973	Merrick, Silas	New Brighton, Pa.	Car-trucks, railroad.	June 23, 1863.
38, 082	Merrill, E. C., & Co. (See Sanderson, Burton, assignor.)	New York, N. Y.	Cars, railroad, iron.	Mar. 31, 1863.
40, 884	Merrill, Helen, assignor to self and D. D. Badger.	Baltimore, Md.	Fire-arm, breech-loading.	Dec. 8, 1863.
38, 713	Merrill, James H., assignor to self and George W. Horner.	Poland, Maine.	Coffin lids.	May 26, 1863.
1, 373	Merrill, Rufus Milton	Chicago, Ill.	Lamps, lantern.	June 13, 1863.
38, 414	Mercereau, W. T.	Philadelphia, Pa.	Lamps, coal oil.	Jan. 6, 1863.
40, 726	Mersbon, Ralph S., assignor to self and John M. Harper.	Newark, N. J.	Trunks and boxes, roller for.	Aug. 4, 1863.
38, 825	Mersbon, Ralph S., and Jehu Hollingsworth	Philadelphia, Pa.	Watch keys.	Nov. 24, 1863.
40, 493	Merrin, Asher, and C. H. Hobart	Zanesville, Ohio.	Fire-arm, revolving, self-cocking. (Antedated August 16, 1862.)	Sept. 8, 1863.
38, 665	Meryman, Frederick I.	Padua, Ill.	Planters, corn.	Nov. 3, 1863.
37, 259	Messer, Henry	Boston, Mass.	Mittens, water-proof, for divers.	Aug. 25, 1863.
38, 237	Messer, Henry	Roxbury, Mass.	Air engines.	Jan. 6, 1863.
40, 178	Messer, Henry	Roxbury, Mass.	Air engines, hot.	April 21, 1863.
38, 321	Messer, Henry, assignor to self and Cecilio G. Duncomb.	Roxbury, Mass.	Caloric engines.	Oct. 6, 1863.
38, 319	Metallic Car Spring Company. (See Vose, Richard, assignor.)	Roxbury, Mass.	Air engines, hot.	July 21, 1863.
38, 117	Melville, J. M. H. P.	Battle Creek, Mich.	Stoves.	April 26, 1863.
38, 402	Meta, John D.	Paris, France.	Pumps.	April 7, 1863.
38, 300	Meta, John D.	Dubuque, Iowa.	Paper, leather, &c., apparatus for cutting ornaments in.	May 5, 1863.
40, 702	Meta, John D.	Dubuque, Iowa.	Photographic albums.	July 24, 1863.
1, 561	Meta, John D.	Dubuque, Iowa.	Photographic albums.	Nov. 24, 1863.
38, 714	Meneel, Antonio, assignor to Mrs. Estelle Meneel.	Philadelphia, Pa.	Photographic albums.	Nov. 24, 1863.
38, 908	Meyer, Jeremiah. (See Schnebley, Theodore, assignor.)	Clifton, N. Y.	Preparing hydro-carbon liquids to serve as vehicle for paints.	Dec. 1, 1863.
38, 908	Meyer, John	Brooklyn, N. Y.	Boring machine.	June 16, 1863.
38, 029	Mezels, C.	New York, N. Y.	Lubricating axle-boxes. (Antedated November 9, 1861.)	June 30, 1863.
40, 450	Mignault, John H., A. B. Southwick, Charles Spofford, and Albert Marshall, assignors, through means assignments, to the Whipple Filo Manufacturing Company.	Port Washington, N. J.	Mops, tar.	Oct. 27, 1863.
37, 601	Miles, Melville, and Leonard Allen. (See Ames and Miles.)	Ballard Vale, &c., Mass.	Molds, machine for rolling.	Feb. 3, 1863.

1, 508	Miles, Oren E.	Aurora, Ill.	Vehicles, wheeled, construction of.	June 30, 1863.
40, 422	Miles, Oren E.	Aurora, Ill.	Wagon standards.	Oct. 27, 1863.
40, 765	Milano, Girolamo	New York, N. Y.	Bandages for the testicles.	Dec. 1, 1863.
38, 301	Millard, Henry W.	Utica, N. Y.	Lamps, chimneys for.	July 21, 1863.
38, 739	Millard, Robert, et al. (See Parlington, James, Jr., assignor.)	Pennsylvania, Pa.	Mach tubs.	Sept. 1, 1863.
37, 354	Miller, Charles A. (See Kirkham, W. S., assignor.)	New York, N. Y.	Stairs, iron, construction of.	Sept. 24, 1863.
40, 493	Miller, Charles E.	Armella, Ohio.	Seeders.	Jan. 6, 1863.
38, 158	Miller, Charles H. (See Stratton, Richard A., assignor.)	Brattleboro', Vt.	Clothes dryer.	Nov. 3, 1863.
38, 067	Miller, Charles H. (See Stratton, Richard A., assignor.)	Madison, N. J.	Presses, bulging.	July 7, 1863.
38, 574	Miller, Edward. (See Marcy, John J., assignor.)	Janesville, Wis.	Car coupling.	Mar. 31, 1863.
38, 616	Miller, Herman	New York, N. Y.	Cans, sheet metal.	June 23, 1863.
38, 616	Miller, Herman, assignor to C. T. Reynolds, F. W. Devos, and Charles Pratt	New York, N. Y.	Cans, sheet metal, soldering.	Aug. 18, 1863.
40, 661	Miller, Herman, assignor to Chas. T. Reynolds, Fred. W. Devos, and Charles Pratt	New York, N. Y.	Cans, sheet metal.	Nov. 17, 1863.
40, 767	Miller, J. A., and J. W.	La Grange, Ind.	Separators, grain.	Dec. 1, 1863.
38, 101	Miller, John Jacob, assignor to self and Ernst Prussing.	Chicago, Ill.	Lamps. (Antedated February 14, 1863.)	June 30, 1863.
37, 887	Miller, John Jacob, assignor to self and Ernst Prussing.	Chicago, Ill.	Lamps.	June 30, 1863.
40, 662	Miller, John Jacob, assignor to self and Ernst Prussing.	Chicago, Ill.	Condensing, evaporating, and cooling, apparatus for.	Mar. 10, 1863.
37, 355	Miller, John M.	Hamilton, Ohio.	Water-wheels.	Nov. 17, 1863.
38, 740	Miller, John P.	Boston, Mass.	Calculators, arithmetical.	Jan. 6, 1863.
38, 902	Miller, Joseph. (See Steedman, Nathan, assignor.)	Boston, Mass.	Paint, composition for.	Sept. 1, 1863.
38, 902	Miller, Josiah, assignor to Harrison Trumbower and Wm. C. Kleppinger.	Moore township, Pa.	Paint, composition for.	July 7, 1863.
1, 374	Miller, Martin C. (See Treat, John L., assignor.)	New York, N. Y.	Lanterns for coal oil.	Jan. 6, 1863.
38, 118	Miller, Warren P.	Marysville, Cal.	Ordnance on war vessels, operating.	April 7, 1863.
38, 834	Miller, Warren P.	New York, N. Y.	Bed, spring.	June 9, 1863.
38, 497	Miller, William	Cincinnati, Ohio.	Holding machines.	June 9, 1863.
37, 871	Miller, William	New York, N. Y.	Coal scuttles.	May 12, 1863.
40, 115	Miller, William	Boston, Mass.	Locks, guard attachment for.	Mar. 10, 1863.
40, 351	Miller, William	Boston, Mass.	Pegging boots and shoes, machine for.	Sept. 29, 1863.
37, 456	Milligan, John C.	Elizabeth City, N. J.	Kettles, camp.	Oct. 20, 1863.
38, 338	Milliken, Francis	Boston, Mass.	Cooking apparatus, steam.	Jan. 20, 1863.
37, 723	Miller, John Keen, assignor to self and Samuel T. Salt.	New York, N. Y.	Fire-arm, breech-loading.	April 21, 1863.
37, 918	Millochan, Adolph	New York, N. Y.	Preparing a paint oil from petroleum residuum.	Feb. 17, 1863.
38, 640	Millochan, Adolph, assignor to self and Alfred Berney.	New York, N. Y.	Oil, paint.	Mar. 17, 1863.
38, 641	Millochan, Adolph, assignor to self and Alfred Berney.	New York, N. Y.	Oil as a substitute for linseed oil, process of preparing an.	May 19, 1863.
1, 450	Millochan, Adolph, assignor to self and Alfred Berney.	New York, N. Y.	Oil, paint, preparing a.	May 19, 1863.
40, 571	Millochan, Adolph	New York, N. Y.	Engines, rotary.	May 19, 1863.
38, 320	Mills, C. A.	Hazel Green, Wis.	Coffee roasters.	Nov. 10, 1863.
37, 300	Mills, Daniel	Paterson, N. J.	Fastenings, window blinds.	April 28, 1863.
40, 542	Mills, Luke S., and Charles Hart Smith	New York, N. Y.	Fastenings, window blinds.	Jan. 6, 1863.
40, 423	Mills, Temple, and Stout. (See Temple, John, assignor.)	Baltimore, Md.	Roofing for buildings.	Nov. 3, 1863.
		Ridge Farm, Ill.	Planters, corn.	Oct. 27, 1863.

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No.	Name of patentee.	Residence.	Invention or discovery.	Date.
39, 159	Mills, Wm., and O. H. Burdett.	New Athens, Ohio.	Gas apparatus for domestic use.	July 7, 1863.
39, 392	Mills, Wm. M., et al. (See Temple, Mills & Stout.)	Buffalo, N. Y.	Lanterns, signal.	July 21, 1863.
39, 415	Miner, Joseph J.	Hartford, Conn.	Carriage poles, adjustable. (Antedated Dec. 19, 1862.)	Aug. 4, 1863.
1, 804	Miner, Leman C.	Mogadore, Ohio.	Plate, cooking, stone-ward.	July 21, 1863.
1, 500	Mishler, Henry.	New Haven, Conn.	Shoe tips, machines for swaging.	June 16, 1863.
39, 741	Mitchell, George A., assignor through <i>meane</i> assignments to Ameritann Shoe Tip Company.	Racine, Wis.	Ploughs.	Sept. 1, 1863.
40, 766	Mitchell, Henry.	El Paso, Ill.	Cultivators.	Dec. 1, 1863.
37, 515	Mitchell, Samuel H.	Terrysville, Conn.	Locks.	Jan. 27, 1863.
37, 515	Mitchell, Vance & Co. (See Vance, Samuel B. H., et al.)	Prospect, Conn.	Spoons, wire-strengthened, method of making. (Extension.)	April 18, 1863.
39, 416	Mix, James C.	New York, N. Y.	Locks.	Aug. 4, 1863.
39, 826	Mix, William.	Laurens county, Pa.	Ventilating cap for tents. (Antedated July 24, 1863.)	Sept. 8, 1863.
41, 014	Monkley, John.	New York, N. Y.	Metals, flour.	Dec. 22, 1863.
1, 453	Mohler, Richard, and John Hecker.	Philadelphia, Pa.	Metal pointing machine.	April 14, 1863.
40, 116	Mohr, Wm. P. (See Katzenmayer, John N., assignor.)	Philadelphia, Pa.	Zinc, metallic, manufacture of.	Sept. 29, 1863.
37, 516	Monroe, James F., and Edward P.	Flushing, Mass.	Copper, nickel, and cobalt, separating.	Jan. 27, 1863.
39, 945	Monson, Charles.	New Haven, Conn.	Apple-paring machine.	Sept. 15, 1863.
40, 117	Montreith, James.	New York, N. Y.	Lamp or gas lights, brackets for. (Antedated July 4, '62.)	Sept. 29, 1863.
37, 821	Montgomery, Joseph A.	Columbus, Ohio.	Desk and seat, school.	Mar. 3, 1863.
37, 633	Montgomery, Richard.	New York, N. Y.	Screws, wood, machine for cutting square threads of.	Feb. 10, 1863.
38, 975	Moody, W. K.	Hartford, Wis.	Ships and other batteries, defensive armor for.	June 23, 1863.
37, 970	Moore, Albert.	San Francisco, Cal.	Stump extractors.	Mar. 24, 1863.
1, 721	Moore, Daniel.	Brooklyn, N. Y.	Picks or axes.	Feb. 24, 1863.
38, 321	Moore, George C., and James M. Eveleth. (See Eveleth & Moore.)	Brooklyn, N. Y.	Pistol handle.	April 26, 1863.
1, 393	Moore, Lewis.	Ypsilanti, Mich.	Fire-arms, revolving.	Mar. 24, 1863.
1, 394	Moore, Lewis.	Ypsilanti, Mich.	Drills, grain.	Mar. 24, 1863.
1, 395	Moore, Lewis.	Ypsilanti, Mich.	Drills, grain. (Division II of release—Feb. 3, 1863.)	Mar. 24, 1863.
39, 946	Moore, M., et al. (See Relifus, George, assignors.)	Brooklyn, N. Y.	Type, apparatus for rubbing. (Antedated Oct. 18, '63.)	Sept. 15, 1863.
39, 322	Moore, Willis E.	Crawfordsville, Ind.	Cartridges, metal, for cannon.	April 29, 1863.
39, 303	Moore, R. B.	Cincinnati, Ohio.	Car seat locks.	July 21, 1863.
37, 236	Morgan, Charles H.	Philadelphia, Pa.	Paper bag machines.	Feb. 17, 1863.
40, 352	Morgan, Isaac G.	Ithaca, N. Y.	Captain or windlass.	Oct. 20, 1863.
39, 115	Morgan, John F., assignor to self and George W. Walker.	Boston, Mass.	Plates or metal sheets, turning edges of.	April 7, 1863.
40, 572	Morgenstern, William, and Edward Morwitz.	Philadelphia, Pa.	Fire-arms, breech-loading.	Nov. 10, 1863.
37, 634	Morley, P. A.	Sodus Point, N. Y.	Cog wheels.	Feb. 10, 1863.

COMMISSIONER OF PATENTS.

39, 666	Morrell, B. D.	Leban, N. H.	Clothes wringer. (Antedated Sept. 19, 1862.)	Aug. 25, 1863.
39, 490	Morrell, James A., and Peter Bargon.	Richmond, Ind.	Succinate liquids, apparatus for evaporating.	Aug. 11, 1863.
40, 553	Morrill, Oscar F.	Chelsea, Mass.	Harner, aero-vapor.	Oct. 20, 1863.
1, 548	Morrill, Oscar F.	Chelsea, Mass.	Gridirons.	Nov. 10, 1863.
40, 743	Morrill, Oscar F.	Chelsea, Mass.	Stove, cooking, vapor-burning.	Nov. 24, 1863.
40, 768	Morrill, Oscar F.	Chelsea, Mass.	Iron, sad.	Dec. 1, 1863.
38, 692	Morris, A., and J. W. Bartlett. (See Bartlett & Morris.)	Cincinnati, Ohio.	Label, commercial.	May 26, 1863.
39, 417	Morris, Charles N.	Charlestown, Mass.	Brush.	Aug. 4, 1863.
37, 517	Morris, Samuel.	Keokuk, Iowa.	Steering apparatus, steam.	Jan. 27, 1863.
39, 700	Morris, Charles S.	Leroy, N. Y.	Nozzles, hose, attaching revolving tips to.	Aug. 25, 1863.
38, 174	Morrison, H. B., assignor to C. H. Morrison.	Troy, N. Y.	Stoves.	April 14, 1863.
39, 160	Morrison, James, jr.	Birmingham, England.	Sewing machines, folding guides for.	July 7, 1863.
40, 046	Morrison, John N.	Philadelphia, Pa.	Bells for invalids.	Sept. 22, 1863.
37, 457	Morrison, Robert.	New Castle, England.	Hammer, steam, valve gearing for.	Jan. 20, 1863.
38, 976	Morrison, Robert.	Great Britain.	Valves for steam burners.	June 23, 1863.
37, 301	Morrison, S. G.	Williamsport, Pa.	Lamps.	Jan. 6, 1863.
37, 286	Morrow, William T.	Chicago, Ill.	Journal boxes.	Feb. 3, 1863.
41, 042	Morrow, W. T., assignor, Warlich Martin, Rosaline N. Ambler, and Elizabeth Johnson.	Chicago, Ill.	Car brakes. (Antedated June 23, 1863.)	Dec. 27, 1863.
40, 704	Morse, Curtis G., et al. (See Peckard, Caleb H., assignor.)	Hastings, N. Y.	Water wheels.	Nov. 24, 1863.
38, 463	Morse, Freeman.	Medford, Mass.	File blanks, apparatus for grinding.	May 3, 1863.
38, 119	Morse, Stephen A., and William Morgenstern. (See Morgenstern & Morwitz.)	East Bridgewater, Mass.	Drill bits.	April 7, 1863.
39, 418	Moseley, Thomas W. H.	Boston, Mass.	Metal, sheet, corrugating.	Aug. 4, 1863.
38, 056	Moser, Henry, and Louis Gregg. (See Gregg & Moser.)	Moserville, N. Y.	Ploughs, shovel.	Mar. 31, 1863.
39, 607	Mosher, Isaac, and Wadden Eddy.	Cleveland, Ohio.	Caps, military. (Antedated July 23, 1862.)	Aug. 25, 1863.
39, 304	Mossman, Sarah.	Medina, N. Y.	Hair restoratives. (Antedated Nov. 1, 1862.)	July 21, 1863.
40, 851	Mott, Isaac C. (See Burr, Theodore, assignor.)	New York, N. Y.	Clock and watch escapements.	Dec. 8, 1863.
37, 763	Mozart, Don J.	Bristol, Conn.	Puzzle.	Feb. 24, 1863.
1, 459	Muller, Henry P. (See Huttelmuier, George, assignor.)	Detroit, Mich.	Reaping and mowing machines.	June 16, 1863.
40, 404	Muller, Carl, assignor to John Matthews.	Littleton, N. H.	Water wheels.	Nov. 3, 1863.
1, 731	Mullins, William.	New York, N. Y.	Soda water, &c., draught stand for.	April 28, 1863.
38, 253	Mumma, Jacob H.	Sturtevant, Ohio.	Lanterns.	Sept. 22, 1863.
39, 203	Munger, W. F., assignor to Thomas Kennedy.	Harrisburg, Pa.	Straw cutters.	April 27, 1863.
38, 623	Munroe, David H.	Frankford, Conn.	Locks and latches, door.	July 7, 1863.
38, 624	Murlock, John G.	Plymouth Station, Mass.	Water elevators.	May 26, 1863.
39, 305	Murphy, E. D.	Cincinnati, Ohio.	Hydrants.	June 9, 1863.
		Warrensburg, (formerly of Rochester), N. Y.	Barrel machinery.	July 21, 1863.

List of patenters of inventions, designs, and reissues, 1863.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
Murphy, John, deceased, by Mary Murphy, administratrix.	Philadelphia, Pa.	Car wheels, method of regulating the contraction of. (Extension.)	Aug. 5, 1863.	
Murphy, J. R.	Pittsburg, Pa.	Fasting, sub.	April 28, 1863.	
Murphy, J. R., assignor to Alexander Speer	Pittsburg, Pa.	Hinge, window, self-locking.	Sept. 20, 1863.	
Murphy, William	New York, N. Y.	Envelopes, letter	June 2, 1863.	
Myers, A.	Springfield, Ohio	Wine, sorghum. (Antedated July 13, 1862)	Jan. 13, 1863.	
Myers, David	South Bend, Ind.	Car springs, railroad	July 21, 1863.	
Myers, F. R., and F. H. Furniss. (See Furniss & Myers.)	Schookcraft, Mich.	Drills, grdu	Nov. 3, 1863.	
Myers, H. B., and G. A.	Binghamton, N. Y.	Locks	Feb. 17, 1863.	
Myers, S. and J. (See Jennings, John, assignor.)	San Francisco, Cal.	Soundng apparatus, automatic	July 7, 1863.	
Myers, Wm. H., et al. (See Lathrop & De Sano, ass'rs.)	San Francisco, Cal.	Torpedoes, submarine, apparatus for detecting and ex- ploding.	July 7, 1863.	
Mygath, John Tracy	Pittsfield, Mass.	Water elevators	Nov. 17, 1863.	
Nading, Martin, and Matthew Heisecke. (See Heisecke & Nading.)	Rock county, Ill.	Separators, grdu. (Disclaimer)	July 6, 1863.	
Nagle, Joseph M. (See Brunon, Felix, assignor.)	New York, N. Y.	Steam pressure regulator	Oct. 30, 1863.	
Nash, Hiram	Poultney, Vt.	Curry-combs	Oct. 6, 1863.	
Nash, J., assignor to self and Alonzo K. Cutts.	Pittsburg, Pa.	Locomotives, running gear of.	June 30, 1863.	
Nash, William. (See Newton, Oliver, assignor.)	New York, N. Y.	Water closets, ship's	Feb. 10, 1863.	
Nash, William, and Abner G. Tiedel. (See Tiedel & Nash.)	New York, N. Y.	Pouches	Mar. 17, 1863.	
Nason, Joseph	Clinton, Mass., and Lancaster, N. Y.	Floor cloths (Design)	Mar. 31, 1863.	
Neal, Benjamin F.	Petersham, Mass.	Plating machines.	Oct. 27, 1863.	
Neal, Thomas H.	Birmingham, Conn.	Corsets, clasps for	July 21, 1863.	
Nealy, A. Gratton. (See Whitney, Reul W., assignor.)	Franklin, N. H.	Wool, cotton, &c., machines for burring and picking	Sept. 1, 1863.	
Neefus, Peter W.	New York, N. Y.	Skirts, hoop	Oct. 20, 1863.	
Neefus, Peter W.	New York, N. Y.	Metal vessels, pressing and polishing	Mar. 3, 1863.	
Neighaur, Louis. (See Reay, George H., assignor.)	Lawrence, Mass.	Clothes dryers.	Feb. 17, 1863.	
Negley, David. (See Glover, Robert, assignor.)	Des Moines, Iowa.	Brick machine.	June 30, 1863.	
Nell, John, and Albert E. Powers, assignors to D. A. and N. B. Powers.	New York, N. Y.	Umbrellas.	April 28, 1863.	
Nelson, George G.	Redford, Ind.	Hoes	Jan. 13, 1863.	
Nelson, Thomas A., assignor to self and Shelton and Osborn Manufacturing Company.	Ash Ridge, Ohio.	Straw cutters	Nov. 24, 1863.	
Nesmith, R. D.				
Neumann, Casar				
Neumann, John				
Newbury, A., et al. (See Goodspeed, Isaac, assignor.)				
Newell, George W., assignor to S. M. Davis.				
Newell, John N.				
Newhall, Walter F.				
Newland, Eliza C. and John W.				
Newlin, William				

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List of patentees of inventions, designs, and reissues, 1863.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
39, 491	Nicholson, Ezra	East Rockport, Ohio.	Gates, farm. (Antedated April 18, 1863)	Aug. 11, 1863.
39, 492	Nicholson, Samuel	East Rockport, Ohio.	Pavement, wooden.	Dec. 1, 1863.
39, 493	Niederhorn, George, and John Dubernet.	New York, N. Y.	Saw, revell, guide for.	July 7, 1863.
39, 494	Nutting, August, jr.	Philadelphia, Pa.	Meat cutter.	Aug. 11, 1863.
39, 495	Noble, Charles F.	Chicago, Ill.	Engines, locomotive, smoke-stacks for.	Aug. 11, 1863.
40, 543	Noble, S. H., assignor to self, Joseph and Charles Goodrich, and William M. Woolley.	Franklin du Chien, Wis.	Projectiles, directing. (Antedated October 29, 1863)	Nov. 3, 1863.
40, 562	Nobles, John C., et al. (See Foster, Randolph S., assignor.)	St. Anthony, Minn.	Blowers, fan.	Dec. 15, 1863.
38, 239	Nobles, John C., et al. (See Foster, Randolph S., assignor.)	New York, N. Y.	Culinary steamers.	April 21, 1863.
39, 639	Norcross, Samuel C.	Norway, Maine.	Anger stock.	Aug. 25, 1863.
40, 558	North, Edward L.	Salem, Mass.	Gas retorts, device for supplying, with liquids.	Sept. 22, 1863.
38, 574	North, Chase and North. (See Smith & Brown, assignors.)	Middletown, Conn.	(Design.)	June 9, 1863.
39, 670	North, Chase and North. (See Smith & Brown, assignors.)	Middletown, Conn.	(Design.)	Aug. 25, 1863.
37, 362	North, Chase and North. (See Smith & Brown, assignors.)	Middletown, Conn.	(Design.)	Oct. 6, 1863.
40, 355	Northrup, Sanford W.	Albany, N. Y.	Hooks, snap.	Aug. 25, 1863.
37, 683	Northrup, Nelson W.	Homer, N. Y.	Washing machine.	Oct. 6, 1863.
39, 947	Northrup, Nelson W., and Dilla L. Callender. (See Callender and Northrup.)	Greene, N. Y.	Engines, trunk.	Jan. 6, 1863.
38, 175	Noton, A. S. (See Barnes, M. H., assignor.)	Troy, N. Y.	Sawing machine.	Oct. 20, 1863.
38, 176	Noton, Marcus P.	East Township, Pa.	Carriages, attaching shafts or poles to.	Feb. 10, 1863.
38, 977	Noton, Marcus P.	New York, N. Y.	Battery, submarine. (Antedated August 14, 1862)	Sept. 15, 1863.
37, 701	Noton, Marcus P.	New York, N. Y.	Stumps, post office.	April 14, 1863.
38, 671	Noton, Marcus P.	New York, N. Y.	Motion, lever and crank, combined.	April 14, 1863.
38, 672	Noton, Marcus P.	New York, N. Y.	Coffee-roasting apparatus. (Antedated Nov. 12, 1862)	June 23, 1863.
38, 673	Noton, Marcus P.	New York, N. Y.	Pumps, lateral water-valves for.	Feb. 17, 1863.
38, 674	Noton, Marcus P.	New York, N. Y.	Press, oil, mule.	Aug. 25, 1863.
38, 675	Noton, Marcus P.	New York, N. Y.	Vegetable cutters.	Mar. 31, 1863.

38, 207	Nye, John C.	Randolph, N. Y.	Carriage, breech-loading.	May 19, 1863.
37, 350	Oakley, Truman G., and William R. Finch.	Cincinnati, Ohio.	Fire-arm, breech-loading.	Jan. 6, 1863.
39, 367	O'Brien, Lawrence.	Amboy, Ill.	Flat bed, apparatus for stretching.	Oct. 20, 1863.
40, 181	O'Brien, Lawrence.	Indianapolis, Ind.	Washing machine.	July 21, 1863.
41, 015	O'Connell, Charles H.	Poughkeepsie, N. Y.	Carding machine.	Oct. 6, 1863.
38, 021	O'Connell, Charles H.	Watertown, Iowa.	Peg float.	Dec. 22, 1863.
40, 911	O'Connell, Charles H.	Watertown, Iowa.	Straw cutters.	April 7, 1863.
38, 655	O'Connell, Charles H.	Watertown, Iowa.	Weather strips.	Dec. 15, 1863.
40, 436	O'Connell, Charles H.	Watertown, Iowa.	Pipe, &c., cement, machine for making. (Antedated Feb. 21, 1863.)	May 26, 1863.
37, 587	O'Connell, Charles H.	Watertown, Iowa.	Soda-water fountain.	Nov. 3, 1863.
38, 855	O'Connell, Charles H.	Watertown, Iowa.	Needles, apparatus for threading.	Feb. 3, 1863.
37, 406	O'Connell, Charles H.	Watertown, Iowa.	Paper, safety.	June 9, 1863.
37, 407	O'Connell, Charles H.	Watertown, Iowa.	Fire-arms, safety nipple-guard for.	Jan. 13, 1863.
37, 971	O'Connell, Charles H.	Watertown, Iowa.	Fire-arms, breech-loading.	Jan. 13, 1863.
37, 393	O'Connell, Charles H.	Watertown, Iowa.	Ratchet brace.	Mar. 24, 1863.
37, 959	O'Connell, Charles H.	Watertown, Iowa.	Sugar-evaporator.	Jan. 6, 1863.
38, 836	O'Connell, Charles H.	Watertown, Iowa.	Ploughs.	Mar. 17, 1863.
40, 182	O'Connell, Charles H.	Watertown, Iowa.	Inkstands.	June 9, 1863.
38, 121	O'Connell, Charles H.	Watertown, Iowa.	Belt hooks.	Oct. 6, 1863.
38, 756	O'Connell, Charles H.	Watertown, Iowa.	Propeller blades.	April 7, 1863.
39, 165	O'Connell, Charles H.	Watertown, Iowa.	Turning logs on saw-mill carriages, machinery for.	June 2, 1863.
39, 672	O'Connell, Charles H.	Watertown, Iowa.	Bridle-bits. (Antedated May 15, 1863.)	July 7, 1863.
38, 449	O'Connell, Charles H.	Watertown, Iowa.	Tree-protectors.	Aug. 25, 1863.
38, 736	O'Connell, Charles H.	Watertown, Iowa.	Silicates of potash and soda, hydrated, preparing.	May 5, 1863.
39, 166	O'Connell, Charles H.	Watertown, Iowa.	Printing frame and slide, photographable.	April 28, 1863.
38, 177	O'Connell, Charles H.	Watertown, Iowa.	Photographs, &c., apparatus for pasting and mounting.	July 7, 1863.
40, 183	O'Connell, Charles H.	Watertown, Iowa.	Bird cage.	April 14, 1863.
38, 299	O'Connell, Charles H.	Watertown, Iowa.	Mill pick.	Oct. 6, 1863.
41, 046	O'Connell, Charles H.	Watertown, Iowa.	Faucets, self-balancing and self-closing.	April 21, 1863.
38, 178	O'Connell, Charles H.	Watertown, Iowa.	Gins, cotton.	Dec. 22, 1863.
38, 240	O'Connell, Charles H.	Watertown, Iowa.	Car-coupling.	April 14, 1863.
38, 241	O'Connell, Charles H.	Watertown, Iowa.	Brushes, hat, holder for.	April 21, 1863.
38, 757	O'Connell, Charles H.	Watertown, Iowa.	Garments having body and sleeves.	June 2, 1863.
38, 242	O'Connell, Charles H.	Watertown, Iowa.	Pantaloons.	Aug. 18, 1863.
38, 243	O'Connell, Charles H.	Watertown, Iowa.	Ventilators, window.	April 28, 1863.

List of patentees of inventions, designs, and reissues, 1863.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
38 405	Ode, N. P. Ostenhelmer, Solomon and Adolph. (See Goulloud, H. J., assignor.) Ostenhelmer, Solomon and Adolph. (See Goulloud, B. J., assignor.)	Yonkers, N. Y.	Vise, parallel.	May 5, 1863.
39, 673	Oudry, Edward. Overfield, Nicholas, and Silas Vernoy. (See Vernoy and Overfield.)	Pittsburg, Pa.	Teeth, apparatus for cooling the.	Aug. 25, 1863.
40, 425	Oxliatt, Solomon E.	Richfield, Ohio.	Sleds.	Oct. 27, 1863.
39, 062	Owen, George B.	Springfield, Pa.	Straw-cutters.	June 30, 1863.
1, 738	Owen, George B.	New York, N. Y.	Clock case. (Design.)	Mar. 17, 1863.
38, 498	Oyston, Charles.	Brooklyn, N. Y.	Lantern and reflector, attachment of.	May 12, 1863.
39, 671	Packard, Charles.	Little Falls, N. Y.	Nozzles.	Aug. 25, 1863.
39, 864	Packard, Caleb H., assignor to John J. Haley, Curtis G. Morse, and Addison Boyden.	North Bridgewater, Mass.	Clothes-wringer.	Sept. 8, 1863.
39, 219	Packer, James.	New York, N. Y.	Chain links.	July 14, 1863.
1, 574	Paddock, Oscar.	Watertown, N. Y.	Furnaces, hot-air.	Nov. 24, 1863.
1, 575	Paddock, Oscar.	Watertown, N. Y.	Furnaces, hot-air. (Division of reissue.)	Nov. 24, 1863.
39, 743	Paden, John S.	Lebanon, Ill.	Ploughs, gang. (Antedated March 1, 1863.)	Sept. 1, 1863.
39, 167	Pago, Samuel N.	Saloma, Pa.	Millstones, balancing and ventilating.	July 7, 1863.
38, 798	Pago, William H., assignor to Wm. H. Pugo & Co.	New York, N. Y.	Feed ration for army use, &c.	June 2, 1863.
1, 869	Palgy, Benjamin O.	Norwich, Conn.	Alphabet, German type. (Design.)	Nov. 24, 1863.
37, 823	Palme, Lynn S. (See Cackhuff, Ralph, assignor.)	Lowell, Mass.	Drawing boards, stop motion for.	Mar. 3, 1863.
39, 102	Painter, William, assignor to Charles Painter.	Fallston, Md.	Lamp-burners.	June 30, 1863.
39, 918	Pake, M.	Dorchester, Ill.	Evaporating apparatus for.	Sept. 15, 1863.
39, 108	Paluzot, Bernard.	Bordeaux, France.	Furnaces.	July 7, 1863.
40, 706	Pallett, Robert.	New York, N. Y.	Pontoon boat.	Nov. 24, 1863.
38, 837	Palmer, Aaron.	Blackport, N. Y.	Sewing machines.	June 9, 1863.
38, 450	Palmer, Charles H., assignor to self and Samuel Colgate.	New York, N. Y.	Sewing machines.	May 5, 1863.
39, 351	Palmer, F.	Jamesville, Wis.	Hook, snip.	July 28, 1863.
1, 534	Palmer, Isaac E.	Montville, Conn.	Block, tackle. (Reissue.)	Sept. 8, 1863.
40, 497	Palmer, Isaac E., and John Turner. (See Turner and Palmer.)	Laoli, Wis.	Drill, grain, teeth.	Nov. 3, 1863.
41, 016	Palmer, Isaac H.	Laoli, Wis.	Harvesters.	Dec. 22, 1863.
39, 063	Palmer, John J., and M. Plamondon.	Chicago, Ill.	Separators, grain.	June 30, 1863.
37, 337	Palmer, Milton J., and Henry R. Ingalls.	Homer, N. Y.	Churn-dashers.	Jan. 6, 1863.
1, 423	Palmer, Nelson.	Groton, N. Y.	Elevating forks, hay. (Reissue.)	Mar. 3, 1863.
37, 408	Palmer, Sidney W., and Minson C. Cronk. (See Cronk and Palmer.)	Greenville, N. Y.	Harvesters, raking and binding attachment to.	Jan. 13, 1863.

41, 017	Palmer, William.	New York, N. Y.	Fire-arms, breech-loading.	Dec. 22, 1863.
1, 500	Palmer, J. B., and George Howland.	Fort Edward, N. Y.	Paper pulp, preparation of straw for.	Dec. 13, 1863.
3, 391	Pancost and Archer. (See Deaws, Charles, assignor.)	Fort Edward, N. Y.	Paper pulp, manufacture of.	Dec. 13, 1863.
1, 562	Parham, Charles.	Philadelphia, Pa.	Sewing machines.	Nov. 3, 1863.
1, 877	Paris, Daniel E.	Troy, N. Y.	Stove plate. (Design.)	Dec. 15, 1863.
1, 878	Paris, Daniel E.	Troy, N. Y.	Stove plate. (Design.)	Dec. 15, 1863.
1, 872	Paris, Daniel E., and Francis E. Ritchie, assignors to Daniel E. Paris.	Troy, N. Y.	Stove plates. (Design.)	Dec. 1, 1863.
1, 871	Paris, Daniel E., and N. S. Vedder, assignors to Daniel E. Paris.	Troy, N. Y.	Stove plates. (Design.)	Dec. 1, 1863.
1, 873	Paris, Daniel E., and N. S. Vedder, assignors to Daniel E. Paris.	Troy, N. Y.	Stove plates. (Design.)	Dec. 1, 1863.
1, 874	Paris, Daniel E., and N. S. Vedder, assignors to Daniel E. Paris.	Troy, N. Y.	Stove plates. (Design.)	Dec. 1, 1863.
37, 972	Park, John C.	Buffalo, N. Y.	Welding and repairing railroad bars.	Mar. 24, 1863.
38, 406	Parker and Perkins. (See Perkins, Russell B., assignor.)	Meriden, Conn.	Door knobs.	May 5, 1863.
38, 352	Parker, Emory.	Boston, Mass.	Veneers, machine for cutting.	July 28, 1863.
38, 358	Parker, Harrison, and Charles W. Hawkes.	Winterset, Iowa.	Beehives.	April 28, 1863.
40, 638	Parker, Leonard.	Hopkinton, Mass.	Fruit-gatherers.	Nov. 17, 1863.
38, 359	Parker, Owen B.	Williamsport, Pa.	Shingle machine.	April 28, 1863.
40, 974	Parker, S. J.	Detroit, Mich.	Shingles, machine for jointing.	Oct. 13, 1863.
37, 638	Parkhurst, A. N.	Peoria, Ill.	Pumps.	Feb. 10, 1863.
37, 304	Parkhurst, Stephen R.	New York, N. Y.	Carding engines, machinery for feeding.	Jan. 6, 1863.
37, 637	Parneelee, Imbols D.	New York, N. Y.	Legs, artificial.	Feb. 10, 1863.
38, 499	Parish, William D.	Philadelphia, Pa.	Gases, apparatus for mixing.	May 12, 1863.
39, 827	Parrot, John D.	Morristown, N. J.	Churn-powers.	Sept. 8, 1863.
40, 796	Parbuhl, Charles H., assignor to Parbuhl and Duncan.	Detroit, Mich.	Engines, steam, balanced valves for.	Dec. 1, 1863.
38, 932	Parsons, Harvey M., deceased, by George H. Parsons, administrator, and Thomas N. Egery.	East Edgington, Me.	Sawing shingles and staves, machine for.	June 16, 1863.
39, 940	Pariz, August P. W.	Bangor, Me.	Amalgamators.	July 14, 1863.
1, 739	Pateron, James, assignor to Deborah, Albert E., and Nathaniel B. Powers.	Wurtsboro, N. Y.	Floor oil-cloth. (Design.)	Mar. 17, 1863.
38, 630	Patric, Lewis, assignor to self and Henry Reed.	Victor, N. Y.	Separator, oat. (Antedated March 25, 1863.)	May 19, 1863.
38, 630	Patullo, Edward James Y.	New York, N. Y.	Fibre of tropical plants, machine for separating the.	April 28, 1863.
38, 752	Patterson, C. S., et al. (See Rebfuss, George, assignor.)	Woodbury, N. J.	Process of utilizing the tin from tin-plate clippings, &c.	June 2, 1863.
40, 942	Patterson, J. M.	Monticello, Minn.	Grain cleaner and separator. (Antedated Dec. 12, 1863.)	Dec. 15, 1863.
40, 498	Patterson, J. W.	Kingston, Tenn.	Cannons and fire-arms, construction of.	Nov. 3, 1863.
40, 685	Patterson, Newton A.	Somerset, Ky.	Shells, percussion fuze for.	Dec. 8, 1863.
38, 268	Patterson, William F., assignor to self and Wm. S. Forbes.	Harrisburg, Pa.	Nail or tack, carpet.	May 19, 1863.
38, 631	Pattin, Thomas J., and John Poole. (See Poole and Pattin.)	Harrisburg, Pa.	Clothes dryer.	May 19, 1863.
37, 834	Patton, W. H. (See Fenner, R. R., assignor.)	New York, N. Y.	Sugar, refining.	Mar. 3, 1863.
	Paulsen, Herman G. C.			
	Fawling, Wm. M., and William K. Green, Jr. (See Green and Fawling.)			
	Payne, David C., and Wm. Proctor. (See Proctor and Payne.)			

List of patentees of inventions, designs, and reissues, 1863.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
38,978	Payne, D. C., and D. A. Danforth, (See Danforth and Payne.)	New York, N. Y.	Bedstead, sofa.	June 23, 1863.
39,949	Payne, F. C.	New York, N. Y.	Curtain fixtures, self-holding clamp for. (Antedated January 18, 1863.)	Sept. 15, 1863.
40,573	Payne, Martin, and Alfred Sower. (See Sower and Payne.)	Salem, Mass.	Muscle, keyed instrument of.	Nov. 10, 1863.
38,651	Peabody, Alfred. (See Hawkins, Lucius D., assignor.)	Shortsville, N. Y.	Horse-shoes.	May 5, 1863.
37,458	Peacock, Isaac.	Shortsville, N. Y.	Horse-shoes, steel, making.	June 20, 1863.
1,732	Peacock, Isaac, assignor to self and S. S. Sawyer.	Lawrence, Mass.	Spinning flyer.	April 28, 1863.
37,702	Pearl, Oliver.	Lawrence, Mass.	Spinning machines, flyers of.	Feb. 17, 1863.
40,059	Pearson, Gabriel D.	Ypsilanti, Mich.	Sawing, cross-cut, machine.	Sept. 22, 1863.
40,060	Pearse, Daniel.	Floyd, N. Y.	Mills, mill.	Sept. 22, 1863.
38,058	Pearse, Henry.	Brockport, N. Y.	Pumps, rotary.	Mar. 31, 1863.
40,499	Pearse, James N.	Panama, N. Y.	Horse-powers.	Nov. 3, 1863.
38,122	Pearse, Julius A.	New York, N. Y.	Shirt collars, euncheon.	April 7, 1863.
38,909	Pearse, Julius A.	New York, N. Y.	Shirt collars.	June 16, 1863.
40,496	Pearse, Julius A.	New York, N. Y.	Shirt bosoms.	April 28, 1863.
39,744	Pearse, Lewis P.	McGardville, Ind.	Stump extractors.	Sept. 1, 1863.
40,184	Pease, W. H.	Dayton, Ohio.	Bedstead, wardrobe.	Oct. 6, 1863.
38,979	Peck, Ezra.	Middleport, Ill.	Planters, corn.	June 23, 1863.
38,599	Peck, Israel, and Wm. H. H. Glover.	Southold, N. Y.	Presses.	May 19, 1863.
39,169	Peck, Israel, and Wm. H. H. Glover.	New York, N. Y.	Oil, &c., device for drawing off and skimming.	July 7, 1863.
38,419	Peck, Obad.	New York, N. Y.	Hits to braces, attaching.	Aug. 4, 1863.
40,275	Peck, Obad.	Windsor, Vt.	Hits to braces, attaching.	Oct. 13, 1863.
37,639	Pelree, Isaac Newton.	Windsor, Vt.	Composition for slate surface, blackboards, &c.	Feb. 10, 1863.
38,331	Pelree, James M.	Darby, Pa.	Gates.	April 28, 1863.
37,973	Pell, Arthur.	New York, N. Y.	Gimlets.	Mar. 24, 1863.
40,357	Pelton, James A.	Middletown, Conn.	Teeth, artificial, mounting.	Oct. 20, 1863.
38,407	Peltz, Philip G.	U. S. Navy.	Ordnance, adjustable portholes for directing.	May 5, 1863.
38,959	Pemberton, Henry.	East Tarentum, Pa.	Paper for sorghum, manufacture of.	Mar. 31, 1863.
40,427	Penn, Worden P., Jacob Gehes, and Jacob Broadus.	Belleville, Ill.	Harvesters.	Oct. 27, 1863.
38,745	Pennepacker, Hurman.	Kimbarton, Pa.	Hoisting apparatus.	Sept. 1, 1863.
40,727	Penny, T. J.	Wooster, Ohio.	Wrench, scraper and screw-driver, combined.	Mar. 17, 1863.
1,538	Peoples, Daniel K., assignor to self and John Peoples.	Philadelphia, Pa.	Chaulp floor.	Nov. 24, 1863.
1,538	Pepper, John.	Holderness, N. H.	Knitting machines, circular.	Sept. 15, 1863.
37,268	Pepper, John.	Holderness, N. H.	Knitting machines, circular.	Oct. 27, 1863.
38,404	Percy, John.	Albany, N. Y.	Winter metres.	Feb. 3, 1863.
38,353	Perlin, Moses.	Albany, N. Y.	Fire-arms, breech-loading.	Aug. 11, 1863.
		Lakeland, Minn.	Washing machine.	July 28, 1863.

1,424	Perkins and Parker. (See Truck, Martin V., assignor.)	Providence, R. I.	Horse-shoes, machines for making.	Mar. 3, 1863.
40,118	Perkins, Charles H.	Newark, N. J.	Holers, steam.	Sept. 29, 1863.
37,373	Perkins, James, and Wm. H. H. Hurnett.	Meriden, Conn.	Spoons, lined, iron.	Jan. 6, 1863.
37,764	Perkins, John, et al. (See Davis, R. W. and D. assignors.)	New York, N. Y.	Fire-arm, breech-loading.	Feb. 24, 1863.
37,765	Perkins, Russell B., assignor to Parker and Perkins.	New York, N. Y.	Fire-arms, end thrust.	Feb. 24, 1863.
37,766	Perley, Charles.	New York, N. Y.	Batteries, travelling.	Feb. 24, 1863.
37,767	Perley, Charles.	New York, N. Y.	Hose-coupling.	Feb. 24, 1863.
37,768	Perley, Charles.	New York, N. Y.	Steering apparatus.	Feb. 24, 1863.
37,769	Perley, Charles.	New York, N. Y.	Ram, naval, for the destruction of the enemy's ships.	Feb. 24, 1863.
37,770	Perley, Charles.	New York, N. Y.	Shells, explosive, from balloons, discharging.	Feb. 24, 1863.
37,771	Perley, Charles.	New York, N. Y.	Windmills, vertical.	Feb. 24, 1863.
38,408	Perley, Charles.	New York, N. Y.	Canon, constructing.	May 5, 1863.
38,409	Perley, Charles.	New York, N. Y.	Which, direct and counter motion.	May 5, 1863.
		New York, N. Y.	Windmills, fitting the bearing socket and head of. (Extension.)	May 13, 1863.
		New York, N. Y.	Windmills, fitting the bearing socket and head of. (Extension.)	Nov. 10, 1863.
39,950	Perot, T. Morris.	Philadelphia, Pa.	Bottles, &c., for transportation, packing. (Antedated June 16, 1863.)	Sept. 15, 1863.
39,951	Perot, T. Morris.	Philadelphia, Pa.	Wagon for transporting medicines.	Sept. 15, 1863.
39,952	Perot, T. Morris.	Philadelphia, Pa.	Medicine case.	Sept. 15, 1863.
40,354	Perret, Edward Favre.	Locle, Switzerland.	Watches.	Oct. 30, 1863.
37,409	Perrin, David C.	Roxbury, Mass.	Hals and bonnets, palm leaf, manufacture of.	June 13, 1863.
38,729	Perry, A. H.	Upton, Iowa.	Furnaces of sugar evaporators.	June 2, 1863.
40,707	Perry, Heraldo O., assignor to Sidney Shepard.	Buffalo, N. Y.	Propeller, screw.	Nov. 24, 1863.
37,974	Perry, John G.	Brooklyn, N. Y.	Bread, making.	Nov. 24, 1863.
38,241	Perry, John G.	South Kingston, R. I.	Straw cutters.	Nov. 24, 1863.
38,242	Perry, John G.	South Kingston, R. I.	Straw cutters.	Nov. 24, 1863.
38,243	Perry, John G.	South Kingston, R. I.	Hay cutters.	Nov. 24, 1863.
38,244	Perry, John G.	South Kingston, R. I.	Meat cutters.	Nov. 24, 1863.
38,746	Perry, Jonathan P.	South Kingston, R. I.	Sausage stuffer.	Nov. 24, 1863.
		Foxborough, Mass.	Shells, explosive, composition for. (Antedated Sept. 19, 1862.)	Sept. 1, 1863.
39,324	Perry, Stuart, assignor to C. H. A. Carter.	Newport, N. Y.	Horse-powers.	July 21, 1863.
39,325	Perry, Stuart, assignor to C. H. A. Carter.	Newport, N. Y.	Horse-powers.	July 21, 1863.
39,454	Perry, Wm. V.	Barnett, Wis.	Sewing machine, take-up for.	Aug. 4, 1863.
39,828	Perzel, John George.	New York, N. Y.	Wool from mixed fabrics, process of recovering. (Antedated April 3, 1861.)	Sept. 8, 1863.
38,500	Peters, Charles H.	Cincinnati, Ohio.	Lamp and lantern, chamber, combination of.	May 12, 1863.
1,570	Petrie, Samuel. (See Philo, E. H., assignor.)	Watertown, Mass.	Wool, machine for drying. (Release. Patented in England August 12, 1861.)	Nov. 17, 1863.
38,452	Petrie, John, Jr., assignor to Jesse A. Locke.	Watertown, Mass.	Paper bag machine.	May 5, 1863.
	Petrie, S. E., assignor to Union Paper Bag Company.	Philadelphia, Pa.	Car trucks, connexion of.	June 23, 1863.
	Petribone, Jay, et al. (See Tucker and Hill, assignors.)	Lowell, Mass.	Shells, bomb, manufacturing.	July 28, 1863.
	Pettingill, Wm. P., and S. T. McDougall. (See Ketchum, A. C., assignor.)	Boston, Mass.	Brush, bat.	May 19, 1863.
38,980	Pettit, William.	Detroit, Mich.	Turning cross-head wrists or pins, &c.	Mar. 31, 1863.
39,354	Pevay, Abel.			
38,652	Phelps, Courtland F., assignor to self and Elisha Stone.			
	Phelps, J. Willard, and E. R. Walt. (See Walt & Phelps.)			
38,080	Phelps, Walter S.			

List of patentees of inventions, designs, and reissues, 1863.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
39, 774	Phenix, R. P., deceased, by R. M. Phenix, administrator.	River Falls, Wis.	Smut machines.	Sept. 1, 1863.
39, 961	Phillips, Charles P.	Crown Point, Ind.	Drilling machines.	June 23, 1863.
40, 500	Phillips, William G.	Newport, Del.	Ladders.	Nov. 3, 1863.
37, 703	Phillips, Charles E.	Arlington, Mass.	Screws, heading tool for.	Feb. 17, 1863.
	Phillips, George H., and Anson Ingraham. (See Ingraham Phillips. Design.)			
40, 146	Phillips, George H., and Wm. H. Johnson, assignors to Anson and Wm. H. Ingraham and Geo. H. Phillips.	Troy, N. Y.	Grates, stove.	Sept. 29, 1863.
39, 617	Phillips, Henry F., assignor to Downs & Co.	Auburn, N. Y.	Axle skells.	Aug. 18, 1863.
39, 618	Phillips, Henry F., assignor to Downs & Co.	Ilion, N. Y.	Pumps, portable.	Aug. 18, 1863.
40, 639	Phillips, Isaac	Hurlington, Iowa	Smut machines.	Nov. 17, 1863.
38, 805	Philo, E. H., assignor to self and Samuel Peters.	Half Moon, N. Y.	Churns. (Antedated June 2, 1863).	June 9, 1863.
38, 901	Phoenix Iron Company. (See Reeves, David, assignor.)	Rowley, Mass.	Raiding buildings, clamps for.	May 12, 1863.
37, 640	Pickard, Nathaniel	New Bedford, Mass.	Nails, horseshoe and other, making.	Feb. 10, 1863.
39, 430	Pierce, Benjamin W.	Buffalo, N. Y.	Wood splitters.	Aug. 4, 1863.
37, 358	Pierce, Charles W.	Oakhill, N. Y.	Mill, coffee and spice.	Jan. 6, 1863.
38, 982	Pierce, Samuel	Troy, N. Y.	Range. (Antedated April 29, 1863).	June 23, 1863.
40, 635	Pierce, Samuel	Troy, N. Y.	Stove, cooking. (Antedated April 29, 1863).	Nov. 17, 1863.
38, 453	Piggott, Jabez J., and H. Rentchler. (See Kuebler, John, assignor.)	Somerville, Mass.	Lamp.	May 5, 1863.
	Piggott, Jabez J., and H. Rentchler. (See Heaton, Chas. W. S., assignor.)			
38, 123	Piggott, Jabez J., and C. L. Cronwell.	St. Clair county, Ill.	Harvesters.	April 7, 1863.
40, 061	Pillbriam, Jesse	Peoria county, Ill.	Coal hods.	Sept. 22, 1863.
41, 018	Pillsbury, Isaac N., and N. E. Warren.	Cleveland, Ohio.	Railroad turnouts.	Dec. 22, 1863.
40, 448	Piner, Thomas. (See Allender, John, assignor. Reissue.)			
39, 585	Pinus, E., et al. (See Reclus, George, assignor.)	Troy, N. Y.	Harvesters.	Oct. 27, 1863.
40, 119	Pine, James, assignor to self and Walter A. Wood.	Bridgeport, Conn.	Fanets. (Antedated November 12, 1862).	Aug. 16, 1863.
37, 518	Pinner, Moritz	Gaia, Ill.	Water elevator.	Sept. 29, 1863.
38, 170	Pinner, Moritz. (See Susseger, Christoph, assignor.)	New York, N. Y.	Ambulances.	Jan. 27, 1863.
37, 550	Pino, John A., assignor to self and Samuel S. Sherwood.	New York, N. Y.	Kitchens, travelling.	July 7, 1863.
38, 760	Pipet, J. B. G. M. F.	New York, N. Y.	Raffles, machines for making.	Jan. 27, 1863.
	Planonden, A., and John J. Palmer. (See Palmer and Planonden.)	Paris, France	Lubricating journals and axles.	June 23, 1863.
40, 708	Planet, L., and E. Becklen. (See Becklen and Planet.)	Putaski, Iowa.	Pumps.	Nov. 24, 1863.

37, 940	Plant, Ebenezer H., and Fred P., et al. (See Ellis and White, assignors. Reissue.)	Washington, D. C.	Rocket, war.	Mar. 17, 1863.
39, 839	Plant, Ebenezer H., and Anzi P., et al. (See Ellis and White, assignors. Reissue.)	New York, N. Y.	Engine, rotary. (Antedated March 14, 1862).	Sept. 8, 1863.
39, 830	Plant, James	Utica, N. Y.	Shafting, vertical, bearing for. (Antedated Oct. 25, '62).	Sept. 8, 1863.
39, 831	Plant, James	Utica, N. Y.	Water wheels. (Antedated April 2, 1863).	Sept. 8, 1863.
39, 852	Plant, James	Utica, N. Y.	Water wheel. (Antedated Oct. 17, 1862).	Sept. 8, 1863.
39, 853	Plant, James	Utica, N. Y.	Water wheel. (Antedated Oct. 25, 1862).	Sept. 8, 1863.
38, 854	Plant, James	Utica, N. Y.	Water wheel. (Antedated July 20, 1862).	Sept. 8, 1863.
39, 776	Plant, Wm. K., assignor to self and George S. Harwood and George H. Quincy.	Philadelphia, Pa.	Carding engines.	Sept. 1, 1863.
39, 355	Playa, Robert	Smithfield, R. I.	Carding engines.	July 28, 1863.
40, 215	Playel, Emmanuel J., assignor to self and Albert Zügelo.	Dallas county, Iowa.	Horseshoe.	Oct. 6, 1863.
37, 865	Plampton, James L.	New York, N. Y.	Skates.	Jan. 6, 1863.
37, 704	Plumb, Henry E.	Monroe, Conn.	Elevator and carrier.	Feb. 17, 1863.
40, 943	Pogue, Tyre	Madison, Ind.	Saddle, slide, tree.	Dec. 15, 1863.
37, 975	Pohle, Julius G., and James S. Crow.	Morrisania, N. Y.	Glass, mode of removing stains from.	Mar. 24, 1863.
39, 376	Pointon, Philip	Matt Haven, N. Y.	Glass, mode of removing stains from.	Mar. 24, 1863.
40, 310	Pointon, Philip, assignor to self, Jas. Ford, and Chas. Leuk.	Trenton, N. J.	Earthenware, slits for burning.	July 28, 1863.
40, 438	Polhamus, A. G.	Trenton, N. J.	Crockery stils.	Oct. 13, 1863.
38, 933	Polleys, Wm. H., and David D.	Wyuck, N. Y.	Saddle and wheel, adjustable, combination of. (Extension).	Mar. 27, 1863.
	Pomeroy, John, assignor to Henry A. Shipman and Robt. Hoadley.	Derby, Conn.	Plumb levels.	Oct. 27, 1863.
40, 886	Pomeroy, Thomas J., and Ephraim Culver. (See Culver & Pomeroy.)	New York, N. Y.	Lampwick regulators.	June 16, 1863.
39, 974	Pond, Henry E., assignor to William E. George.	Franklin, Mass.	Hats, &c., sizing for.	Dec. 8, 1863.
39, 838	Pond, Lucius W., assignor to self and John H. Vickers.	Worcester, Mass.	Fire-arms, revolving.	June 16, 1863.
40, 339	Pond, Minus	Boston, Mass.	Stoves, cooking.	June 9, 1863.
38, 410	Poole, John, and Thomas J. Patten.	Independence, Iowa	Drills, grain.	Oct. 20, 1863.
38, 411	Poor, Joshua. (See Wheeler, William, assignor.)	Hannar, Ohio.	Swages for zinc washboards.	May 5, 1863.
39, 421	Porter, Henry	New York, N. Y.	Clamping and nailing washboards.	May 5, 1863.
	Porter, C. T. (See Richards, C. H., assignor.)			
37, 450	Porter, Luther E., et al. (See Bigelow, Thos. S., assignor.)	Youngtown, N. Y.	Boots and shoes, manufacture of. (Antedated Oct. 16, '62).	Aug. 4, 1863.
38, 715	Porter, Luther E., et al. (See Bigelow, Thos. S., assignor.)	Youngtown, N. Y.	Wrenches.	Jan. 30, 1863.
38, 332	Porter, Rufus, assignor to Thomas F. Wells.	Melrose, Mass.	Pumps, air. (Antedated October 2, 1862).	May 30, 1863.
39, 054	Porter, Timothy R., and George H. Crook.	Syracuse, N. Y.	Saltblocks, flue walls for.	April 28, 1863.
39, 386	Porter, William	Hudson, N. J.	Saltblocks, flue walls for.	April 28, 1863.
	Post, Jared Wilson. (See Simpson, Edwin L., assignor.)	Myrtle River, Conn.	Engines, steam, slide valves for.	June 30, 1863.
	Post, Jared Wilson. (See Simpson, Edwin L., assignor.)	New York, N. Y.	Lanterns.	Aug. 18, 1863.
39, 717	Post, S. A., and W. H.	Durham, N. Y.	Planing shavings for upholsterers, machine for.	Sept. 1, 1863.
38, 910	Post, Sharon S.	Jessy City, N. J.	Bridges, iron.	June 16, 1863.
38, 839	Potter, N. Z.	Uniontown, Ind.	Sorghum juicer, &c., evaporating pans for.	June 9, 1863.

List of patentees of inventions, designs, and reissues, 1863.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
38, 412	Potter, William J.	Chicago, Ill.	Grain and ornamental printing, process for	May 5, 1863.
39, 953	Poulney, Thomas. (See Snedder, C. E., assignor.) Poulney, Thomas. (See Crispin, S. S., assignor.) Poulney, Thomas. (See Rodman & Crispin.) (Powell, George M.) (Charles D. Lincoln, and G. Evans.) Powell, George W. Powers, Albert E., and John Nell. (See Nell & Powers. Design.) Powers, D. A. E., and N. B. (See Nell & Powers, Design.) Powers, Deborah, Albert E., and Nathaniel B. (See Green, George, assignor. Design.) Powers, Deborah, Albert E., and Nathaniel B. (See Puter- son, James, assignor. Design.) Powers, Wesley Pruitt, Charles, et al. (See Miller, Herman, assignor.) Pruitt, Charles, et al. (See Miller, Herman, assignor.) Pruitt, David U. Pruitt, E. L. Pruitt, E. L., assignor to Geo. R. Carter Pruitt, Francis A., assignor to Pratt, Whitney & Co. Pruitt, Francis A., assignor to Pratt, Whitney & Co. Pruitt, Julius H. Pruitt, Pascal P. (See Townsend, J. F., assignor. Reissue.) Pruitt, Ulysses Pruitt, William H. (See Collins, Frederick W., assignor.) Pruitt, William S. Preble, Haskell Prentice, James H. (See Blackham, Job W., assignor.) Preston, Charles J. Preston, Henry, and James Mahood Preston, H. M., assignor to A. H. Baker Preston, O. W., Jr., and Charles Barry Price, Abby H., assignor to the Magic Ruffle Company Price, Abby H., assignor to the Magic Ruffle Company Price, Jacob, Jr. Price, Philip M. (See Sellers, Geo. Ezeol, assignor.) Pringle, David H., et al. (See Knapp, A. H., assignor.) Pringle, John Procter, David R. Procter, William, and David G. Payne Prosser, Thomas	Chicago, Ill. Chicago, Ill. River Falls, Wis. Hiddeford, Me. Rochester, N. Y. Chillicothe Camp, Cal. Troy, N. Y. Preston, N. Y. Cleveland, Ohio. Boston, Mass. Boston, Mass. Hartford, Conn. Hartford, Conn. New York, N. Y. Deep River, Conn. New York, N. Y. Machias, Maine Harlem, Ill. Philadelphia, Pa. St. Louis, Mo. Corning, N. Y. New York, N. Y. New York, N. Y. Petaluma, Cal. Jersey City, N. J. Gloucester, Mass. Elkhart, Ind. New York, N. Y.	Grain and ornamental printing, process for Grain tool Cot, camp and hospital. (Antedated April 11, 1862.) Paint, fire-proof Match blocks, machine for splitting Clothes dyer, window Bedstead Apple purer Apple purer, cutter-head for Pumps to bangs of barrels, apparatus for attaching Pumps to bangs of barrels, apparatus for attaching News distributor Planing and dressing ivory, machine for Sawing machine Washing machine Vehicles, wheel Milk can Trenoning spokes, machine for Irons, rad. Rattles Ruffles, turn-of-mado Presses, balling Hydrants Must be open Diecast, potato Tool for attaching tubes to boilers (Extension)	May 5, 1863. Sept. 15, 1863. Sept. 15, 1863. Oct. 27, 1863. June 16, 1863. Jan. 6, 1863. Feb. 2, 1863. Oct. 6, 1863. Oct. 6, 1863. Sept. 22, 1863. Oct. 13, 1863. Feb. 3, 1863. Mar. 24, 1863. Dec. 8, 1863. Oct. 20, 1863. Dec. 15, 1863. Mar. 24, 1863. Mar. 3, 1863. July 7, 1863. June 30, 1863. Aug. 23, 1863. Sept. 1, 1863. Dec. 8, 1863. Mar. 10, 1863. Sept. 29, 1863. April 3, 1863.

37, 772	Prosser, Trent T.	Chicago, Ill.	Ventilators	Feb. 21, 1863.
38, 600	Prosser, Trent T.	Fond du Lac, Wis.	Jars, fruit, stoppers for	May 19, 1863.
39, 530	Prosser, T. T., assignor to self, M. C. and K. A. Darling	Fond du Lac, Wis.	Boiler, steam. (Antedated January 31, 1863.)	Aug. 11, 1863.
40, 083	Prosser, T. T., assignor to self, M. C. and K. A. Darling	Fond du Lac, Wis.	Steam, exhaust, method of utilizing	Sept. 22, 1863.
1, 285	Prosser, T. T., assignor to self, M. C. and K. A. Darling	Fond du Lac, Wis.	Boilers, steam	Dec. 1, 1863.
40, 082	Prosser, T. T., assignor to self, M. C. and K. A. Darling	Paris, France	Pumps	Sept. 22, 1863.
39, 587	Puffer, A. D.	Somerville, Mass.	Soda-water cooler	Aug. 18, 1863.
39, 945	Puffer, Stephen, and Andrew J. Sands	Oxford, N. Y.	Water elevators	July 14, 1863.
39, 422	Pugsley, John G.	New York, N. Y.	Car springs	Aug. 4, 1863.
39, 777	Pullen, Richard H., assignor to Jesse D. Pullin	Cumhamsville, Ohio	Tent frame, folding	Sept. 1, 1863.
1, 382	Pullen, E., and D. G. and J. S. Davison. (See Davison, Pullen & Davison.)	Lynn, Mass.	Boots and shoes, machine for lasting	Jan. 6, 1863.
38, 284	Purves, William A., assignor to David W. Baldwin	Madrid, N. Y.	Saw, drag	April 21, 1863.
37, 705	Pusey, John G.	New York, N. Y.	Gun stocks, machinery for curving and drilling	Feb. 17, 1863.
38, 658	Putnam, Ellen T.	New York, N. Y.	Stocking supporters	May 19, 1863.
39, 326	Putnam Machine Co. (See Putnam & Wright, assignors.) Putnam, S. W., and John Q. Wright, assignors to Putnam Machine Company.)	Fitchburg, Mass.	Lathe	July 21, 1863.
39, 495	Pyle, Isaac N.	Decatur, Ind.	Car brakes, railroad	Aug. 11, 1863.
40, 577	Quick, George F.	Moorestown, N. J.	Hatching poultry, apparatus for	Oct. 13, 1863.
38, 124	Quincy, George H., et al. (See Platt, Wm. K., assignor.)	Stanton, Del.	Cultivating machine	April 7, 1863.
39, 065	Race, Washburn	Wilkesbarre, Pa.	Cultivating machine	April 7, 1863.
40, 278	Race, Wm. H. (See Miller, Max, assignor. Reissue.)	Lockport, N. Y.	Pumps	June 30, 1863.
38, 983	Ramsdell, Abraham	Moscow, Mich.	Engine, rotary	Oct. 13, 1863.
37, 421	Ramsdell, Charles V.	Bauger, Maine	Skates and fastenings	June 23, 1863.
40, 501	Randall, Henry, assignor to self and I. P. Baldwin	San Francisco, Cal.	Paddle wheels, construction and location of	Jan. 13, 1863.
40, 501	Randall, John G.	Canon City, Colorado Ter.	Ores, grinding, and amalgamating precious metals, ma- chine for	Nov. 3, 1863.
40, 854	Randall, Phineas M.	San Francisco, Cal.	Quartz mills or crushers	Dec. 8, 1863.
41, 019	Randolph, Theodore F.	Cincinnati, Ohio	Grates, hot-air	Dec. 22, 1863.
39, 676	Randolph, William	Bloomington, Ill.	Fishing nets, adjustment of	Aug. 23, 1863.
37, 706	Rankin, Andrew	Philadelphia, Pa.	Annunciator	Feb. 17, 1863.
38, 631	Rankin, James I.	Astoria, N. Y.	Carriage covers. (Antedated April 2, 1863.)	May 19, 1863.
37, 460	Rankin, John. (See Himmun, Egbert, assignor.)	Chester, Conn.	Broilers, meat	Jan. 20, 1863.
1, 759	Ransom, George B.	Albany, N. Y.	Stove, cook's, plates of a	July 7, 1863.
1, 759	Ransom, Samuel H.	Albany, N. Y.	Stove, cook's, plates of a	July 7, 1863.
1, 801	Ransom, Samuel H.	Albany, N. Y.	Stove, cook's, plates of a	July 7, 1863.
1, 802	Ransom, Samuel H.	Albany, N. Y.	Stove, cook's, plates of a	July 7, 1863.
38, 840	Rath, Edward F.	Woodbridge, Conn.	Drills, seed. (Antedated January 11, 1862.)	June 9, 1863.
1, 729	Rath, D. F., et al. (See Kuenow, Cole, & Rath.)	Albany, N. Y.	Stove, cooking, plates for a	June 21, 1863.
1, 750	Rathbone, John F.	Albany, N. Y.	Stove, cooking, plates for a	June 23, 1863.
1, 791	Rathbone, John F.	Albany, N. Y.	Stove, cooking, plates for a	June 23, 1863.
	Rathbone, J. N., and E. F. Branch. (See Church, Jos., ass'or.)			

List of patents of inventions, designs, and reissues, 1863.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
39, 749	Rauch, J. H.	Ida, Mich.	Sawing machine, cross-cut.	Sept. 1, 1863.
40, 855	Runch, John H.	New York, N. Y.	Pen and pencil cases.	Dec. 8, 1863.
39, 452	Rawson, Smith E. G.	Saratoga, N. Y.	Supporters, textile.	Aug. 4, 1863.
38, 912	Ray, Samuel.	Alliance, Ohio.	Casting sheaves, moulds for.	June 16, 1863.
39, 172	Ray, Willard S.	North Adams, Mass.	Steam traps.	July 7, 1863.
38, 335	Ray, William C.	Redington, N. J.	Presses.	April 28, 1863.
39, 496	Raymond, Edward A.	Brooklyn, N. Y.	Hatchet drills.	Aug. 11, 1863.
38, 964	Raymond, Lewis.	New York, N. Y.	Bouts, metallic, construction of.	June 23, 1863.
40, 279	Raymond, Squire.	New York, N. Y.	Bouts, life, valve for.	Oct. 13, 1863.
40, 709	Raymond, Timothy, assignor to self and Samuel Diez.	Groton, N. Y.	Pitch-forks, horse.	Nov. 24, 1863.
38, 537	Raynolds, Charles T., et al. (See Miller, Herman, assignor.)	Brooklyn, N. Y.	Lamp, kerosene, burners for.	May 12, 1863.
40, 430	Raynor, William.	Brooklyn, N. Y.	Postage stamps, cancelling. (Antedated October 14, 1863).	Oct. 27, 1863.
39, 497	Read, C. D.	Hamilton, Ohio.	Harvesters, rakes for.	Aug. 11, 1863.
40, 164	Read, Wilbur.	Greenwood, Cal.	Press, hay and cotton.	Sept. 23, 1863.
39, 702	Reber, George H., assignor to Louis Negbauer.	New York, N. Y.	Envelope machine.	Aug. 25, 1863.
38, 211	Reber, Joshua.	Perry Township, Pa.	Fence, portable.	April 21, 1863.
37, 269	Reckendorfer, Joseph.	New York, N. Y.	Pencils, lead.	Jan. 6, 1863.
38, 913	Redding, William F.	Utica, N. Y.	Fastening for blind slats.	June 16, 1863.
39, 046	Redner, Joseph Antonio Jean.	Paris, France.	Watches.	June 30, 1863.
39, 835	Reeve, William R.	Tremont, Pa.	Coul-breaking rolls. (Antedated January 16, 1863).	Sept. 8, 1863.
39, 453	Reed, Benjamin.	Alleghany, Pa.	Propulsion, marine, wheels for.	Aug. 17, 1863.
38, 582	Reed, George F.	Roxbury, Mass.	Watches, stop.	May 12, 1863.
37, 591	Reed, Henry. (See Patrie, Lewis, assignor.)	Jersey City, N. J.	Process of manufacturing enamelled fruit jars and other vessels.	Feb. 3, 1863.
38, 179	Reed, H. H., et al. (See Refruss, George, assignor.)	Marshfield, Mass.	Threshing machine.	April 14, 1863.
38, 334	Reed, Jesse.	Marshfield, Mass.	Steering apparatus. (Extension).	May 27, 1863.
39, 337	Reed, John A. (See Thompson, John, assignor.)	Jersey City, N. J.	Pumps, steam, direct action.	April 28, 1863.
38, 761	Reed, Samuel G.	Worcester, Mass.	Hetting wagon tires, apparatus for.	July 28, 1863.
38, 682	Reese, Jacob.	Hackensack, Pa.	Millstones, stopping.	June 2, 1863.
38, 869	Reeves, David, assignor to Phoenix Iron Company.	Pittsburg, Pa.	Stills, oil.	May 13, 1863.
37, 835	Reffelt, John Hermann Randolph.	Phoenixville, Pa.	Metal, construction of rolls for rolling.	June 9, 1863.
37, 978	Regan, Barnet.	Hoboken, N. J.	Numerical frames.	March 3, 1863.
38, 841	Regester, Joshua.	Miamisburg, Ohio.	Drills, seed.	March 24, 1863.
40, 311	Refruss, George, assignor to C. S. Patterson, E. Pincus, A. Hart, M. Moore, A. Mitchell, and H. H. Reed.	Baltimore, Md.	Hydrants.	June 9, 1863.
38, 325	Rehn, Isaac.	Philadelphia, Pa.	Sewing machines.	Oct. 13, 1863.
40, 361	Reichmann, Christian.	Philadelphia, Pa.	Bank-notes, &c., mode of preventing the counterfeit of.	April 28, 1863.
38, 336	Reid, James.	Philadelphia, Pa.	Lamp-shade supporter.	Oct. 20, 1863.
39, 750	Reid, John S.	Muncie, Ind.	Fire-arms, revolving.	April 28, 1863.
37, 519	Reid, John Wyatt.	New York, N. Y.	Hatters.	Sept. 1, 1863.
			Fortifications.	Jan. 27, 1863.

39, 327	Reid, F. W., assignor to James S. and Thomas H. A. Litterbury and J. Reddick.	Hillingham, Pa.	Jan. preserve.	July 21, 1863.
38, 242	Reif, Christian.	Lewis Township, Pa.	Clover hullers. (Antedated January 30, 1863).	April 21, 1863.
39, 067	Reigart, J. Franklin.	Washington, D. C.	Vessels, means for aid in the propulsion of.	June 30, 1863.
40, 283	Reilly, Thomas W., assignor to Hector H. McLean.	New Orleans, La.	Bales of merchandise, mode of fastening.	Dec. 15, 1863.
37, 921	Remington, E., & Sons. (See Rider, Joseph, assignor.)	Ilion, N. Y.	Fire-arms, revolving, securing the base pin of.	March 17, 1863.
40, 769	Remington, Samuel.	Ilion, N. Y.	Presses, drop.	Dec. 1, 1863.
	Remschler, H., and Jabez J. Piggott. (See Heaton, Charles W. S., assignor.)			
	Remschler, H., and Jabez J. Piggott. (See Heaton, Charles W. S., assignor.)			
37, 775	Requa, E. B.	Jersey City, N. J.	Lamps, combination of globe and chimney for.	Feb. 24, 1863.
39, 068	Requa, E. B.	Jersey City, N. J.	Windlases, power.	June 30, 1863.
40, 552	Requa, E. B.	Jersey City, N. J.	Saw-mill, head block for.	Nov. 3, 1863.
1, 488	Requa, E. B.	Jersey City, N. J.	Lamps. (Reissue.)	June 2, 1863.
37, 580	Resley, Horace.	Cambelund, Md.	Shells, explosive, for ordnance.	Jan. 27, 1863.
37, 836	Reynolds, Andrew J.	Dayton, Ohio.	Pumps.	March 3, 1863.
	Reynolds, C. T., et al. (See Miller, Herman, assignor.)			
	Reynolds, David. (See Cookson, John C., assignor.)			
41, 020	Reynolds, David M.	Rising Sun, Md.	Horse-powers, safety brakes for.	Dec. 22, 1863.
37, 727	Reynolds, George H.	New York, N. Y.	Printing press, lithographing.	Feb. 17, 1863.
40, 915	Reynolds, George H., and George H. Babcock.	Myrtle Bridge, Conn.	Pumps.	Dec. 15, 1863.
	Reynolds, Henry. (See Ellis & White, assignors.)			
	Reynolds, Henry, et al. (See Ellis & White, assignors.)			
	Reynolds, Henry, et al. (See Ellis & White, assignors.)			
40, 856	Reynolds, Jabez, and Daniel G. Harrison. (See Harrison & Reynolds.)			
1, 413	Reynolds, Lucius E.	Mendon, Ill.	Projectile, compound, for ordnance.	Dec. 8, 1863.
37, 789	Reynolds, L. Simpson.	Indianapolis, Ind.	Milk, flour, friction bolt for.	March 31, 1863.
	Reynolds, P. B. and L. C., assignors to selves and Clark G. Reynolds.	Prophetstown, Ill.	Cultivators.	Feb. 24, 1863.
38, 925	Reynolds, Ransom S.	New Haven, Conn.	Driers, grain.	June 23, 1863.
40, 121	Reynolds, Robert B.	United States navy.	Ordnance, breech-loading.	Sept. 29, 1863.
37, 641	Rhoades, George M.	East Hamilton, N. Y.	Mail bags, device for closing.	Feb. 10, 1863.
38, 603	Rhoades, George M.	East Hamilton, N. Y.	Mill picks. (Antedated December 14, 1862).	May 19, 1863.
37, 521	Rhoades, N. A.	Waterbury, Vt.	Clothes-wringer.	Jan. 27, 1863.
37, 377	Rhoades, Benjamin, assignor to James McGeary.	England.	Tubes, pipes, &c., apparatus for the manufacture of.	Jan. 6, 1863.
	Rhodes, J., et al. (See Lawton, Hilbert, & Rhodes.)			
40, 288	Rhodes, John C., assignor to B. Hobart & Son.	East Bridgewater, Mass.	Screw blanks, machines for nicking.	Nov. 10, 1863.
38, 337	Rice, Robert.	Georgetown, Ill.	Cultivators.	April 28, 1863.
38, 604	Rice, Wayne H.	Windsor, Conn.	Fire-arms, self-loading.	May 19, 1863.
40, 770	Rich, Martin.	Horsicon, Wis.	Drills, grain.	Dec. 1, 1863.
37, 774	Richardiere, Pierre Eugene.	Paris, France.	Buttons.	Feb. 24, 1863.
37, 980	Richards, Daniel. (See Thompson, Abel, assignor.)	Hartford, Conn.	Engines, steam, indicator.	March 24, 1863.
1, 757	Richards, Egbert S.	Attleboro', Mass.	Chains, links of a.	May 5, 1863.
1, 758	Richards, Egbert S.	Attleboro', Mass.	Breast-pin and car-drops. (Design.)	May 5, 1863.

List of patentees of inventions, designs, and reissues, 1863.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
1, 761	Richards, Egbert S.	Attleboro', Mass.	Chain, ornamental, links of an.	May 19, 1863.
38, 842	Richards, Egbert S.	Attleboro', Mass.	Chains, &c., ornamental.	June 9, 1863.
40, 280	Richards, Egbert S., and Levi Alexander.	Cumington, Mass.	Washing dishes and other like table furniture, apparatus for.	Oct. 13, 1863.
1, 527	Richards, John.	Sherburne Falls, Mass.	Saws, scroll, guide-support for.	Aug. 25, 1863.
30, 246	Richards, Wesley.	Columbus, Ohio.	Fire-arms, breech-loading.	July 14, 1863.
38, 846	Richardson, A. F.	England.	Boat-truss.	June 23, 1863.
37, 522	Richardson, Francis B.	Worcester, Mass.	Syringes, enema, elastic bulb.	Jan. 27, 1863.
1, 472	Richardson, John, assignor to Walter A. Wood.	Boston, Mass.	Harvesters, rakes for.	May 12, 1863.
28, 911	Richardson, J. J.	Ilwaco, N. Y.	Wrenches.	June 16, 1863.
1, 433	Richardson, M. A.	Woodstock, Vt.	Cream pump.	March 17, 1863.
	Richardson, Thurston, and Larkoy N. Leslie. (See Leslie & Richardson.)	Sherman, N. Y.		
40, 186	Richardson, William A., et al. (See Collins, Michael H., et al.)	Springfield, Ill.	Haggage checks.	Oct. 6, 1863.
38, 061	Richardson, William D.	San Francisco, Cal.	Washing machine.	March 31, 1863.
40, 887	Richter, Andrew J.	New York, N. Y.	Fire-arms, breech-loading.	Dec. 8, 1863.
40, 281	Rider, J. J.	Wilton Junction, Iowa.	Planters, corn.	Oct. 13, 1863.
37, 873	Ridour, William.	Springfield, Ohio.	Presses, hay.	March 10, 1863.
40, 431	Ridour, William, and Mathon K. Blier. (See Adley, Heman A., assignor.)	Franklin Grove, Ill.	Carriage wheels, method of attaching.	Oct. 27, 1863.
38, 062	Rieson, Andrew. (See Steinmetz, Samuel, assignor.)	Pittsburg, Pa.	Engines, steam, slide valves of.	March 31, 1863.
39, 751	Ring, David.	Demariscott, Maine.	Crutches.	Sept. 1, 1863.
39, 675	Ripson, J. B.	East Kendall, N. Y.	Hub machines.	Aug. 25, 1863.
40, 641	Risher, T. A.	Oklauch, Iowa.	Harvesters, corn.	Nov. 17, 1863.
39, 125	Ritchie, Edward Samuel.	Brookline, Mass.	Computers, mariners.	April 7, 1863.
39, 126	Ritchie, Edward Samuel.	Brookline, Mass.	Compensers, liquid, cards for.	April 7, 1863.
38, 762	Ritchie, Francis E., and Daniel E. Paris. (See Paris & Ritchie, Design.)	Brookline, Mass.	Compensers, liquid, cards for.	June 2, 1863.
37, 361	Ritter, Michael.	Vincennes, Ind.	Projectiles for ordnance.	Jan. 6, 1863.
39, 677	Ritter, Andrew J.	Rahway, N. J.	Carriage seats. (Antedated June 12, 1862.)	Aug. 25, 1863.
39, 173	Robbins, Francis.	Acton, Mass.	Turning staves, chucks for.	July 7, 1863.
37, 425	Robbins, Richard C.	Jersey City, N. J.	Pipe, gas, joints.	Jan. 13, 1863.
39, 778	Roberts, Andrew J., assignor to Benjamin F. Roberts.	Boston, Mass.	Harvesters, machines for making.	Sept. 1, 1863.
37, 379	Roberts, Benjamin S.	United States army.	Projectiles for rifled ordnance.	March 31, 1863.
37, 523	Roberts, Charles, et al. (See Smith, Franklin, assignor.)	New York, N. Y.	Vulcanizing machine.	Jan. 27, 1863.
1, 446	Roberts, Edward A. L., and William J. Demarest, assignors to Edward A. L. Roberts.	New York, N. Y.	Rubber, &c., apparatus for vulcanizing.	March 31, 1863.

40, 282	Roberts, E. C.	Salem, Mich.	Houses, fruit. (Antedated October 7, 1863.)	Oct. 13, 1863.
37, 827	Roberts, George F.	St. Louis, Mo.	Box machine.	March 3, 1863.
41, 022	Roberts, L. D.	Cleveland, Ohio.	Horsehoes, machine for making.	Dec. 22, 1863.
38, 338	Roberts, Thomas D.	Elletts, N. Y.	Saw, hand.	April 28, 1863.
38, 243	Roberts, A. L., M. M. Donnelly, and D. H. Krum.	Cincinnati, Ohio.	Founders, disks for.	April 21, 1863.
39, 588	Robinson, Charles H.	Bath, Maine.	Presses, hay and cotton.	Aug. 18, 1863.
39, 589	Robinson, David.	Cold Spring, N. Y.	Moulds, sand, applying wash to.	Aug. 18, 1863.
40, 797	Robinson, Edward. (See Douglas, R. A., assignor.)	England.	Washing machine, tank. (Patented in England Dec. 20, '59.)	Dec. 1, 1863.
39, 955	Robinson, William. (See Havch, John, assignor.)	Detroit, Mich.	Engines, steam, slide valves for.	Sept. 15, 1863.
38, 843	Robinson, William B.	Ripon, Wis.	Engines, steam, slide valves for.	June 9, 1863.
40, 187	Robinson, W. W.	Ripon, Wis.	Engines, steam, slide valves for.	Oct. 6, 1863.
38, 328	Rolfe, Thomas, assignor to E. C. Wooster.	New York, N. Y.	Gate catches.	July 21, 1863.
39, 779	Rolfe, Thomas, assignor to E. C. Wooster.	New York, N. Y.	Ruffling, apparatus for making.	Sept. 1, 1863.
1, 556	Rolfe, Thomas, assignor to Emma C. Wooster.	New York, N. Y.	Ruffling, apparatus for making.	Oct. 27, 1863.
39, 752	Rochow, Julius Ferdinand.	Brooklyn, N. Y.	Ruffling, apparatus for making.	Sept. 1, 1863.
38, 715	Rockafellow, Samuel, assignor to self and Joshua W. Hoops.	Muscatine, Iowa.	Steering apparatus.	Aug. 25, 1863.
38, 696	Rockwell, John W.	Ridgely, Ind. Conn.	Cultivators.	May 26, 1863.
40, 946	Rockwell, John W.	Ridgely, Ind. Conn.	Currycombs.	Dec. 15, 1863.
39, 956	Rodgers, Toppin P.	Taunton, Mass.	Belt shippers.	Sept. 15, 1863.
40, 988	Rodman, Thomas J., and Silas Crispin, assignors to Thomas Poulter.	Watertown, Mass.	Cartridge, metallic.	Dec. 15, 1863.
37, 922	Roe, Giles Boliver.	New York, N. Y.	Planters, corn, foot.	Mar. 17, 1863.
37, 923	Roe, Giles Boliver.	Palmer's Point, Ill.	Pumps, cuttle.	Mar. 17, 1863.
37, 524	Roe, Henry A.	Palmer's Point, Ill.	Chesse van.	Jan. 27, 1863.
38, 359	Roe, Henry A.	Madison, Ohio.	Mosquito canopy.	April 28, 1863.
38, 127	Roff, Alphon.	Brooklyn, N. Y.	Fortifications.	April 7, 1863.
37, 642	Rogers, Isiah.	Bridgeport, Conn.	Bridges.	Feb. 10, 1863.
40, 947	Rogers, Isiah.	Washington, D. C.	Safes.	Dec. 15, 1863.
	Rogers, John F.	South Bend, Ind.	Trucks, railroad. (Extension.)	Nov. 10, 1863.
40, 857	Rogers, Joshua, and Paul Keller. (See Keller and Rogers.)	New York, N. Y.	Stamp canceller.	Dec. 8, 1863.
39, 753	Rolfe, Richard H.	New York, N. Y.	Cooking ranges. (Extension.)	Sept. 10, 1863.
39, 958	Rolfe, Philip.	New York, N. Y.	Whistle-reeds. (Antedated October 26, 1861.)	Sept. 1, 1863.
38, 541	Rolph, Kenben.	Coventry, N. Y.	Carriages, hold-backs for. (Antedated November 2, 1861.)	Sept. 15, 1863.
	Romerize, Henry T.	Philadelphia, Pa.	Bit, "anatomical," for horses.	May 12, 1863.
38, 414	Ross, Stephen, et al. (See Myers, Benjamin S., assignor.)	Hartford, Conn.	Cartridges, metallic, shot.	May 5, 1863.
38, 415	Ross, John B.	Brooklyn, N. Y.	Propeller, marine.	May 5, 1863.
39, 957	Ross, John B.	Detroit, Mich.	Engines, steam.	Sept. 15, 1863.
39, 308	Ross, William T.	Geneva, N. Y.	Spring, door. (Antedated March 7, 1863.)	July 21, 1863.
38, 866	Roper, Sylvester H., assignor to Elmer Townsend.	Boston, Mass.	Air engines, hot.	June 9, 1863.
40, 084	Rose, Israel M., assignor to J. Wilcox.	New York, N. Y.	Sewing machines, tucking device for.	Sept. 22, 1863.
38, 180	Rose, Timothy.	Cortlandville, N. Y.	Water wheels, scroll for.	April 14, 1863.
39, 171	Rose, William.	England.	Metals, quality and ornamentation of.	July 7, 1863.
38, 416	Ross, Henry.	Elkhart, Ind.	Pumps.	May 5, 1863.
37, 875	Ross, Alexander.	Brooklyn, N. Y.	Fire alarms and heat detectors.	Mar. 10, 1863.
39, 424	Ross, Charles.	Hartland, Mich.	Horse powers, fastening for.	Aug. 4, 1863.
39, 958	Ross, Charles.	Hartland, Mich.	Measuring grain, machines for.	Sept. 15, 1863.
39, 896	Ross, David A.	Cincinnati, Ohio.	Fireplaces.	Sept. 8, 1863.

List of patentees of inventions, designs, and reissues, 1863.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
37, 981	Ross, George	Newport, Ky.	Pipes, patterns for moulding.	Mar. 24, 1863.
40, 574	Ross, H. Parker	Hastings, N. Y.	Fences, portable. (Antedated October 21, 1863.)	Nov. 10, 1863.
39, 754	Ross, Joseph W.	Boston, Mass.	Ink-wells.	Sept. 1, 1863.
40, 642	Ross, Mary C.	New York, N. Y.	Limiment, compound for.	Nov. 17, 1863.
40, 643	Ross, Mary C.	New York, N. Y.	Salve, composition for.	Nov. 17, 1863.
38, 417	Roundey, George C.	New York, N. Y.	Gus-burners.	May 5, 1863.
38, 458	Routh, Jeremiah	Grayville, Ill.	Snout machine and separator, combined.	April 7, 1863.
38, 687	Row, John	Manitowish, Minn.	Wagon brake.	May 26, 1863.
38, 915	Rowan, Charles E.	Brooklyn, N. Y.	Rice-cleaners.	June 16, 1863.
39, 309	Rowan, Charles E.	Brooklyn, N. Y.	Cars, railroad, buffer springs for.	July 21, 1863.
40, 122	Rowand, A. H.	Alleghany, Pa.	Leather-splitting machines.	Sept. 23, 1863.
38, 763	Rowe, Bradford	Albany, N. Y.	Pencil and sponge holder for cleaning slates, &c.	June 2, 1863.
39, 704	Rowe, John L., assignor to Franklin C. Brownell.	New York, N. Y.		Aug. 25, 1863.
38, 418	Rowe, Samuel M., et al. (See Bigelow, Thos. S., assignor.)	Greenpoint, N. Y.	Vessels, apparatus for launching.	May 5, 1863.
38, 605	Rowland, Thomas F.	Greenpoint, N. Y.	Bolt-holes in barrels of gunboats, drilling.	May 19, 1863.
38, 419	Royer, Alfred	Reed's Mills, Ohio.	Furnaces, smelting, device for heating ores in.	May 5, 1863.
40, 147	Rozell, John, assignor to Felix Campbell and Henry Y. Davison.	Brooklyn, N. Y.	Fire regulator. (Antedated September 11, 1863.)	Sept. 29, 1863.
	Rubber Clothing Company. (See Clark, Augustus N., assignor.)			
	Rugee, Hermann, and Wenzel Toepler. (See Toepler and Rugee.)			
39, 960	Rumbold, T. F.	St. Louis, Mo.	Rolling mills. (Antedated June 2, 1863.)	Sept. 15, 1863.
38, 643	Rundell, Lorenzo D.	South Waterloo, N. Y.	Presses, hay, pulps for.	Feb. 10, 1863.
38, 129	Rundell, L.	Coxsack, N. Y.	Hay elevating forks.	April 7, 1863.
38, 420	Rundell, Luman	New Baltimore, N. Y.	Hay elevating forks.	May 5, 1863.
37, 707	Rundell, Wm. F.	East Genoa, N. Y.	Jack, lifting.	Feb. 17, 1863.
39, 961	Runk, J. L.	Nashville, Ill.	Ploughs, gang.	Sept. 15, 1863.
40, 984	Ruselhaupt, Frederick M., assignor to John G. Kernbau	New York, N. Y.	Stone, artificial, manufacture of.	Dec. 15, 1863.
40, 575	Rusco, Volney L.	Chicago, Ill.	Tanning, machine for.	Nov. 10, 1863.
40, 644	Rusco, Volney L.	Chicago, Ill.	Lard, apparatus for cooling.	Nov. 17, 1863.
39, 310	Russell, Clement	Massillon, Ohio	Car springs, railroad.	July 21, 1863.
39, 678	Russell, Dwight	Salford, Mass.	Injectors, powder.	Aug. 25, 1863.
	Russell and Erwin Manufacturing Company. (See Terry, James E., assignor.)			
40, 283	Russell, E. P.	Manlius, N. Y.	Harvester digger.	Oct. 13, 1863.
39, 780	Russell, Henry R., assignor to self and Isaac S. Russell.	New Market, Md.	Harvesters.	Sept. 1, 1863.
39, 329	Russell, Isaac S. and Henry R. Russell.	New Market, Md.	Harvesters, raking attachments to.	July 21, 1863.
38, 130	Russell, John	Worcester, Mass.	Dressing case, portable.	April 7, 1863.
38, 181	Rath, Jacob	Philadelphia, Pa.	Cars, railroad, city.	April 14, 1863.
38, 086	Ratlidge, O. E.	Dayton, Ohio.	Paper-making machinery. (Antedated November 21, 1861.)	May 30, 1863.
39, 679	Ryder, A. V.	New York, N. Y.	Barrel and trunk, combination of.	Aug. 23, 1863.

38, 244	Ryder, John H.	Wapello, Iowa.	Planters, corn.	April 21, 1863.
38, 646	Rynes, Christopher E.	Charlestown, Mass.	Press, hydraulic.	May 19, 1863.
40, 948	Rynes, Christopher E.	Charlestown, Mass.	Presses or cases, tobacco, fastenings for.	Dec. 13, 1863.
38, 743	Sackett, R. W.	Worcester, Mass.	Stamps, &c., apparatus for wetting.	May 12, 1863.
39, 438	Safely, Robert	Cohoes, N. Y.	Water wheels.	Aug. 11, 1863.
39, 069	Safford, Henry W.	Philadelphia, Pa.	Blinds, Venetian, hanging.	June 30, 1863.
1, 742	Safford, Joseph A.	Winchester, Mass.	Eyelet machine, stand of an.	June 24, 1863.
40, 284	Sage, A. A.	Memphis, Mich.	Yeast, device for rinsing.	Oct. 13, 1863.
38, 421	Sage, W. J.	Steubenville, Ohio.	Horse powers.	May 5, 1863.
1, 743	Sailor, Samuel	Philadelphia, Pa.	Picture frame.	Mar. 24, 1863.
	Salisbury, Thomas L. (See Jones, William, assignor.)			
39, 425	Salisbury, Guy M., and	Wilson, N. Y.	Ploughs.	Aug. 4, 1863.
	Salisbury, George S.	Clarendon, N. Y.	Iron, malleable, direct from the ore, process of making.	Nov. 10, 1863.
	Salter, Moses S.	Newark, N. J.	(Extension.)	
			Furnaces for making malleable iron.	Nov. 24, 1863.
40, 710	Salter, Moses S., assignor to Charles L. Ladd.	Salterville, N. J.	Pipes, conduit.	Mar. 3, 1863.
37, 828	Salzger, J. C. (See Ferteg, J. P., assignor.)	New York, N. Y.	Torpedoes, mines, &c., exploding.	Oct. 30, 1863.
40, 362	Sampson, William S.	Philadelphia, Pa.	Skirts, hoop. (Antedated October 10, 1863.)	Oct. 30, 1863.
40, 363	Sampson, Wm. S., et al. (See Ingalls, Seth H., assignor.)	New York, N. Y.	Bit, or boring tool.	May 19, 1863.
38, 653	Sandborn, Sven Eskil	Derby Line, Vt.	Needles, knitting, making. (Antedated June 10, 1863.)	June 23, 1863.
38, 987	Sanders, Leopold	Gilford, N. H.	Needles, machine knitting. (Antedated Feb. 23, 1863.)	June 23, 1863.
38, 988	Sanderson, Burton, assignor to E. C. Merrill & Co.	Gilford, N. H.	Hemp and flax, machinery for breaking.	April 24, 1863.
38, 340	Sand, Andw. J., and Stephen Puffer. (See Puffer & Sands.)	New York, N. Y.	Flax, hemp, &c., machines for breaking and cleaning.	June 10, 1863.
38, 916	Sands, Thomas	New York, N. Y.	Flax, &c., machine for breaking and cleaning.	Aug. 25, 1863.
39, 680	Sands, Thomas	New York, N. Y.	Flax, hemp, &c., machine for breaking and cleaning.	Sept. 15, 1863.
39, 962	Sanford, Gelston, and James E. Mallory.	New York, N. Y.	Hemp, flax, &c., machine for breaking and cleaning.	Sept. 22, 1863.
40, 063	Sanford, Gelston, and	New York, N. Y.		
	James E. Mallory	New York, N. Y.		
	Sanford, Harroun & Co. (See Hill, George J., assignor.)			
	Sanford, Joseph H., and John Brooks. (See Brooks and Sanford.)			
40, 065	Sanford, N. C.	Meriden, Conn.	Sleds, boys'.	Sept. 22, 1863.
37, 708	Sanford, Samuel T.	Fall River, Mass.	Stringing dried apples and other fruits, machine for.	Feb. 17, 1863.
39, 963	Sanford, Samuel T.	Fall River, Mass.	Fruit, device for quartering, coring, and stringing.	Sept. 15, 1863.
37, 876	Sanger, Ebenezer C.	Canterbury, Conn.	Mules, self-acting, regulators for.	July 1, 1863.
38, 764	Sangster, Amos W.	Buffalo, N. Y.	Dies for turning flanges.	Mar. 2, 1863.
37, 306	Sangster, Hugh	Buffalo, N. Y.	Lamps, hand, for vessel.	June 2, 1863.
39, 705	Sargent, Charles G.	Granville, Mass.	Barring cylinders.	Sept. 29, 1863.
37, 982	Sargent, Joseph F.	Boston, Mass.	Eyeletting machines.	Jan. 6, 1863.
1, 411	Sargent, Joseph F., assignor to self and Elmer Townsend.	Boston, Mass.	Eyeletting machines.	Aug. 25, 1863.
39, 706	Saul, Thomas	New York, N. Y.	Handing ships' armor-plates, press for.	Mar. 24, 1863.
39, 681	Saunders, A. F., assignor to self and C. B. Unsford	Seymour, Conn.	Steam apparatus, traps for.	Mar. 24, 1863.
37, 592	Saunders, Benjamin	Nashville, N. H.	Clothes-dryer.	Aug. 25, 1863.
38, 432	Santemmelster, Ferdinand	Newark, N. J.	Japan, &c., over fabrics, machine for spreading.	Feb. 3, 1863.
39, 531	Savage, Orrin F., and George P. Hawley.	Ithaca, N. Y.	Lamp-burners.	May 5, 1863.
	Savory, Richard, assignor to self and Robert C. Totten.	Pittsburg, Pa.	Iron and steel with copper, brass, &c., process of unilting.	Aug. 11, 1863.
			(Antedated August 9, 1863.)	

List of patentees of inventions, designs, and reissues, 1863.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
38, 245	Seely, Samuel J.	Brooklyn, N. Y.	Rubber spring.	April 21, 1863.
38, 547	Seely, Samuel J.	Brooklyn, N. Y.	Cars, constructing.	May 12, 1863.
38, 765	Seely, Samuel J.	Brooklyn, N. Y.	Car for carrying petroleum, &c.	June 2, 1863.
40, 433	Seely, J. C., et al. (See Holden, Luther, and Sloughton B., assignors.)	Philadelphia, Pa.	Lubricator. (Antedated October 10, 1863.)	Oct. 27, 1863.
39, 071	Selden, Geo. S., et al. (See Bullock, William, assignor.)	Eric, Pa.	Oil, &c., case or box for holding.	June 30, 1863.
38, 508	Selden, Samuel	Spring Valley, Ohio.	Mills, frame and level for	May 12, 1863.
40, 576	Sellers, George Esol	Hardin county, Ill.	Fibre, &c., separation of, disintegration of vegetable substances for the.	Nov. 10, 1863.
40, 217	Sellers, G. Esol, assignor to self and Phillip M. Price.	Hardin county, Ill.	Paper stock, preparing woody fibre for.	Oct. 6, 1863.
1, 573	Sellers, Theodore, assignor through <i>mesne</i> assignments to John F. Griffin.	Brooklyn, N. Y.	Cans, preserve, closing. (Release.)	Nov. 24, 1863.
39, 312	Sellers, William	Philadelphia, Pa.	Injector, Giffard's.	July 21, 1863.
39, 313	Sorrell, Alfred T. (See Lawrence, John, assignor.)	Philadelphia, Pa.	Injector, Giffard's.	July 21, 1863.
40, 434	Sorrell, Edward W. (See Harrison, Enoch, assignor.)	Dixon, Ill.	Scales, platform.	Oct. 27, 1863.
38, 672	Seymour, Elias W., and George W. Gregory, assignors to George W. Gregory	Centro Lake, Pa.	May elevating forks.	June 9, 1863.
40, 286	Seymour, Henry J.	Binghamton, N. Y.	Moulding machine	Oct. 13, 1863.
38, 063	Shank, Isaac R., deceased, by Elizabeth F. Shank, adm'x.	Buffalo, Va.	Fences.	Mar. 31, 1863.
39, 501	Shapely, J. Hamilton	Exeter, N. H.	Gum lock.	Aug. 11, 1863.
40, 711	Sharp, Theodore	Louisville, Ky.	Mills, elder	Nov. 24, 1863.
38, 917	Sharp, Thomas	Chicago, Ill.	Railroad switches, frogs for.	June 16, 1863.
39, 683	Sharp, Thomas	Chicago, Ill.	Unloading canal-boats, mode of.	Aug. 23, 1863.
40, 153	Sharp, Thomas	Chicago, Ill.	Car wheels.	Sept. 29, 1863.
40, 190	Sharp, Thomas	Chicago, Ill.	Castings car wheels, chills for.	Oct. 6, 1863.
40, 771	Sharp, Thomas	Philadelphia, Pa.	Railroad frogs.	Dec. 1, 1863.
1, 455	Sharps, Christian	Philadelphia, Pa.	Cartridges, packing.	April 21, 1863.
40, 772	Sharps, Christian	Philadelphia, Pa.	Cartridges, metallic, method of priming.	Dec. 1, 1863.
38, 538	Shattuck, Darwin, user to self and Alexander F. Whitaker	Branchport, N. Y.	Thrashing and cleaning clover and grass seed, machines for.	May 12, 1863.
38, 135	Shattuck, David, and Shattuck, Jas. S., user to the Whipple File Manufacturing Co.	Malden, Mass.	Knaps, machines for cutting.	April 7, 1863.
38, 989	Shaver, Jacob	Troy, N. Y.	Stoves.	June 23, 1863.
38, 918	Shaver, Jacob, and Albert E. Corso	Troy, N. Y.	Stoves, cooking.	June 16, 1863.
40, 952	Shaw, Charles A.	Hiddeford, Maine	Robbins.	Dec. 25, 1863.
38, 246	Shaw, Charles A., and James R. Clark	Hiddeford, Maine	Sewing machine.	Apr. 21, 1863.
37, 525	Shaw, C. G.	Florence, Mass.	Shuttle counter.	Jan. 27, 1863.
1, 594	Shaw, Daniel	Chicago, Ill.	Mill, animal and grain separator.	Nov. 3, 1863.
39, 350	Shaw, Henry F.	West Roxbury, Mass.	Saw frames, wood.	July 21, 1863.

38, 766	Shaw, Philander	Hudson, Mass.	Hoops and shoes.	June 2, 1863.
38, 068	Shaw, Thomas, assignor to self and Philip F. Justice	Philadelphia, Pa.	Motion, crank.	May 19, 1863.
37, 704	Shaw, Thomas, assignor to self and John L. Lutsen.	Philadelphia, Pa.	Steam gauge.	Feb. 24, 1863.
38, 791	Shaw, Thomas, assignor to self and John L. Lutsen.	Philadelphia, Pa.	Burning fluids for the generation of steam, &c., apparatus for.	June 2, 1863.
37, 677	Shaw, Thomas L.	Omaha City, Nebraska Territory	Balloons.	Feb. 10, 1863.
37, 877	Shaw, W. Anthony	New York, N. Y.	Pipes, lead, with tin lining.	Mar. 10, 1863.
1, 576	Shaw, William A.	Boston, Mass.	Bottles and bottle stoppers.	Nov. 24, 1863.
38, 423	Shaw, Zebulon, and Josiah Judevine. (See Judevine & Shaw.)	Albany, N. Y.	Stoves, cooking.	May 5, 1863.
37, 644	Shaw, Jacob H.	Albany, N. Y.	Stoves, cooking.	May 5, 1863.
37, 644	Shaw, Jacob H.	Albany, N. Y.	Stoves, cooking.	May 5, 1863.
40, 501	Shaw, Jacob H.	Albany, N. Y.	Stoves, cooking.	May 5, 1863.
40, 544	Shaw, Jacob H.	Albany, N. Y.	Stoves, cooking.	May 5, 1863.
40, 933	Shaw, Jacob H.	Albany, N. Y.	Stoves, cooking.	May 5, 1863.
40, 954	Shaw, Jacob H.	Albany, N. Y.	Stoves, cooking.	May 5, 1863.
39, 072	Shaw, Jacob H.	Albany, N. Y.	Stoves, cooking.	May 5, 1863.
39, 858	Shaw, Jacob H.	Albany, N. Y.	Stoves, cooking.	May 5, 1863.
40, 828	Shaw, Jacob H.	Albany, N. Y.	Stoves, cooking.	May 5, 1863.
40, 124	Shaw, Jacob H.	Albany, N. Y.	Stoves, cooking.	May 5, 1863.
40, 125	Shaw, Jacob H.	Albany, N. Y.	Stoves, cooking.	May 5, 1863.
1, 507	Shaw, Jacob H.	Albany, N. Y.	Stoves, cooking.	May 5, 1863.
40, 355	Shaw, Jacob H.	Albany, N. Y.	Stoves, cooking.	May 5, 1863.
38, 182	Shaw, Jacob H.	Albany, N. Y.	Stoves, cooking.	May 5, 1863.
1, 512	Shaw, Jacob H.	Albany, N. Y.	Stoves, cooking.	May 5, 1863.
38, 341	Shaw, Jacob H.	Albany, N. Y.	Stoves, cooking.	May 5, 1863.
40, 577	Shaw, Jacob H.	Albany, N. Y.	Stoves, cooking.	May 5, 1863.
37, 374	Shaw, Jacob H.	Albany, N. Y.	Stoves, cooking.	May 5, 1863.
40, 985	Shaw, Jacob H.	Albany, N. Y.	Stoves, cooking.	May 5, 1863.
40, 191	Shaw, Jacob H.	Albany, N. Y.	Stoves, cooking.	May 5, 1863.
39, 756	Shaw, Jacob H.	Albany, N. Y.	Stoves, cooking.	May 5, 1863.

List of patentees of inventions, designs, and reissues, 1863.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
37, 776	Shockley, U. H.	Litchfield, Ill.	Seedling machines.	Feb. 24, 1863.
37, 757	Shogren, Andrew.	Mission, Ill.	Iron, machine for cutting and punching.	Sept. 1, 1863.
37, 536	Shophell, Elias.	Ashland, Ohio.	Boats, patterns for cutting.	Jan. 27, 1863.
37, 527	Shophell, Elias.	Ashland, Ohio.	Shoes and gutters, patterns for cutting.	Jan. 27, 1863.
38, 424	Short, Levi.	Philadelphia, Pa.	Shells, composition for filling.	May 5, 1863.
38, 990	Shoudy, Peter.	Canton, Ohio.	Washing machines.	June 23, 1863.
1, 401	Shuck, Christian.	Canton, Ohio.	Iron by means of blasts of air, refining.	Feb. 10, 1863.
1, 402	Shuck, Christian.	Canton, Ohio.	Iron, refining.	Feb. 10, 1863.
37, 645	Shurtleff, R. G.	Springfield, Mass.	Fire-arms, tompons for.	Feb. 10, 1863.
39, 176	Sickles, Theophilus E.	Kennett Square, Pa.	Engines, steam, condensers for.	July 7, 1863.
37, 302	Siddall, Henry.	San Francisco, Cal.	Separators, grain.	Jan. 6, 1863.
39, 073	Siddall, Henry.	San Francisco, Cal.	Separators, grain.	Jan. 6, 1863.
37, 410	Sidons, John.	Rochester, N. Y.	Roofing metal, machines for seaming.	Jan. 13, 1863.
37, 777	Silsbee, Nathaniel D., and Charles E. Hodges. (See Ordway, John M., assignor.)	Providence, R. I.	Shirt stud and sleeve buttons.	Feb. 24, 1863.
38, 017	Simon, Henry.	Boston, Mass.	Gas for illumination, treating.	Mar. 24, 1863.
23, 005	Simonds, Warren A., and Seth Warner, assignors to Seth Warner, Oliver Warner, and Albert S. Fernald.	Monroe, Conn.	Composition for water-proofing fabrics.	Mar. 24, 1863.
38, 006	Simpson, Edwin L., ass'r to self and Jared Wilson Post.	Monroe, Conn.	Fabrics, water-proof, flocked, manufacture of.	Mar. 24, 1863.
33, 805	Simpson, Edwin L., ass'r to self and Jared Wilson Post.	Bridgeport, Conn.	Boots and shoes, water-proof. (Antedated July 15, 1863.)	Sept. 8, 1863.
39, 084	Sinding, Matthias W.	Norway and Sweden.	Ores, pyrites and other sulphur, treating. (Antedated May 2, 1863.)	Aug. 25, 1863.
37, 890	Singer, Isaac C.	Ebensburg, Pa.	Tire, bending and setting.	Mar. 10, 1863.
39, 025	Singer, Joseph.	Chicago, Ill.	Beer from malt and Indian meal, manufacture of.	Aug. 25, 1863.
40, 192	Singer, Joseph.	Chicago, Ill.	Injecting and donching instruments.	Oct. 6, 1863.
40, 773	Singer, Joseph.	Chicago, Ill.	Cooking apparatus.	Dec. 1, 1862.
1, 720	Skauts, William W., assignor to Glendon Skauts.	Brooklyn, N. Y.	Lamp chimney.	Feb. 17, 1863.
38, 991	Skeels, E. A. (See Borton, E. H., assignor.)	St. Louis, Mo.	Fireplugs.	June 23, 1863.
39, 728	Skeels, Edwin A.	St. Louis, Mo.	Barrel cases.	Sept. 1, 1863.
38, 629	Skidmore, Benjamin D.	New York, N. Y.	Fasteners, window sash.	May 19, 1863.
40, 829	Skiff, Miles H.	Cornwall Bridge, Conn.	Cultivators.	Dec. 8, 1863.
39, 759	Skinner, Halsey, assignor to Alexander Smith.	West Farms, Conn.	Looms, power, for weaving tufted pile fabrics.	Sept. 1, 1863.
37, 551	Slocum, Frank P., assignor to Samuel W. Slocum.	Brooklyn, N. Y.	Fire-arms, revolving.	Jan. 27, 1863.
38, 204	Slocum, Frank P., assignor to Samuel W. Slocum.	Brooklyn, N. Y.	Fire-arms, revolving.	Jan. 27, 1863.
40, 956	Small, Isaac D.	North Fairfield, Ohio.	Large, artificial.	April 14, 1863.
40, 156	Smend, Jonathan.	Pawlet, Vt.	Sugar evaporators, automatic feeders for.	Dec. 15, 1863.
37, 709	Streetley, John D.	Chicago, Ill.	Stubs, oil.	Feb. 17, 1863.

40, 193	Streetley, John D.	Chicago, Ill.	Funnels.	Oct. 4, 1863.
37, 964	Smith, George.	New York, N. Y.	Ink, green.	Mar. 24, 1863.
39, 338	Smith, A. B.	Clinton, Pa.	Reaping machines, raking and blading apparatus for. (Antedated July 20, 1862.)	July 28, 1863.
39, 359	Smith, A. B.	Clinton, Pa.	Ordinance, breech-loading. (Antedated Jan. 10, 1863.)	July 28, 1863.
37, 925	Smith, Abbey S.	Perryburg, Ohio.	Sewing machines, mechanism for starting.	Mar. 17, 1863.
37, 710	Smith, Addison.	New York, N. Y.	Steering apparatus.	Feb. 17, 1863.
41, 024	Smith, Addison.	New York, N. Y.	Liquids, apparatus for cooling.	Dec. 22, 1863.
41, 025	Smith, Addison.	New York, N. Y.	Mash, beer, &c., mode of cooling.	Dec. 22, 1863.
40, 085	Smith, Addison, assignor to self and James M. Sayre.	New York, N. Y.	Gas compensators.	Sept. 22, 1863.
39, 965	Smith, Addison, and James M. Sayre. (See Mackenzie, Philip W., assignor. Reissue.)	Norwich, Conn.	Engines, steam, condensers for.	Sept. 15, 1863.
40, 957	Smith, Alba F.	Norwich, Conn.	Car trucks, railroad.	Dec. 15, 1863.
39, 966	Smith, Alba F., and John Cooke. (See Cooke & Smith.)	New York, N. Y.	Sewing-work holders. (Antedated November 1, 1862.)	Sept. 15, 1863.
39, 177	Smith, Albert M.	Bronxville, N. Y.	Wagon hubs.	July 7, 1863.
37, 692	Smith, Alfred E.	Jamaica, N. Y.	Fastenings, window-sash.	Feb. 3, 1863.
39, 219	Smith, Benjamin F.	Batavia, Ill.	Harvesters, raking attachments to.	July 14, 1863.
40, 415	Smith, Benjamin F., Jr.	Unity, Iowa.	Drills, grain.	Oct. 27, 1863.
37, 942	Smith, Benjamin F., Jr.	Albany, N. Y.	Batteries, submarine.	Mar. 17, 1863.
38, 359	Smith, Charles W.	New York, N. Y.	Projectiles, explosive, for rifled ordnance.	April 28, 1863.
40, 578	Smith, Charles W.	New York, N. Y.	Trusses for hernia.	Nov. 10, 1863.
38, 950	Smith, Charles W.	Sharon, Conn.	Shot drop, method of manufacturing.	Mar. 3, 1863.
37, 422	Smith, Charles W.	New York, N. Y.	Garments, spring-book fastening for.	June 16, 1863.
1, 776	Smith, Charles W.	Dorchester, Mass.	Tool for inserting putty beneath vault glasses.	Jan. 13, 1863.
1, 793	Smith, Garrettson, and Henry Brown, assignors to David Hestick.	Philadelphia, Pa.	Stove, cooking.	June 16, 1863.
1, 794	Smith, Garrettson, and Henry Brown, assignors to North, Chase & North.	Philadelphia, Pa.	Stove, cook's.	June 30, 1863.
1, 795	Smith, Garrettson, and Henry Brown, assignors to North, Chase & North.	Philadelphia, Pa.	Stove, wood.	June 30, 1863.
1, 803	Smith, Garrettson, and Henry Brown, assignors to North, Chase & North.	Philadelphia, Pa.	Stove, fire-board.	June 30, 1863.
1, 819	Smith, Garrettson, and Henry Brown, assignors to March & Siler.	Philadelphia, Pa.	Stove, plates of a.	July 7, 1863.
	March and E. Siler.	Philadelphia, Pa.	Stove.	Sept. 22, 1863.

List of patentees of inventions, designs, and reissues, 1863.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
1,828	Smith, G., and H. Brown, assignors to Abbott & Noble.	Philadelphia, Pa.	Stove, furnace.	Oct. 6, 1863.
1,829	Smith, G., and H. Brown, assignors to Abbott & Noble.	Philadelphia, Pa.	Stove, cooking.	Oct. 6, 1863.
1,875	Smith, Garretson, and Henry Brown, assignors to C. S. Collins and E. S. Heath.	Philadelphia, Pa.	Stove, fireplace.	Dec. 1, 1863.
38, 183	Smith, George H.	Des Moines, Iowa.	Bag holder and elevator, combined.	April 14, 1863.
38, 839	Smith, George H.	Lowell, Mass.	Last holder.	Sept. 8, 1863.
40, 712	Smith, George I.	Brooklyn, N. Y.	Grates, furnace.	Nov. 24, 1863.
40, 127	Smith, George R.	Dowagiac, Mich.	Sewing machine, binding guides for.	Sept. 29, 1863.
39, 451	Smith, G. W., A. B. Vosburgh, A. I. Kramer, and W. L. Winter.	Linn county, Iowa.	Beehives.	Aug. 4, 1863.
39, 750	Smith, H. B.	Eureka, N. Y.	Cultivators.	Sept. 1, 1863.
39, 360	Smith, Hamilton E.	Pittsburg, Pa.	Washing machine.	July 28, 1863.
40, 774	Smith, Hamilton E.	Pittsburg, Pa.	Washing machine.	Dec. 1, 1863.
39, 522	Smith, Henry C.	Clarksville, Ohio.	Mortising machine.	Aug. 11, 1863.
39, 074	Smith, Henry D.	New York, N. Y.	Rayonet scabblers, machine for cutting out. (Antedated June 16, 1861.)	June 30, 1863.
40, 287	Smith, Henry D.	New York, N. Y.	Reel cutting machine.	Oct. 13, 1863.
40, 148	Smith, Hiram, assignor to Jesse A. Locke.	Worcester, Mass.	Wool, machine for drying.	Sept. 23, 1863.
38, 921	Smith, Horace, and D. H. Wesson.	Springfield, Mass.	Fire-arms, revolving.	June 16, 1863.
37, 616	Smith, H. S.	Brooklyn, N. Y.	Bolts, door.	Feb. 10, 1863.
38, 247	Smith, J. J.	New York, N. Y.	Radiators, steam.	April 21, 1863.
38, 840	Smith, Jacob J.	Philadelphia, Pa.	Stretchers, army.	Sept. 8, 1863.
40, 194	Smith, James L.	Neoga, Ill.	Planters, corn.	Oct. 6, 1863.
40, 195	Smith, Jared W.	Middletown, Conn.	Water-wheels.	Oct. 6, 1863.
37, 363	Smith, John J. (See Baker, William C., assignor.)	Iowa Point, Kansas.	Beehives.	Jan. 6, 1863.
39, 391	Smith, Joseph N.	Cincinnati, Ohio.	Fire-arms, magazine. (Antedated January 21, 1863.)	Aug. 18, 1863.
39, 593	Smith, Joseph Nottingham.	New York, N. Y.	Projectiles, elongated, for fire-arms.	Aug. 18, 1863.
40, 888	Smith, J. Nottingham, assignor to self and W. B. Headley.	Jersey City, N. J.	Projectiles, explosive. (Antedated December 1, 1863.)	Dec. 8, 1863.
37, 926	Smith, Jos. P., and Salmon Stevens, (See Stevens & Smith.)	Owensville, Ohio.	Stoves, camp.	Mar. 17, 1863.
38, 362	Smith, Marshall.	St. Louis, Mo.	Mail pouches.	April 28, 1863.
39, 021	Smith, Matthias.	Rochester, N. Y.	Irran duster.	June 27, 1863.
37, 985	Smith, Mervin R.	Armonk, N. Y.	Sewing machines.	Mar. 24, 1863.
38, 511	Smith, Nicholas.	Lauding, Iowa.	Measuring and weighing, apparatus for.	May 12, 1863.
34, 686	Smith, N. E.	Springdale, Iowa.	Cultivators.	Aug. 23, 1863.
38, 385	Smith, O. C., assignor to A. N. Clark.	Salem, Mass.	Looms.	April 21, 1863.
40, 288	Smith, Patrick. (See Davis, Jarvis, assignor.)	Brooklyn, N. Y.	Cannon, pendulum sight for. (Antedated Sept. 28, 1863.)	Oct. 13, 1863.
38, 919	Smith, Robert, and Alfred Heaven. (See Heaven & Smith.)	Newport, R. I.	Rigging, ship's, means of setting up.	June 16, 1863.
38, 184	Smith, Samuel, and Wm. H. Flindler.	New York, N. Y.	Jewelry, setting up.	April 14, 1863.
38, 178	Smith, Samuel J.	New York, N. Y.	Stamping press, hand.	July 7, 1863.

40, 310	Smith, Theophilus S., assignor to self and Andrew W. Smith.	Lowell, Mass.	File, curb.	Oct. 13, 1863.
39, 781	Smith, Timothy, and A. B. Southwick, assignors to the Whipple File Manufacturing Company.	Charlestown, Mass.	Rasps, machine for cutting.	Sept. 1, 1863.
39, 782	Smith, Timothy, and James A. Stafford, assignors to the Whipple File Manufacturing Company.	Ballard Vale, Mass.	Files, half-round, machine for grinding.	Sept. 1, 1863.
39, 361	Smith, Uriah.	Battle Creek, Mich.	Legs, artificial.	July 28, 1863.
37, 845	Smith, Willard H.	New York, N. Y.	Lamp burners, perforations in.	Mar. 3, 1863.
39, 506	Smith, William.	Pittsburg, Pa.	Crucibles, plumbago, apparatus for making.	Nov. 17, 1863.
37, 711	Smith, David M.	New York, N. Y.	Skirts, ladies', apparatus for claspings hoops to.	Feb. 17, 1863.
1, 762	Snod, M. Audine.	Louisville, Ky.	Brooch.	May 26, 1863.
40, 713	Snedden, George.	New York, N. Y.	Turrets, war.	Nov. 24, 1863.
39, 707	Sneider, C. E., assignor to self and Thomas Poultney.	Baltimore, Md.	Fire-arms, breech-loading.	Aug. 25, 1863.
39, 362	Snyder, George.	Philadelphia, Pa.	Strop and bone, combination of the.	July 28, 1863.
37, 463	Snyder, Isaac B.	Clay Township, Pa.	Harvesters, raking attachments for.	Jan. 20, 1863.
38, 083	Snyder, Theodore H., assignor to self and Wm. Vandyke.	Canaan, N. J.	Gas to soldering apparatus, regulating flow of.	Mar. 31, 1863.
40, 775	Sorger, Henry.	Columbus, Pa.	Churns, device for operating.	Dec. 1, 1863.
41, 026	Solomon, Isaac.	Baltimore, Md.	Stucking and shucking oysters.	Dec. 22, 1863.
39, 503	Somers, William H.	Urbana, Ill.	Books, record, case for.	Aug. 11, 1863.
39, 592	Somes, Daniel E. (See Herron, James P., assignor.)	Washington, D. C.	Fire-arms.	Aug. 18, 1863.
39, 567	Somes, Daniel E. (See De Puy, Henry W., assignor.)	Bladeford, Md.	Cooling room for preserving provisions. (Antedated January 24, 1862.)	Sept. 15, 1863.
40, 958	Soper, J. Horace.	Washington, D. C.	Projectile for ordnance.	Dec. 15, 1863.
38, 064	Sorey, James H.	Baltimore, Md.	Desk, school.	Mar. 31, 1863.
38, 510	Southward, E. F.	Xenia, Ill.	Planters, corn. (Antedated December 28, 1861.)	May 12, 1863.
38, 701	Southwick, A. B., et al. (See Mignault, Southwick, Spofford, and Marshall.)	Boston, Mass.	Knapack.	May 26, 1863.
37, 552	Southwick, Alphons B., assignor to the Whipple File Manufacturing Company.	Ballard Vale, Mass.	Files, machines for cutting.	Jan. 27, 1863.
37, 603	Southwick, Alphons B., assignor to the Whipple File Manufacturing Company.	Ballard Vale, Mass.	File blanks, grinding.	Feb. 3, 1863.
37, 725	Southwick, A. B., and H. E. Grandy, assignors to the Whipple File Manufacturing Company. (See Marshall & Southwick.)	Ballard Vale, Mass.	Rasps, machines for cutting.	Feb. 17, 1863.
38, 509	Southwick, A. B., and Timothy Smith. (See Smith & Southwick.)	Troy, N. Y.	Punching railroad rails, machine for.	May 12, 1863.
38, 927	Sower, Alfred, and Martin Payne.	Providence, R. I.	Bristles, machinery for assorting.	Mar. 3, 1863.
37, 831	Spafford, N. H.	Port Clinton, Ohio.	Grading machines.	Dec. 15, 1863.
40, 929	Spaulding, William.	Wyanet, Ill.	Cultivators.	April 21, 1863.
1, 456	Sparks, A. J.	San Francisco, Cal.	Saws and saw plates, setting teeth in. (Release.)	Jan. 20, 1863.
37, 464	Spaulding, N. W.	Brandon, Vt.	Stoves for boiling sap.	Oct. 6, 1863.
37, 464	Spaulding, Samuel B.		Furnaces for sugar evaporators.	
40, 196	Speakman, Jonathan. (See Embree, Pearson, assignor.)			
	Spears, Charles. (See Halvorson, Halvor, assignor.)			

List of patentees of inventions, designs, and reissues, 1863.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
40, 646	Speer, Charles. (See Halvorson, Halvor, assignor.)	Chelsea, Mass.	Fruit dryers.	Nov. 17, 1863.
40, 139	Speer, Henry, and Jno. L. Harlow.	Rochester, N. Y.	Ventilators, railroad car.	Oct. 6, 1863.
37, 647	Spencer, A. B.	Rochester, N. Y.	Jar, preserve.	Feb. 10, 1863.
37, 946	Spencer, Charles F.	Rochester, N. Y.	Lamps, coal-oil.	Mar. 24, 1863.
1, 546	Spencer, Charles L.	New York, N. Y.	Motion, converting. (Release.)	Sept. 29, 1863.
1, 547	Spencer, Charles L.	New York, N. Y.	Motion, converting. (Antedated January 3, 1863.)	Sept. 29, 1863.
38, 702	Spencer, Christopher M.	Boston, Mass.	Fire-arm, magazine.	May 26, 1863.
40, 128	Spencer, Robert.	Newark, N. J.	Saddle or sweat cloth.	Sept. 29, 1863.
40, 129	Spencer, Robert.	Newark, N. J.	Sweat or saddle cloth, absorbing and ventilating.	Sept. 29, 1863.
40, 507	Sperry, John.	New York, N. Y.	Boxes, manufacturing.	Nov. 3, 1863.
38, 847	Spiller, William F.	Philadelphia, Pa.	Photographs, &c., composition for coloring and water-proofing.	June 9, 1863.
38, 454	Spofford, Charles, et al. (See Miguault, Southwick, Spofford, and Marshall.)	Ballard Vale, Mass.	File blanks, machines for rolling.	May 5, 1863.
40, 366	Spofford, Charles, and A. B. Southwick, assignors to the Whipple File Manufacturing Company.	Alleghany City, Pa.	Heaters.	Oct. 20, 1863.
1, 593	Sprague, Edwin.	Cincinnati, Ohio.	Cans, fruit, sealing.	Dec. 22, 1863.
40, 367	Spratt, James, assignor to John F. Griffin.	Constantine, Mich.	Cultivators.	Oct. 20, 1863.
37, 832	Squire, John J.	New Haven, Conn.	Gas and water meters, register for.	Mar. 3, 1863.
40, 647	Stackpole, J. B.	Boston, Mass.	Drawing and camera table.	Nov. 17, 1863.
37, 257	Stackpole, W., T. F. Engelbrecht and R. Bocklen. (See Engelbrecht, Bocklen and Stackpole.)	Burlington, Iowa.	Projectiles for ordnance.	Jan. 27, 1863.
39, 179	Stafford, Charles W.	Burlington, Iowa.	Projectiles, sabot for.	July 7, 1863.
38, 180	Stafford, Charles W.	Burlington, Iowa.	Projectiles.	July 7, 1863.
39, 437	Stafford, C. W.	Burlington, Iowa.	Projectiles, sub-calibre, incendiary.	Aug. 4, 1863.
40, 158	Stafford, C. W.	New York, N. Y.	Shells, incendiary.	Oct. 6, 1863.
37, 308	Stafford, Daniel S.	Decatur, Ill.	Cultivators.	Jan. 6, 1863.
37, 258	Stafford, James A., and Timothy Smith. (See Smith and Stafford.)	New York, N. Y.	Fastenings, window-lash.	Jan. 27, 1863.
37, 504	Stagg, David I.	New York, N. Y.	Ladders, step.	Feb. 3, 1863.
40, 288	Stagg, David I.	New York, N. Y.	Scut and desk, school.	Oct. 13, 1863.
39, 868	Staman, John K., assignor to self, C. C. Staman, and M. H. Mansfield.	Middletown, Ohio.	Harvester-cutter sharpener.	Sept. 8, 1863.
38, 425	Stanford, Otis W., and Andrew W. Crane.	Mason, Ohio.	Separators, grain.	May 5, 1863.
39, 016	Stanislas, Pierre Henry, Count d'Escayrac de Lauture.	Lebanon, Ohio.	Telegraphic signals.	June 23, 1863.
40, 313	Stanley, Henry, assignor to Stanley and Tarble.	Paris, France.	Elevators, flour and grain.	Oct. 13, 1863.
40, 860	Stanley, Rowland J.	St. Johnsbury, Vt.	Hay-elevating forks.	Dec. 8, 1863.
	Stanley, William. (See Hook, Albert H., assr. Release.)	Mount Morris, N. Y.		
	Stanton, Nehemiah P., et al. (See Davis, R. W. and D., assignors.)			

38, 248	Stark, William.	Pittsburg, Pa.	Iron, operating rolls for rolling.	April 21, 1863.
1, 760	Starr, Eben T.	New York, N. Y.	Skate.	May 12, 1863.
39, 428	Stauffer, Joseph R., and Amos Miller. (See Miller and Stauffer.)	New York, N. Y.	Cultivators.	Aug. 11, 1863.
39, 541	Stearns, C. C.	Syracuse, N. Y.	Auger, hollow. (Antedated January 16, 1863.)	Sept. 8, 1863.
39, 842	Stearns, George N.	Aurora, Ind.	Pumps.	Sept. 8, 1863.
38, 369	Stedman, Nathan.	Aurora, Ind.	Pump.	Sept. 8, 1863.
37, 924	Stedman, Nathan, assignor to self and Joseph Miller.	United States Navy.	Ordnance, rifling.	April 28, 1863.
38, 999	Steger, Joseph, assignor to Charles W. Baker.	New York, N. Y.	Cars, railroad, device for stopping and starting.	Mar. 17, 1863.
38, 767	Stein, Max Henry.	New York, N. Y.	Dies, press for forming. (Antedated April 9, 1863.)	Sept. 15, 1863.
38, 703	Steinberg, David.	San Francisco, Cal.	Teeth, artificial, bones for.	June 2, 1863.
38, 948	Steinert, David.	Hamburg.	Ink, printer's, and for other purposes, varnish for making.	May 26, 1863.
37, 743	Steinmetz, Samuel, assignor to Andrew P. Pierson.	Chicago, Ill.	Boilers, steam.	Sept. 15, 1863.
37, 463	Steiner, C. E.	Geneseo, Wis.	Seeding machines.	Feb. 24, 1863.
40, 197	Stenson, Stephen.	Beloit, Wis.	Winter-wheel. (Antedated September 23, 1863.)	Jan. 20, 1863.
1, 731	Stenton, Robert S.	New York, N. Y.	Skates, metallic. (Design.)	Oct. 6, 1863.
38, 249	Stephens, Anson P.	Brooklyn, N. Y.	Fire-arms, lock for.	Mar. 3, 1863.
40, 508	Stephenson, James.	Cannadagua, N. Y.	Time-keepers.	April 21, 1863.
40, 861	Stephenson, William R.	West Greenville, Pa.	Trusses.	Nov. 3, 1863.
40, 368	Sterling, John M., et al. (See Boyd, Anon H., assignor.)	Bridgeport, Conn.	Lamps.	Dec. 8, 1863.
37, 928	Sterling, W. H.	Bridgeport, Conn.	Lamps.	Oct. 20, 1863.
40, 300	Stetson, W. S., et al. (See Taber, J. O., assignor.)	New York, N. Y.	Beer and other liquids, apparatus for cooling.	Mar. 17, 1863.
38, 183	Stevens, Henry.	Fond du Lac, Wis.	Scales, grain, automatic.	Oct. 6, 1863.
39, 181	Stevens, Andrew.	San Francisco, Cal.	Engines, steam, slide-valves for. (Antedated April 29, 1863.)	April 14, 1863.
39, 017	Stevens, B. D., assignor to self, Samuel C. Cromble, and G. S. Appleton.	Lawrence, Mass.	Car axles and bearings, mode of oiling.	July 7, 1863.
40, 370	Stevens, Ebenezer.	Lawrence, Mass.	Journal boxes and bearings, self-oiling.	June 23, 1863.
37, 364	Stevens, Edwin A.	London, England.	Dough, paste, &c., machine for making. (Patented in England December 24, 1862.)	Oct. 20, 1863.
37, 465	Stevens, Edwin A.	Hoboken, N. J.	Ordnance, operating.	Jan. 6, 1863.
37, 411	Stevens, Edwin A.	Hoboken, N. J.	Guns, sighting.	Jan. 6, 1863.
38, 504	Stevens, E. M., assignor to Alfred B. Ely.	Hoboken, N. J.	Vessels, war, construction and defence of.	Jan. 13, 1863.
39, 429	Stevens, Francis B.	Boston, Mass.	Books and shoes, stiffening for heels of.	Aug. 18, 1863.
39, 430	Stevens, Francis B.	New York, N. Y.	Engines, steam, condensers of.	Aug. 4, 1863.
40, 509	Stevens, Francis B.	New York, N. Y.	Engines, steam.	Aug. 4, 1863.
40, 510	Stevens, Francis B.	New York, N. Y.	Engines, steam, valves for.	Nov. 3, 1863.
	Stevens, Frederick. (See Fogg, Luther, assignor.)		Engines, steam, condensers for.	Nov. 3, 1863.
	Stevens, Henry R., and Mauley Howe. (See Howe and Stevens.)			
39, 431	Stevens, Nathan P.	Boston, Mass.	Engines, steam, pistons for.	Aug. 11, 1863.
39, 909	Stevens, Samuel, and Joseph P. Smith.	Pittsburg, Pa.	Grates. (Antedated September 24, 1863.)	Sept. 15, 1863.
38, 512	Stevens, William J.	Jersey, City, N. J.	Screw-taps, expanding.	May 12, 1863.
40, 449	Stevens, William W., assr. to Nathaniel P. Richardson & Co.	Portland, Me.	Coal-sifter.	Oct. 27, 1863.
40, 579	Stevenson, George. (See Boyle, James E., assignor.)	Zionsville, Ind.	Sugar-evaporator, with automatic feeder.	Nov. 10, 1863.

List of patentees of inventions, designs, and reissues, 1863.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
40,802	Stevenson, G. E., and C. E. Mead. (See Mead and Stevenson.)	Wapello, Iowa.	Sorghum juice, evaporator for.	Dec. 8, 1863.
34,361	Stewart, D. S.	Troy, N. Y.	Stoves, cooking.	April 24, 1863.
30,023	Stewart, Philo P.	Troy, N. Y.	Stoves, cooking.	June 23, 1863.
34,610	Stewart, Robert.	Elmira, N. Y.	Valve, cut-off and regulator.	May 19, 1863.
34,611	Stewart, Robert.	Elmira, N. Y.	Valve gear, cut-off.	May 19, 1863.
31,073	Stewart, Robert.	Elmira, N. Y.	Valve gear, cut-off.	June 30, 1863.
30,076	Stewart, S. H.	Centre Township, Pa.	Collar and hames for horses, combined.	June 30, 1863.
38,513	Stichter, Henry P., et al. (See Krauser, Daniel, assignor.)	Centre Township, Pa.	Furnaces, melting and smelting.	May 12, 1863.
37,406	Stilleman, James F., and Zebina Ellis.	Philadelphia, Pa.	Hydrants.	Jan. 20, 1863.
37,778	Stilleman, Richard.	Philadelphia, Pa.	Stoves, cooking.	Feb. 24, 1863.
40,653	Stiles, David L.	Rochester, N. Y.	Stoves, cooking.	Nov. 17, 1863.
39,570	Stiles, David L., assignor to M. Huntington.	Rochester, N. Y.	Stoves.	Sept. 15, 1863.
40,900	Stiles, Joseph.	Salem, Mich.	Ladders.	Dec. 15, 1863.
40,900	Stiles, J. W.	New York, N. Y.	Skirt, hoop, wire.	Nov. 17, 1863.
40,648	Stilwell, H. F.	San Francisco, Cal.	Advertising directory.	Nov. 17, 1863.
38,704	Stimets, C. F. (See Brown, J. S., assignor.)	Canandaigua, N. Y.	Registers, omnibus and car. (Antedated March 13, 1863.)	May 26, 1863.
38,612	Stuard, Stephen R.	Elmira, N. Y.	Railroad chair.	May 19, 1863.
40,714	St. John, E.	Elmira, N. Y.	Button-key.	Nov. 24, 1863.
39,432	St. John, Henry.	New Haven, Conn.	Camera, photographic.	Aug. 11, 1863.
41,511	Stock, John.	New York, N. Y.	Monoling machine, wood.	Nov. 3, 1863.
39,843	Stock, John.	New York, N. Y.	Bridle bit.	Sept. 8, 1863.
39,867	Stoddard, C. E.	West Meriden, Conn.	Ordinance, mounting.	Aug. 25, 1863.
1,457	Stoddard, Moses.	Buffalo, N. Y.	Shingle machines.	April 21, 1863.
40,436	Stoddard, Oren.	Iusti, N. Y.	Fruit baskets.	Oct. 27, 1863.
38,136	Stone, Charles H., and Charles W. Livingston.	South Groton, Mass.	Alarm, burglar.	April 7, 1863.
38,136	Stone, Eliaba. (See Phelps, Courland F., assignor.)			
38,136	Stone, H., and Roscoe G. Turner. (See Turner and Stone.)			
38,69	Stoner, Henry K.	Lancaster, Pa.	Rakes, horse.	June 2, 1863.
40,776	Storrie, Henry K.	Hancock, Md.	Bedstead fastenings.	May 13, 1863.
37,878	Stout, Isaac and Stephen.	Trenton, Ill.	Cultivators.	Dec. 1, 1863.
37,829	Stout, Temple, and Mills. (See Temple, John, assignor.)	Quincy, Ill.	Excavating and ditching machines.	Mar. 10, 1863.
37,829	Stratton, B. T.	St. Louis, Mo.	Lanterns.	Jan. 27, 1863.
37,829	Stratton, Herman, Jr.	Roxbury, Mass.	Air-condensing apparatus for forcing liquids.	April 21, 1863.
37,829	Stratton, Isaac.	Philadelphia, Pa.	Vessels, preserving, cover for.	Feb. 3, 1863.
38,539	Stratton, Richard A., ass'r to self and Charles H. Miller.	Philadelphia, Pa.	Hangers, adjustable.	May 12, 1863.
38,065	Straub, Abraham.	Milton, Pa.	Roofs, cement.	Mar. 31, 1863.
40,649	Straub, Abraham.	Milton, Pa.	Cement, asphaltic.	Nov. 17, 1863.

40,650	Straub, A.	Milton, Pa.	Marble, variegated, artificial.	Nov. 17, 1863.
40,651	Straub, A.	Cincinnati, Ohio.	Stone, paving or flag, asphaltic.	Nov. 17, 1863.
39,182	Straub, Isaac.	Cincinnati, Ohio.	Mills, sugar cane, crushing.	July 7, 1863.
40,652	Straub, Isaac.	Sherburne Falls, Mass.	Brace.	Nov. 17, 1863.
39,261	Streeter, A. W.	Huffalo, N. Y.	Brands, marking.	July 14, 1863.
37,310	Strickler, John B.	Milford, Ill.	Beehives.	Jan. 6, 1863.
38,643	Strong, Samuel.	Washington, D. C.	Fire-arms, breech-loading.	May 19, 1863.
38,716	Strong, Samuel, assignor to self and Jerome B. Woodruff.	Washington, D. C.	Fire-arms, breech-loading.	May 19, 1863.
38,646	Strowger, Wm. D.	Washington, D. C.	Brick machine.	May 26, 1863.
38,436	Stuart, David.	Owego, N. Y.	Subsoiling instrument.	Mar. 31, 1863.
39,668	Stump, George.	Philadelphia, Pa.	Stoves and ranges, cooking.	May 3, 1863.
37,373	Sturdy, J. E., assignor to self and C. A. Smith.	New York, N. Y.	Condensers.	Aug. 25, 1863.
40,715	Sturrock, Archibald.	Augusta, Maine.	Water elevators.	Jan. 24, 1863.
38,768	Sturtevant, Benj. F.	Dorchester, England.	Locomotive tenders. (English patent, May 6, 1863.)	Nov. 24, 1863.
37,365	Sturtevant, Edmund, and Edward Stabel, assignors to Charles Sackow.	Boston, Mass.	Tooth-picks, manufacture of.	June 2, 1863.
40,863	Sturtevant, Louis E.	Oldham, England.	Blowers. (English patent, February 25, 1862.)	Jan. 6, 1863.
37,879	Suggett, Samuel H.	St. Louis, Mo.	Stoves, cooking.	Dec. 8, 1863.
38,077	Suino, P. L.	Eden, Me.	Fid.	Mar. 10, 1863.
41,027	Suit, Samuel T. (See Millner, John Keen, assignor.)	Shirleysburg, Pa.	Boiler for culinary purposes.	June 30, 1863.
37,648	Summers, T. A.	Rochester, N. Y.	Hanger-bars, socket for.	Dec. 22, 1863.
40,961	Sumner, Samuel C.	Boston, Mass.	Stencil plates.	Feb. 10, 1863.
39,565	Sunderland, U. M.	Hig-gate, Vt.	Field rollers.	Dec. 15, 1863.
39,265	Suwa, Augustus Wm.	New York, N. Y.	Ambulances. (Antedated July 7, 1863.)	Dec. 15, 1863.
40,265	Suwa, Augustus Wm.	New York, N. Y.	Glass, transparent and flexible, material designed as a partial substitute for.	July 14, 1863.
40,369	Suwa, Augustus Wm.	New York, N. Y.	Filters.	Oct. 20, 1863.
40,512	Sutcliffe, Edith A.	Great Britain.	Ordinance, breech-loading.	Aug. 18, 1863.
40,513	Sutler, Joseph.	New York, N. Y.	Chair and lounge, folding.	Nov. 3, 1863.
38,342	Sutton, John, and James Gregory.	New York, N. Y.	Table, folding.	Nov. 3, 1863.
41,028	Sutton, R. T.	New York, N. Y.	Vessels, deck-lights for.	April 28, 1863.
40,130	Sutton, Wm. H., and James J. Gibson.	Rochester, N. Y.	Driers, grain.	Dec. 22, 1863.
40,962	Swaynam, Eliza C., et al. (See Nobles, Milton V., assignor.)	Brantford, Canada West.	Driers, grain.	Sept. 29, 1863.
38,514	Swartz, Daniel M., and Jonathan Kreamer.	Philadelphia, Pa.	Cloth, machine for measuring.	Dec. 15, 1863.
38,992	Sweet, Allen S., Jr.	Milhelm, Pa.	Harvesters.	May 12, 1863.
40,290	Sweet, George W.	Detroit, Mich.	Locomotives, smoke-stacks for.	June 23, 1863.
38,186	Sweet, George W.	Troy, N. Y.	Locomotives, supports of, upon car-trucks.	Oct. 13, 1863.
38,078	Sweet, George W.	Troy, N. Y.	Furnace for smelting ores and for other purposes.	April 14, 1863.
38,067	Sweet, Henry L.	Troy, N. Y.	Iron and steel by means of blasts of air, purifying.	June 30, 1863.
37,664	Sweet, Wm. A.	Foxboro, Mass.	Hate, apparatus for pressing.	Mar. 31, 1863.
40,514	Sweet, Wm. A.	Sidney, N. Y.	Butter-workers.	Feb. 10, 1863.
40,864	Sweet, Wm. A.	Syracuse, N. Y.	Nails, machines for cutting.	Nov. 3, 1863.
40,291	Sweetman, David.	Syracuse, N. Y.	Harvesters.	Dec. 8, 1863.
37,366	Swift, Henry H.	Homert, N. Y.	Slippers and pincers.	Oct. 14, 1863.
40,716	Swift, William.	Hart's Village, N. Y.	Lamps, mode of attaching chimneys to.	Jan. 6, 1863.
	Swift, W. H., and Henry B. Courtney. (See Wells, Chas. H., assignor, Design.)	Brooklyn, N. Y.	Bedsteads, invalid.	Nov. 24, 1863.

List of patentees of inventions, designs, and reissues, 1863.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
38, 515	Sylla, Philo	Elgin, Ill.	Harvesters, rakes for	May 12, 1863
38, 521	Sylvester, Abner	Dubuque, Iowa	Separators, grain	April 21, 1863
39, 331	Sylvester, Samuel R.	Washington, D. C.	Soda-water tomahaws	July 21, 1863
39, 614	Symmes, John C.	U. S. Ordnance Corps.	Fire-arms, breech-loading, gas check for	Sept. 8, 1863
39, 783	Symonds, Thomas, assignor to self and Hosea Kendall	Cumberland, Maine	Water-wheels	Sept. 1, 1863
40, 580	Syner, John	Buffalo, N. Y.	Billiard cushion	Nov. 10, 1863
37, 330	Taber, Benj. F.	Buffalo, N. Y.	Back, machines for roasting	Jan. 27, 1863
36, 607	Taber, J. O., assignor to self, C. R. Taber, and W. S. Stetson	Salem, Ohio	Harvesters, truck-clearers for	Mar. 24, 1863
39, 845	Tabor, Henry	Hopkinton, R. I.	Drawing-heads, railway, stop-motion for	Sept. 8, 1863
40, 240	Tait, George C., assignor to Thomas H. Dodge	Worcester, Mass.	Wrenches	Nov. 10, 1863
38, 346	Taggart, John, assignor to self and Liversia Hull	Roxbury, Mass.	Ordinance, mounting and operating	April 21, 1863
39, 867	Taggart, John, assignor to self and Stephen O. Thayer	Roxbury, Mass.	Lithographic presses	Sept. 8, 1863
38, 427	Tagliabue, Giuseppe	New York, N. Y.	Oil, &c., barrels of, instrument for ascertaining the amount of water, &c., in	May 5, 1863
40, 131	Talbot, Daniel	Worcester, Mass.	Wool-carding machine	Sept. 29, 1863
38, 770	Talt, Arthur F.	Morrisania, N. Y.	Fire-arms, self-priking hammers for	June 2, 1863
40, 728	Talt, Augustus H., and Wm. H. Holbrook	New York, N. Y.	Fire-arms, self-priking hammers for	Nov. 24, 1863
37, 331	Talbot, David C.	Worcester, Mass.	Paper pulp, manufacture of	Nov. 27, 1861
39, 761	Tallmadge, Nathaniel S.	Fond du Lac, Wis.	Calipers	Jan. 1, 1863
38, 922	Talpley, Joseph A.	Sumnerville, Mass.	Ploughs. (Antedated October 24, 1862)	Sept. 1, 1863
38, 187	Tangye, James	Birmingham, England	Lathes, centering device for	June 16, 1863
39, 689	Tanner, Eli	Bowmanville, N. Y.	Jacks, lifting, hydraulic	April 14, 1863
41, 029	Tapley, J. F.	Springfield, Mass.	Observatories and signal towers, portable. (Antedated July 10, 1862)	Aug. 25, 1863
38, 613	Tarbox, Jerome L.	Wilmington, N. Y.	Bronzing machine	Dec. 22, 1863
40, 515	Tarr, James G., and A. H. Wason	Wilmington, N. Y.	Iron, smoothing	May 19, 1863
40, 516	Tate, Wm. M.	Wilmington, N. Y.	Paint for ships' bottoms	Nov. 3, 1863
41, 050	Taylor, Amos A.	New York, N. Y.	Bottles, machine for filling	Nov. 3, 1863
40, 865	Taylor, Charles F.	New York, N. Y.	Spinning yarn, &c., rolls for	Dec. 22, 1863
40, 086	Taylor, George H., assignor to A. Brown, L. G. Kniffen, and Thos. H. Dodge	Worcester, Mass.	Exercising the human body, machines for	Dec. 22, 1863
39, 532	Taylor, John J., assignor to self and E. F. Gilles	Attica, Ind.	Pawl and ratchet	Sept. 22, 1863
38, 943	Taylor, N. W., and J. W. Brightman	Cleveland, Ohio	Churns, machinery for operating	Aug. 11, 1863
38, 516	Taylor, Samuel	East Cambridge, Mass.	Paper-drying machines	June 25, 1863
1, 456	Taylor, Thomas R.	Brooklyn, N. Y.	Brushes, warp	May 12, 1863
38, 008	Teal, Daniel E.	Zanesville, Ohio	Horse-shoes, machines for making. (Release)	April 21, 1863
38, 428	Teal, Daniel E.	Norwich, N. Y.	Water elevators	Mar. 31, 1863
39, 679	Teal, Daniel E.	Norwich, N. Y.	Chaff	May 5, 1863
37, 367	Teal, Lorenzo P.	White Deer Mills, Pa.	Water elevators	June 30, 1863
40, 777	Teal, A. C.	Girard, Ill.	Thrashing machines, Shaker frames for	Jan. 6, 1863
38, 771	Teek, Lewis	Philadelphia, Pa.	Gates, farm	Dec. 1, 1863
37, 046	Teeter, Daniel	Madison, Md.	Yards, iron-clad	Dec. 1, 1863
39, 971	Teichert, Gottfried	New Haven, Ct.	Engines, steam, valves for	June 2, 1863
			Carriage seat. (Antedated Nov. 20, 1862)	Sept. 15, 1863

1, 465	Temple, John, assignor to Temple, Mills and Stout	Middletown, Ohio	Water-wheels	Feb. 10, 1863
37, 553	Temple, John, Wm. M. Mills, and Atlas L. Stout	Middletown, Ohio	Water-wheels	Mar. 3, 1863
40, 280	Terrill, J.	Philadelphia, Pa.	Teeth, artificial, moulds for forming	Nov. 10, 1861
40, 866	Terry, George	New York, N. Y.	Motive power, combining springs for. (Antedated Oct. 3, 1861)	Dec. 8, 1863
38, 303	Terry, James E., assignor to the Russell & Erwin Manufacturing Company	Philadelphia, Pa.	Locks, door, strike for	April 14, 1863
40, 777	Thackara, J. W., and R. B. Fitts. (See Fitts and Thackara)	Danville, Pa.	Engines, steam, direct action	Dec. 1, 1863
40, 717	Thatcher, Thomas	Syracuse, N. Y.	Ploughs, steam	Nov. 24, 1863
	Thayer, Anson P.			
	Thayer, Charles R., and Waldo Maynard. (See Underwood, John, assignor.)			
	Thayer, Charles R., and Waldo Maynard. (See Underwood and Burr, assignors.)			
	Thayer, Stephen O. (See Taggart, John, assignor.)			
39, 080	Thomas, Edwin A.	Philadelphia, Pa.	Alkalies, caustic, putting up	June 30, 1863
39, 302	Thomas, Henry B.	Caselle, Iowa	Separators, grain	July 14, 1863
37, 712	Thomas, J. H., and P. P. Mast	Springfield, Ohio	Seeding machines	Feb. 17, 1863
39, 504	Thomas, Leopold	Allegheny City, Pa.	Nut machine	Aug. 11, 1863
38, 546	Thomas, Samuel N.	Auburn, N. Y.	Fruit collectors and drying apparatus. (Antedated April 11, 1863)	June 9, 1863
1, 435	Thomas, W. R., and M. Emanuel, Jr.	Catsanqua, Pa.	Blasting powder, composition for. (Release)	Mar. 17, 1863
1, 436	Thomas, W. R., and M. Emanuel, Jr.	Catsanqua, Pa.	Blasting powder. (Release)	Mar. 17, 1863
37, 311	Thompson, Henry	Lafayette, Ind.	Seeding machines	Mar. 17, 1863
37, 477	Thompson, Abel, assignor to self and Daniel Richards	Brooklyn, N. Y.	Casks and barrels for oil	Jan. 6, 1863
	Thompson, Abel, and John S. Loomis. (See Loomis and Thompson.)			
38, 429	Thompson, George W., and Joseph Foster	Bordentown, N. J.	Gas from petroleum and other hydro-carbons, apparatus for generating	May 5, 1863
1, 707	Thompson, Henry G., assignor to the Hartford Carpet Company	New York, N. Y.	Carpet pattern	Jan. 27, 1863
1, 708	Thompson, Henry G., assignor to the Hartford Carpet Co.	New York, N. Y.	Carpet pattern	Jan. 27, 1863
1, 709	Thompson, Henry G., assignor to the Hartford Carpet Co.	New York, N. Y.	Carpet pattern	Jan. 27, 1863
1, 710	Thompson, Henry G., assignor to the Hartford Carpet Co.	New York, N. Y.	Carpet pattern	Jan. 27, 1863
1, 711	Thompson, Henry G., assignor to the Hartford Carpet Co.	New York, N. Y.	Carpet pattern	Jan. 27, 1863
1, 712	Thompson, Henry G., assignor to the Hartford Carpet Co.	New York, N. Y.	Carpet pattern	Jan. 27, 1863
1, 713	Thompson, Henry G., assignor to the Hartford Carpet Co.	New York, N. Y.	Carpet pattern	Jan. 27, 1863
1, 714	Thompson, Henry G., assignor to the Hartford Carpet Co.	New York, N. Y.	Carpet pattern	Jan. 27, 1863
1, 715	Thompson, Henry G., assignor to the Hartford Carpet Co.	New York, N. Y.	Carpet pattern	Jan. 27, 1863
1, 716	Thompson, Henry G., assignor to the Hartford Carpet Co.	New York, N. Y.	Carpet pattern	Jan. 27, 1863
1, 717	Thompson, Henry G., assignor to the Hartford Carpet Co.	New York, N. Y.	Carpet pattern	Jan. 27, 1863
1, 718	Thompson, Henry G., assignor to the Hartford Carpet Co.	New York, N. Y.	Carpet pattern	Jan. 27, 1863
1, 719	Thompson, Henry G., assignor to the Hartford Carpet Co.	New York, N. Y.	Carpet pattern	Jan. 27, 1863
1, 720	Thompson, Henry G., assignor to the Hartford Carpet Co.	New York, N. Y.	Carpet pattern	Jan. 27, 1863
1, 721	Thompson, Henry G., assignor to the Hartford Carpet Co.	New York, N. Y.	Carpet pattern	Jan. 27, 1863
1, 722	Thompson, Henry G., assignor to the Hartford Carpet Co.	New York, N. Y.	Carpet pattern	Jan. 27, 1863
1, 723	Thompson, Henry G., assignor to the Hartford Carpet Co.	New York, N. Y.	Carpet pattern	Jan. 27, 1863
1, 724	Thompson, Henry G., assignor to the Hartford Carpet Co.	New York, N. Y.	Carpet pattern	Jan. 27, 1863
1, 725	Thompson, Henry G., assignor to the Hartford Carpet Co.	New York, N. Y.	Carpet pattern	Jan. 27, 1863

List of patentees of inventions, designs, and reissues, 1863.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
1,786	Thompson, Henry G., assignor to the Hartford Carpet Co.	New York, N. Y.	Carpet pattern. (Design)	June 16, 1863.
1,787	Thompson, Henry G., assignor to the Hartford Carpet Co.	New York, N. Y.	Carpet pattern. (Design)	June 16, 1863.
1,788	Thompson, Henry G., assignor to the Hartford Carpet Co.	New York, N. Y.	Carpet pattern. (Design)	June 16, 1863.
1,831	Thompson, Henry G., assignor to the Hartford Carpet Co.	New York, N. Y.	Carpet pattern. (Design)	Nov. 24, 1863.
1,832	Thompson, Henry G., assignor to the Hartford Carpet Co.	New York, N. Y.	Carpet pattern. (Design)	Nov. 24, 1863.
1,833	Thompson, Henry G., assignor to the Hartford Carpet Co.	New York, N. Y.	Carpet pattern. (Design)	Nov. 24, 1863.
1,834	Thompson, Henry G., assignor to the Hartford Carpet Co.	New York, N. Y.	Carpet pattern. (Design)	Nov. 24, 1863.
1,835	Thompson, Henry G., assignor to the Hartford Carpet Co.	New York, N. Y.	Carpet pattern. (Design)	Nov. 24, 1863.
1,836	Thompson, Henry G., assignor to the Hartford Carpet Co.	New York, N. Y.	Carpet pattern. (Design)	Nov. 24, 1863.
1,837	Thompson, Henry G., assignor to the Hartford Carpet Co.	New York, N. Y.	Carpet pattern. (Design)	Nov. 24, 1863.
1,838	Thompson, Henry G., assignor to the Hartford Carpet Co.	New York, N. Y.	Carpet pattern. (Design)	Nov. 24, 1863.
1,839	Thompson, Henry G., assignor to the Hartford Carpet Co.	New York, N. Y.	Carpet pattern. (Design)	Nov. 24, 1863.
1,840	Thompson, Henry G., assignor to the Hartford Carpet Co.	New York, N. Y.	Carpet pattern. (Design)	Nov. 24, 1863.
1,841	Thompson, Henry G., assignor to the Hartford Carpet Co.	New York, N. Y.	Carpet pattern. (Design)	Nov. 24, 1863.
1,842	Thompson, Henry G., assignor to the Hartford Carpet Co.	New York, N. Y.	Carpet pattern. (Design)	Nov. 24, 1863.
1,843	Thompson, Henry G., assignor to the Hartford Carpet Co.	New York, N. Y.	Carpet pattern. (Design)	Nov. 24, 1863.
1,844	Thompson, Henry G., assignor to the Hartford Carpet Co.	New York, N. Y.	Carpet pattern. (Design)	Nov. 24, 1863.
1,845	Thompson, Henry G., assignor to the Hartford Carpet Co.	New York, N. Y.	Carpet pattern. (Design)	Nov. 24, 1863.
1,846	Thompson, Henry G., assignor to the Hartford Carpet Co.	New York, N. Y.	Carpet pattern. (Design)	Nov. 24, 1863.
1,847	Thompson, Henry G., assignor to the Hartford Carpet Co.	New York, N. Y.	Carpet pattern. (Design)	Nov. 24, 1863.
1,848	Thompson, Henry G., assignor to the Hartford Carpet Co.	New York, N. Y.	Carpet pattern. (Design)	Nov. 24, 1863.
38,570	Thompson, J. A.	Geneva, N. Y.	Filter	Nov. 24, 1863.
40,517	Thompson, Jesse G.	Carbondale, Pa.	Inkstand	April 21, 1863.
40,604	Thompson, John, assignor to self and Martin Reed.	Rochester, N. Y.	Hoop machine	Nov. 3, 1863.
37,779	Thompson, J. B. (See Ducker, William, Jr., assignor.)	Brooklyn, N. Y.	Mosquito frames	Feb. 24, 1863.
40,592	Thompson, Josiah B. (See Ducker, Wm., Jr., assignor.)	England.	Bottles, &c., device for stopping. (Patented in England November 18, 1862.)	Oct. 13, 1863.
40,593	Thompson, Lewis S. (See Krummer, Daniel, assignor.)	England.	Bottles, &c., closing. (Patented in England November 18, 1862.)	Oct. 13, 1863.
40,518	Thompson, Nathan.	San Pedro, Cal.	Paper flies	Nov. 3, 1863.
38,545	Thompson, Samuel.	Baltimore, Md.	Fire-escapes	Aug. 11, 1863.
41,031	Thompson, Thomas.	Chicago, Ill.	Grain-scorer	Dec. 22, 1863.
37,532	Throop, Gardiner E.	Three Rivers, Mich.	Cultivators	Jan. 27, 1863.
40,371	Thulemeyer, Gottfried.	New York, N. Y.	Furnaces for reburning bone-black	Oct. 30, 1863.
40,779	Thurber, William.	Olean, N. Y.	Pipe and other boxes, machine for fitting	Dec. 1, 1863.
40,867	Thurber, William.	Olean, N. Y.	Jack, lifting	Dec. 8, 1863.
38,453	Tibbets, J. S.	Evansville, Ind.	Bell	Dec. 8, 1863.
38,506	Tibbitts, James B.	Palmyra, N. Y.	Harness strap	Aug. 4, 1863.
38,594	Tire, Isaac P.	New York, N. Y.	Shells, concussion fuze for	Aug. 11, 1863.
38,594	Tiellen, Clara O. (See Grote, Frederick W., assignor.)	New Haven, Conn.	Spring and fastener, window	June 23, 1863.
39,702	Tiffany, George S. (See Sward, Walter L., assignor.)	New Haven, Conn.	Spring and fastener, window	Sept. 1, 1863.

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List of patentees of inventions, designs, and reissues, 1863.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
1, 397	Treadwell, F. C., Jr., and Oliver H. Blood. (See Blood and Treadwell.)	Albany, N. Y.	Stoves..... (Reissue).	Feb. 3, 1863.
39, 535	Treadwell, Jno. G., and Wm. Hallen, assignors to Wm. Hallen and Ellen T. Treadwell.	Albany, N. Y.	Stoves, coal.....	Aug. 11, 1863.
39, 572	Treadwell, Jno. G., and Wm. Hallen, assignors to Martin L. Mead and Wm. Hallen.	Brooklyn, N. Y.	Dough for biscuits, &c., preparing. (Antedated September 2, 1863.)	Sept. 15, 1863.
38, 188	Treadwell, W. B.	Albany, N. Y.	Coal scuttles.....	April 14, 1863.
39, 508	Treadwell, W. B.	Albany, N. Y.	Stoves and ranges, cooking.....	Aug. 11, 1863.
40, 132	Treadwell, W. B.	Albany, N. Y.	Stoves, coal.....	Sept. 29, 1863.
38, 689	Trent, James E.	Boston, Mass.	Photograph holder.....	June 8, 1863.
40, 170	Treat, John L., assignor to self and Martin L. Miller.	New York, N. Y.	Presses, cheese.....	Sept. 29, 1863.
38, 614	Trenholm, Edward.	Washington, D. C.	Dryers, grain.....	May 23, 1863.
38, 996	Trenholm, Edward.	Washington, D. C.	Ploughs, snow, and scrapers for railroads.	June 5, 1863.
38, 430	Treich, John.	New York, N. Y.	Pottery, machinery for moulding.....	Nov. 17, 1863.
40, 634	Trimble, J. Q. A.	Zanesville, Ohio	Stereoscope and photographic album.....	Aug. 18, 1863.
39, 598	Trimmer, B. T.	Rochester, N. Y.	Mills, mill.....	Sept. 29, 1863.
1, 545	Trimmer, B. T.	Rochester, N. Y.	Separators, grain..... (Reissue).	Sept. 29, 1863.
39, 434	Tripp, George W.	Auburn, N. Y.	Dental plates. (Antedated February 7, 1863.)	Aug. 4, 1863.
39, 846	Tripp, James N. (See Jamnath, Pierre, assignor.)	Cleveland, Ohio.	Composition for polishing brues.....	Sept. 8, 1863.
38, 070	Trisler, William H.	Philadelphia, Pa.	Burner, coal-oil.....	Mar. 31, 1863.
38, 232	Troffler, Edward T. (See Williams, Jarvis, assignor.)	New Britain, Conn.	Plumb and levels, combined.....	April 21, 1863.
40, 635	Trout, Frederick A.	United States Army	Cauter.....	Nov. 17, 1863.
38, 773	Trowbridge, J. N.	Jersey City, N. J.	Ores, machine for separating and dressing.....	June 2, 1863.
39, 549	Trumbull, Horace.	St. Charles, Ill.	Fruit dryer.....	Aug. 11, 1863.
40, 870	Tuck, J. H. L.	Poplar Grove, Ind.	Sugar-evaporating apparatus.....	Dec. 8, 1863.
38, 189	Tucker, Erasmus.	Albany, N. Y.	Lanterns.....	April 14, 1863.
40, 994	Tucker, F. G., and A. Crawford.	Newton, Mass.	Iron, process for bronzing or coloring.....	Dec. 15, 1863.
37, 649	Tucker, Hiram.	Burlington, Vt.	Car coupling.....	Feb. 10, 1863.
40, 437	Tucker, Nathaniel A.	Penn Yan, N. Y.	Spoke shaves.....	Oct. 27, 1863.
39, 082	Tuell, Melzer.	Medford, Mass.	Soda water and sirups, refrigerator for.....	June 30, 1863.
38, 014	Tufts, James W.	Boston, Mass.	Vessels, war, construction and defence of.....	Mar. 24, 1863.
40, 871	Tufts, Ota.	Triangle, N. Y.	Feathers, machine for purifying and renovating.....	Dec. 8, 1863.
40, 471	Turner, Clark, and J. A. Jackson.	Chicago, Ill.	Journal bearing, anti-friction roller.....	Nov. 3, 1863.
37, 781	Turner, Elieha. (See Adt, John, assignor.)	Boston, Mass.	Draught regulators.....	Nov. 24, 1863.
39, 185	Turner, Enos, assignor to Wm. S. Johnston, Jr.	New York, N. Y.	Lubricating, compound for.....	July 7, 1863.
1, 577	Turner, Henry E.	New York, N. Y.	Lubricating, composition for..... (Reissue).	Nov. 24, 1863.
38, 190	Turner, James.	Montville, Conn.	Twist and cord, covered, machinery for making.....	April 14, 1863.
	{ Turner, John, and Isaac E. Palmer }			

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
40, 965	Turner, Roscoe G., and H. Stone.	Dedham, Mass.	Hot-air registers.....	Dec. 15, 1863.
40, 294	Turton, William.	Brooklyn, N. Y.	Hot-air registers..... (Extension).	Oct. 13, 1863.
	Tuttle, Charles F., deceased, by Edward A. Williams, and Jane D. Tuttle, and James S. Bailey, administrators.	Brooklyn, N. Y.	Hot-air registers..... (Reissue).	Jan. 20, 1863.
1, 412	Tuttle, Edward A.	Brooklyn, N. Y.	Hot-air registers.....	Feb. 17, 1863.
37, 312	Tuttle, William G.	Geneva, N. Y.	Saws.....	Jan. 6, 1863.
37, 635	Tuttle, William G.	Geneva, N. Y.	Saws.....	Mar. 3, 1863.
40, 780	Tuttle, W. W.	Granton, Wis.	Drills, grain.....	Dec. 1, 1863.
37, 553	Tuxworth, D. H., sr.	Baltimore, Md.	Kettle for culinary purposes.....	Jan. 27, 1863.
39, 363	Twining, Alexander C.	New Haven, Conn.	Mashes, means of checking and resisting. (Antedated April 11, 1862.)	July 26, 1863.
38, 015	Twitchell, C. S., and H. S. Goughly. (See Goughly and Twitchell.)	Buffalo, N. Y.	Burning fluid, composition for.....	Mar. 24, 1863.
39, 764	Tyler, Charles N.	Greenwich, N. Y.	Harvesters, flax. (Antedated September 27, 1862.)	Sept. 1, 1863.
	Tyler, S. W.			
39, 510	Tyler, T. L., and J. D. Billings. (See Billings and Tyler.)	Kenothe, Wis.	Harvesters, binding attachments to.....	Aug. 11, 1863.
38, 772	Uitling, L., and C. Liebrich. (See Liebrich and Uitling.)	Tolland, Conn.	Fire-arm, breech-loading.....	June 2, 1863.
38, 066	Uimer, Wm., and Stephen J. Georgehegan. (See Georgehegan and Uimer.)	London, England.	Copying writings, maps, &c., process of.....	Mar. 31, 1863.
38, 008	Underwood, Alexander.	London, England.	Ink, printing and copying, composition for.....	Mar. 24, 1863.
	Underwood, Henry.			
39, 572	Underwood, John, assignor to Waldo Maynard and Charles R. Thayer.	Kenosha, Wis.	Harvesters, binding attachments to.....	Aug. 11, 1863.
39, 008	Underwood, John, and Frederic V. Burt, assignors to Waldo Maynard and Charles R. Thayer.	Tolland, Conn.	Fire-arm, breech-loading.....	June 2, 1863.
	Union Paper-Bag Machine Company. (See Pettee, S. E., assignor.)	London, England.	Copying writings, maps, &c., process of.....	Mar. 31, 1863.
39, 599	Union Sugar Refinery. (See Jasper, Gustavus A., assignor.)	San Francisco, Cal.	Legs, artificial.....	Aug. 18, 1863.
37, 881	Union Sugar Refinery. (See Jasper, Gustavus A., assignor.)	Wilmington, Del.	Harvesters.....	Mar. 10, 1863.
39, 083	Upperman, James F. (See Fuller, Jim B., assignor.)	England.	Propeller, submerged. (Antedated in England April 28, '62.)	June 30, 1863.
38, 132	Uron, Thomas.	Worcester, Mass.	Chair, folding.....	April 7, 1863.
	Urmy, Jesse.			
37, 881	Vail, Robert.	England.	Coking coal and generating gases. (English patent February 13, 1862.)	Jan. 13, 1863.
38, 132	Vail, E. W. (See Merriman, J. D., assignor.)			
	Vail, E. W. (See Whitmore, A. D., assignor.)			
37, 412	Valeutin, William George.	England.	Coking coal and generating gases. (English patent February 13, 1862.)	Jan. 13, 1863.
	Valette, L. D., and H. W. Hensel. (See Hensel and Valette.)			
40, 201	Van, John.	Cincinnati, Ohio.	Stoves, cooking.....	Oct. 6, 1863.
39, 511	Van Anden, William.	Foughkeeps, N. Y.	Harvesters.....	Aug. 11, 1863.
	Van Anden, William. (See Hull, Stephen, assignor.)			
39, 973	Van Anden, William. (See Hull, Stephen, assignor.)	Phelps, N. Y.	Fence posts.....	Sept. 15, 1863.
38, 997	Vauken, George.	Amsterdam, N. Y.	Knitting machine burrs. (Antedated February 16, 1863.)	June 24, 1863.
37, 988	Van Auker, Miner.	Buffalo, N. Y.	Cutlivers.....	Mar. 24, 1863.
37, 553	Van Brocklin, P. C.	New York, N. Y.	Lanterns, coal-oil, for railroad cars.....	Jan. 27, 1863.
38, 774	Vance, Samuel B. H., assignor to Mitchell, Vance & Co.	New York, N. Y.	Telegraph magnets. (Antedated April 26, 1862.)	June 2, 1863.
	Van Choate, Silvanus F.			

List of patentees of inventions, designs, and reissues, 1863.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
40, 133	Van Choute, S. F.	New York, N. Y.	Magnets, revolving.	Sept. 29, 1863
37, 969	Van De Mark, Charles	Oaks Corners, N. Y.	Fences, portable.	Mar. 24, 1863
1, 430	Vanderburgh, George E., assignor through <i>mesne</i> assignments to himself.	New York, N. Y.	Soup, silted.	Mar. 10, 1863
40, 781	Vanderheyden, George.	Troy, N. Y.	Grates for stoves and furnaces.	Dec. 1, 1863
38, 775	Van Dewater, Henry.	Worcester, Mass.	Water wheels.	June 2, 1863
40, 202	Vandiver, John W.	Shelburne, Mo.	Planters, corn.	Oct. 6, 1863
37, 534	Vanduzen, E. W.	Hamilton Township, Ohio.	Boilers, steam, water gauges for.	Jan. 27, 1863
40, 966	Vandynne, John.	Crum Elbow, N. Y.	Car coupling.	Dec. 15, 1863
40, 718	Van Gleason, Amzi H.	Newark, N. J.	Leather, manufacture of.	Nov. 21, 1863
40, 967	Van Gysling, Aaron	North Greenbush, N. Y.	Tools for fastening boiler tubes.	Nov. 15, 1863
37, 650	Van Horn, C.	Springfield, Mass.	Profiles of submarine beds, apparatus for obtaining.	Dec. 10, 1863
37, 713	Van Houten, D.	Fuller's Corners, Ind.	Horse-powers.	Feb. 17, 1863
41, 022	Van Houten, Joseph	Mc Morris, N. Y.	Separators, grain.	Dec. 22, 1863
38, 434	Van Kannel, Theophilus	Chester, Ill.	Cherry-stoner.	Dec. 22, 1863
37, 930	Van Kirk, Joseph T.	Philadelphia, Pa.	Lamps, coal-oil, burners for.	May 3, 1863
39, 868	Van Ripper, Jacob A., for himself and as administrator of Lewis Van Anden, deceased.	Spring Valley, N. Y.	Netting, mosquito, machine for stretching and folding.	Mar. 17, 1863
40, 372	Vassant, John E.	Louisville, Ky.	Cups, tin, manufacturing.	Sept. 8, 1863
40, 562	Van Sice, James H.	Buffalo, N. Y.	Collar, horse.	Oct. 20, 1863
38, 344	Van Sickle, L. M.	Buffalo, N. Y.	Collar, horse.	Nov. 10, 1863
37, 368	Vannote, Samuel.	Woodbridge, N. J.	Hoats, gun, construction of.	April 28, 1863
39, 435	Vannote, Samuel.	Providence, R. I.	Methods, machines for rolling and forging.	Jan. 6, 1863
38, 794	Van Winkle, John E.	Providence, R. I.	Railroads, rail couplings for.	Aug. 4, 1863
38, 540	Van Wyck, William, assignor to Elias W. Van Voorhis.	Patterson, N. J.	Cotton, &c., machine for cleaning and opening.	June 2, 1863
41, 053	Vaughan, Richard M.	New York, N. Y.	Wax, purifying and bleaching.	May 12, 1863
40, 438	Veber, William F.	Glasgow, Mo.	Legs, artificial.	Dec. 24, 1863
	Vedder, N. S., and Daniel E. Parla. (See Parla and Vedder.)	Perryburg, Ohio.	Sawing machine, wood.	Oct. 27, 1863
	Vedder, N. S., and Daniel E. Parla. (See Parla and Vedder.)	Neenah, Wis.	Dampers.	June 2, 1863
38, 776	Verbeck, P., and O. T. Walker.	Philadelphia, Pa.	Nuts, screw, device for locking.	Nov. 10, 1863
40, 863	Vernier, William F.	Philadelphia, Pa.	Shelves, revolving.	Nov. 10, 1863
37, 780	Vernoy, Silas, and Nicholas Overfield.	Mechopon, Pa.	Shelves, revolving.	Feb. 24, 1863
37, 467	Vice, Thomas C.	New Haven, Conn.	Stirring and drying grain, apparatus for.	Jan. 20, 1863
	Vice, Thomas C., and Abner Greenleaf. (See Greenleaf and Vice.)	Worcester, Mass.	Fire-arms, revolving, cartridge case for.	Sept. 8, 1863
30, 869	Vickers, John H. (See Pond, Lucius W., assignor.)	Parma, Italy.	Signal apparatus for railways.	Oct. 21, 1863
40, 373	Vickers, John H., assignor to self and Lucius W. Pond.			
	Viacenz, Eugene.			

39, 974	Viridis, William W.	Baltimore, Md.	Pumps.	Sept. 15, 1863
38, 071	Vitroy, M. A. Le Brus.	Paris, France.	Carbonising wood.	Mar. 31, 1863
40, 295	Von Schilling, F.	Fort Delaware, Del.	Ordnance, breech-loading.	Oct. 13, 1863
38, 517	Voorhees, Theodore B.	New York, N. Y.	Sink traps.	May 12, 1863
	Voorburgh, N. B., et al. (See Smith, Voorburgh, Kramer, and Winter.)			
1, 430	Vose, Richard.	New York, N. Y.	Car springs.	Feb. 24, 1863
1, 421	Vose, Richard.	New York, N. Y.	Car springs.	Feb. 24, 1863
38, 422	Vose, Richard.	New York, N. Y.	Car springs.	Feb. 24, 1863
39, 314	Vose, Richard.	New York, N. Y.	Car springs.	May 5, 1863
40, 963	Vose, Richard.	New York, N. Y.	Car springs.	July 21, 1863
38, 642	Vose, Richard, assignor to the Metallic Car-spring Company.	New York, N. Y.	Car springs.	Dec. 15, 1863
40, 218	Vose, Richard, assignor to Charles S. S. Lenox.	New York, N. Y.	Car springs.	Dec. 15, 1863
38, 777	Vose, Richard, and Charles D. Gibson, assignors to Charles S. S. Lenox.	New York, N. Y.	Car springs.	Nov. 3, 1863
41, 034	Vrooman, Henry S.	Patterson, N. J.	Car springs.	June 2, 1863
40, 374	Wadleigh, Thomas J.	Sutton, N. H.	Sawing irregular forms, machines for.	Dec. 22, 1863
39, 315	Wadsworth, Wm. B.	Sanbornville Bridge, N. H.	Water elevators.	Oct. 20, 1863
37, 975	Wadsworth, Wm. B.	Sacramento, Cal.	Turned articles, machine for polishing.	July 21, 1863
37, 535	Wadsworth, Wm. B.	Cleveland, Ohio.	Spading machines, rotary.	Sept. 15, 1863
38, 850	Wadsworth, Wm. B.	Cleveland, Ohio.	Water elevators.	Jan. 27, 1863
38, 851	Wadsworth, Wm. B.	Cleveland, Ohio.	Water elevators.	June 9, 1863
38, 852	Wadsworth, Wm. B.	Cleveland, Ohio.	Water elevators.	June 9, 1863
38, 705	Wagner, Jephth A.	Cleveland, Ohio.	Wind wheels.	June 9, 1863
40, 206	Wagner, Jephth A.	Cleveland, Ohio.	Latches, cup-board.	June 9, 1863
38, 267	Wagner, Rudolph, assignor to self and Gustavus Greezinger.	Pulney, N. Y.	Sewing machine guides.	May 26, 1863
37, 706	Wagner, Rudolph, assignor to self and Chas. Kuestner.	Pulney, N. Y.	Sewing machine.	May 26, 1863
38, 795	Wagner, Rudolph, assignor to self and Chas. Kuestner.	Pulney, N. Y.	Sewing machine.	May 26, 1863
37, 714	Wait, E. R., and J. Willard Phelps.	Lancaster, Pa.	Batting skins and hides, liquid composition for.	Oct. 13, 1863
39, 849	Wait, Windsor B.	Chicago, Ill.	Mills, grinding.	April 21, 1863
40, 067	Waite, Enoch, assignor through <i>mesne</i> assignments to the Berkeley Manufacturing Company.	Chicago, Ill.	Mills, grinding.	Feb. 24, 1863
40, 297	Walden, John, and Daniel Carpenter.	Buffalo, N. Y.	Mills, grinding.	June 9, 1863
37, 413	Walker, Andrew.	Buffalo, N. Y.	Mills, grinding.	June 9, 1863
38, 023	Walker, Augustus.	Buffalo, N. Y.	Mills, grinding.	June 9, 1863
39, 708	Walker, George W. (See Morgan, John F., assignor.)	Buffalo, N. Y.	Mills, grinding.	June 9, 1863
	Walker, Jeremiah, and James O. Durgin. (See Durgin and Walker.)			
37, 313	Walker, O. F., and P. Verbeck. (See Verbeck and Walker.)	Boston, Mass.	Inkstand and pen-racks. (Antedated July 6, 1862).	Jan. 6, 1863
38, 512	Walker, Sylvanus.	Boston, Mass.	Wringing machine.	Aug. 11, 1863
37, 414	Walker, Sylvanus.	Boston, Mass.	Wringing machine.	Jan. 13, 1863
40, 782	Wallace, John, and Daniel Carpenter.	Nettle Lake, Ohio.	Beehives.	Dec. 1, 1863
40, 258	Wallace, Thomas, jr.	Goshen, N. Y.	Rakes, bay.	Oct. 13, 1863
41, 219	Wallace, Thomas, jr.	Goshen, N. Y.	Rakes, bay.	Oct. 13, 1863
38, 706	Wallace, Thomas, assignor to self, Henry A. Ballentine, and Edward F. Lawrence.	Chicago, Ill.	Presses, wine and cider.	May 26, 1863
	Wallace, Thomas, assignor to self, Henry A. Ballentine, and Edward F. Lawrence.			
	Walsh, Cornelius, et al. (See Foster, Randolph S., et al.)			
	Walsh, Cornelius, et al. (See Foster, Randolph S., et al.)			
	Walsh, Cornelius, et al. (See Foster, Randolph S., et al.)			

List of patentees of inventions, designs, and reissues, 1863.

Date.	Name of patentee.	Residence.	Invention or discovery.	Date.
37, 651	Walsh, Cornelius, et al. (See Foster, Randolph S., ass't.)	Leonardville, N. Y.	Shafts, connecting shafts or thills to	Feb. 10, 1863.
1, 413	Walsh, Cornelius, et al. (See Foster, Randolph S., ass't.)	Philadelphia, Pa.	Oases, apparatus for mixing	Feb. 17, 1863.
38, 433	Walsh, Cornelius, et al. (See Foster, Randolph S., ass't.)	Boston, Mass.	Pipes and manifold, conducting arrangement of	May 5, 1863.
40, 203	Walsh, Cornelius, et al. (See Foster, Randolph S., ass't.)	Boston, Mass.	Screwthreads, tap for cutting	Oct. 6, 1863.
1, 369	Walsh, Cornelius, et al. (See Foster, Randolph S., ass't.)	Memphis, Tenn.	Fabric for roofing, belting, &c.	Jan. 6, 1863.
37, 836	Walter, Jacob C.	Sacramento, Cal.	Armor plates, defensive	Mar. 3, 1863.
37, 862	Waples, Rufus. (See Plant, Pascal, assignor.)	Sacramento, Cal.	Gun-carriages	Mar. 10, 1863.
40, 067	Waples, Rufus. (See Plant, Pascal, assignor.)	Sacramento, Cal.	Ordnance, operating	Sept. 22, 1863.
1, 535	Ward, Herbert D. (See Johnson, John, assignor.)	Philadelphia, Pa.	Hats, ventilated	Sept. 8, 1863.
39, 850	Ward, H. D.	Pittsfield, Mass.	Fire-arm, revolving, double-barrelled	Sept. 8, 1863.
38, 345	Ward, John F.	Philadelphia, Pa.	Pipe couplings. (Antedated July 15, 1863.)	Aug. 25, 1863.
40, 521	Ward, John F.	Marathon, N. Y.	Ladders, extension	April 28, 1863.
38, 518	Ward, Thomas and Israel W.	Millville, Iowa.	Washing machine	Nov. 3, 1863.
39, 186	Ward, Thomas and Israel W.	Port Chester, N. Y.	Bolts, machines for making	May 12, 1863.
40, 564	Wardwell, George J.	Lane Depot, Ill.	Harvesters	July 7, 1863.
37, 837	Ware, Preston, Jr. (See Wimley, John M., assignor.)	Coaticook, Canada.	Stone-cutting machine	Nov. 10, 1863.
37, 536	Ware, Preston, Jr. (See Wimley, John M., assignor.)	New York, N. Y.	Lamp chimneys, mica	Mar. 3, 1863.
40, 048	Ware, W. Powell.	Muscatine, Iowa.	Gates	Jan. 27, 1863.
37, 848	Warfield, D. R.	Rochester, N. Y.	Petroleum, naphtha, &c., deodorizing	Sept. 22, 1863.
38, 976	Warneke, John.	Buffalo, N. Y.	Composition for restoring colors to cloth, &c.	Mar. 3, 1863.
37, 314	Warner, A.	St. Louis, Mo.	Soda water fountain	Sept. 15, 1863.
37, 782	Warner, James.	Cleveland, Ohio.	Composition for lemonade	Jan. 6, 1863.
	Warner, Oliver, et al. (See Simonds and Warner, ass'ts.)	Springfield, Mass.	Fire-arms, sight for	Feb. 24, 1863.
	Warren, Seth, and Warren A. Simonds. (See Simonds and Warren.)			

37, 929	Warren, Sherman R.	New Haven, Conn.	Pipe coupling	Mar. 17, 1863.
38, 064	Warren, Charles B. (See Allen, Nelson E., assignor.)	Brooklyn, N. Y.	Iron	June 30, 1863.
40, 522	Warren, E.	Marshall, Mich.	Tool, clinching and nipping	Nov. 3, 1863.
38, 513	Warren, James.	New York, N. Y.	Stopper, window-sash	Aug. 11, 1863.
40, 385	Warren, Joseph, et al. (See Baker and Hill, assignors.)	New York, N. Y.	Projectiles for fire-arms	Oct. 20, 1863.
	Warren, Owen G., assignor to Joshua Barnes and Warren.			
	Warren, Sylvester W., and Peter C. Schuyler. (See Schuyler and Warren.)			
38, 431	Warth, Albert, assignor to self and W. A. Lillendahl	Three Oaks, Mich.	Beehives	May 5, 1863.
38, 634	Warwick, Charles C.	Stapleton, N. Y.	Marline spikes	May 19, 1863.
40, 439	Washington, George I.	Philadelphia, Pa.	Lamp-burners	Oct. 27, 1863.
40, 245	Washington, George I.	Worcester, Mass.	Engines, steam condenser for	Oct. 6, 1863.
40, 872	Washington, George I.	Worcester, Mass.	Ordnance, breech-loading	Oct. 6, 1863.
38, 346	Washington, Richard.	Worcester, Mass.	Condenser	Dec. 8, 1863.
38, 977	Waterbury, Charles A.	Ramapo, N. Y.	Straw-cutters	April 28, 1863.
38, 519	Waterman, Nathaniel	New York, N. Y.	Projectiles for fire-arms. (Antedated Nov. 8, 1862.)	Sept. 15, 1863.
38, 923	Waterman, Nathaniel	Boston, Mass.	Table waiter or tray	May 12, 1863.
38, 259	Waterman, Nathaniel	Boston, Mass.	Match, friction, stand	June 16, 1863.
38, 765	Waterman, Nathaniel	Boston, Mass.	Iron, and	July 14, 1863.
38, 831	Waterman, Nathaniel	Boston, Mass.	Iron, ruffle	Sept. 1, 1863.
40, 656	Waterman, Henry.	Boston, Mass.	Coffee-bollers	Sept. 8, 1863.
38, 085	Watkins, Alexander	New York, N. Y.	Engines, steam	Nov. 17, 1863.
37, 783	Watkins, G. A.	London, England	Watches	June 30, 1863.
38, 530	Watkins, William	Springfield, Vt.	Garments, hooks for fastening	June 24, 1863.
		Grete, Ill.	Barrel heads, tools for cutting and bevelling. (Antedated October 11, 1862.)	Feb. 24, 1863.
38, 718	Watson, F. M., and H. H. Clough, assignors to selves and B. H. Watson.	Warner, N. H.	Rest, foot	May 12, 1863.
38, 708	Watson, G. E. and E. W.	McLean, N. Y.	Water-wheels	May 26, 1863.
37, 863	Watson, Isaac M.	Grand Rapids, Mich.	Traps, rat	Mar. 10, 1863.
40, 314	Watson, James P., assignor to self and John P. and Frank Lockstedter.	Richmond, Ind.	Hinges, gate	Oct. 13, 1863.
40, 315	Watson, John J., assignor to self and John P. and Frank Lockstedter.	Louisville, Ky.	Grates. (Antedated October 2, 1863.)	Oct. 13, 1863.
1, 448	Watt, Chas., and Hugh Burgess, assignors through means assignments to Wm. F. Ladd and Morris L. Keen.	England	Paper pulp, from wood, &c., for the manufacture of	April 7, 1863.
1, 419	Watt, Chas., and Hugh Burgess, assignors through means assignments to Wm. F. Ladd and Morris L. Keen.	England	Paper pulp, process of treating wood and other vegetable substances in the manufacture of. (Division B of reissue.)	April 7, 1863.
38, 321	Watt, James	Buffalo, N. Y.	Heat, waste, of paddling furnaces, &c., in generating steam, utilizing the	May 12, 1863.
38, 292	Watt, James	Buffalo, N. Y.	Vessels, apparatus for the water propulsion of	May 12, 1863.
38, 832	Wayne, J. B., and William Evered	Newark, N. J.	Pumps, steam	Sept. 8, 1863.
37, 632	Weaver, J. D.	Detroit, Mich.	Drill, rock	Feb. 10, 1863.
38, 092	Weaver, J. H., and D. M. Hefford	Pennfield, N. Y.	Whiffletrees	Aug. 25, 1863.
38, 635	Weaver, James E., and James J. Johnston. (See Johnston and Weaver.)	Chillicothe, Ohio	Churns	May 19, 1863.
40, 920	Weaver, Martin	Millersburg, Pa.	Shingle machine. (Antedated December 1, 1863.)	Dec. 15, 1863.
40, 970	Weaver, Samuel	Gettysburg, Pa.	Photographic gallery	Dec. 15, 1863.

List of patentees of inventions, designs, and reissues, 1863.

No.	Name of patentee.	Residence.	Invention or discovery.	Date.
39, 514	Weaver, William	Nashua, N. H.	Heel iron and ice calk.	Aug. 11, 1863.
38, 133	Weber, George	Newark, N. J.	Skate fastening.	April 7, 1863.
39, 436	Webster, Hazen	Elgin, Ill.	Car couplings.	Aug. 4, 1863.
39, 853	Webster, William	Middletown, Ohio.	Cans, fruit, closing.	Sept. 2, 1863.
38, 905	Webster, William, assignor to Charles Goodyear, Jr.	Morrisania, N. Y.	Rack, shade.	April 14, 1863.
40, 523	Webster, William	Morrisania, N. Y.	Boiler, feed-regulator. (Antedated October 25, 1863.)	Nov. 3, 1863.
37, 990	Wedekind, Gustav	Philadelphia, Pa.	Shade-holders, paper, clasps for.	Mar. 24, 1863.
38, 523	Wedekind, Gustav	Philadelphia, Pa.	Lamps, incombustible paper shades for.	May 12, 1863.
40, 873	Weed, George R. (See Billings, J. D., assignor.)	Muscantine, Iowa.	Plant protectors.	Dec. 8, 1863.
39, 437	Weed, Samuel S.	Stonham, Mass.	Sole-cutting machine.	Aug. 4, 1863.
	Weed, Thurlow, and Philo S. Shelton. (See Jalouresau, Alfred Fauvin, assignor.)		(Release.)	
	Weed, Thurlow, and Philo S. Shelton. (See Jalouresau, Alfred Fauvin, assignor.)		(Release.)	
	Weed, Thurlow, and Philo S. Shelton. (See Jalouresau, Alfred Fauvin, assignor.)		(Release.)	
37, 537	Weed, Waring S., et al. (See Olmsted, Samuel J., assignor.)	Great Britain	Knife-cleaning machine. (Patented in England November 9, 1857.)	Jan. 27, 1863.
	Weedon, George	Boston, Mass.	Boots and shoes, India-rubber soles for.	May 19, 1863.
38, 615	Weeks, Theodore C.	Denver City, Col. Ter.	Axles.	Jan. 20, 1863.
37, 479	Wheble, Charles. (See Hoffman, Henry, assignor.)	Denver City, Col. Ter.	Carriage wheels.	Jan. 20, 1863.
37, 480	Welbling, Harmon G.	New York, N. Y.	Grain, &c., for malding, preparing.	April 28, 1863.
38, 347	Weldenfeld, Sigmond	New York, N. Y.	Wooden cases for lead pencils, machinery for making.	June 24, 1863.
39, 019	Weller, Auguste, assignor to Eberhard Faber	New York, N. Y.	Sewing machines.	Mar. 17, 1863.
37, 931	Wellling, William	Oswego, N. Y.	Shave-cutting machine.	Dec. 1, 1863.
40, 763	Welch, Peter	Oswego, N. Y.	Staves, machine for jointing.	Dec. 1, 1863.
40, 784	Welch, Peter	Albany, N. Y.	Heaters.	Oct. 20, 1863.
40, 375	Weller, Anton	Washington C. H., Ohio.	Pen, fountain.	Sept. 29, 1863.
40, 135	Weller, Joseph	New York, N. Y.	Collar, turn-over.	Nov. 10, 1863.
1, 848	Welling, Charles H.	New York, N. Y.	Marlingales, rings for.	Mar. 17, 1863.
37, 941	Welling, William N., assignor to Samuel G. Welling	New York, N. Y.	Vegetable cutters.	Dec. 15, 1863.
40, 971	Wellington, Amos H.	Woodstock, Vt.	Fanetta, wash-basin.	Jan. 30, 1863.
37, 478	Wellington, Darina, assignor to Cornelius Wellington.	Boston, Mass.	Raddle, side, trees.	Jan. 3, 1863.
40, 524	Wellman, Charles	New York, N. Y.	Lamp or gas-shades.	Nov. 3, 1863.
39, 438	Wellman, Marian J.	New York, N. Y.	Lamps and other lights, chimneys and shades for.	Aug. 4, 1863.
40, 765	Wellman, Marian J., and J. J. Greenough.	New York, N. Y.	Label.	Dec. 1, 1863.
1, 805	Wells, Charles H., assignor to W. H. Swift and Henry B. Courtney.	Philadelphia, Pa.	(Design.)	July 28, 1863.
38, 253	Wells, Joseph.	Hoboken, N. J.	Paper-bag machine.	April 21, 1863.
40, 001	Wells, Joseph, assignor to Orlando A. Wilcox.	Hoboken, N. J.	Paper bags, machine for making. (Antedated March 19, 1863.)	Sept. 15, 1863.
	Wells, Thomas W. (See Porter, Rufus, assignor.)			

491, 134	Wells, William, et al. (See Parikhson, James, assignor.)	Chicago, Ill.	Cars, dumping, railway	Sept. 18, 1863.
507, 348	Weinich, H. M. C. (See Schultzze, Johann F. E., assignor.)	Mt. Carroll, Ill.	Shedlive	Sept. 8, 1863.
361, 854	Welsh, Joseph H.	Albany, N. Y.	Crushed	Aug. 25, 1863.
394, 683	Wemple, John D. W.	Elizabeth, N. J.	Sheets, tailors'	Nov. 3, 1863.
39, 694	Wendel, Hermann	Norvell, Mich.	Wind wheels	Aug. 25, 1863.
1, 586	Wentworth, H. B.	Berlin, Ohio	Barrels, making	Dec. 1, 1863.
38, 254	Werneck, H. M. C. (See Smith and Wesson.)	Springfield, Mass.	Boots and shoes, channelling soles of	April 21, 1863.
400, 399	Wesson, D. B., and Horace Smith. (See Smith and Wesson.)	Martinsdale, Ohio	Sugar evaporator	Oct. 13, 1863.
37, 665	Wesson, Martin	Elyria, Ohio	Planters, corn, hand	Feb. 10, 1863.
39, 000	West, Charles O., and Elsie and John Carey	Syracuse, N. Y.	Keys, door, from being turned, device for preventing	Aug. 18, 1863.
	West, H. B., and C. A. Kellogg	Seneca Falls, N. Y.	Churn-dashers	Dec. 1, 1863.
	Westcott, Amos	Baltimore, Md.	Engines, actuating, use of steam for	Sept. 1, 1863.
	Westcott, Henry P.	Baldon Spa, N. Y.	Water wheels, turbine	May 26, 1863.
	Westerman, Rudolph, and Franklin K. Congrove. (See Congrove and Westerman.)	England	Carriages, spring	Dec. 1, 1863.
1, 595	Westlake, James V. (See Jones, Jonathan L., assignor.)	Philadelphia, Pa.	Railways, street, tracks and switches for	April 14, 1863.
40, 986	Whalen, Seth, assignor to self and Hannah Whalen	R. N., England	Ship-of-war. (Patented in England December 2, 1862).	Feb. 10, 1863.
37, 653	Wharton, William	Mallory, Iowa	Diggers, potato	Oct. 13, 1863.
37, 654	Wharton, William, Jr.	Newton, Mass.	Baby tender	June 9, 1863.
39, 601	Wheatley, John	Poplar Ridge, N. Y.	Harvesters	Jan. 12, 1863.
40, 786	Wheeler, Albion	West Roxbury, and	Stereoscope	July 14, 1863.
39, 766	Wheeler, Asahel	Canton, Mass.	Dryers, grain	Dec. 8, 1863.
39, 708	Wheeler, C. Jr.	Bolton, Mass.	Clothes-wringing machine	Sept. 22, 1863.
40, 798	{ Wheeler, Charles H., and James A. Bazin, assignors to Charles H. Wheeler	Cleveland, Ohio.	Stove, parlor	
38, 191	Wheeler, Jesse B.	Utica, N. Y.	Stove, cooking	(Design)
37, 655	Wheeler, John W., and Henry S. Bishop	Albany, N. Y.	Horse powers, railway, links for	(Design)
1, 808	Wheeler, R., and S. A. Bailey	Poultney, Vt.	Stoves	
1, 853	Wheeler, R., and S. A. Bailey	San Francisco, Cal.	Amalgam and mercury, from ore pulp, machine for col- lecting	
38, 778	Wheeler, Seth	San Francisco, Cal.	Amalgamating gold and silver, machine for	
37, 416	Wheeler, Wm., assignor to self and Joshua Poor	Boston, Mass.	Quartz crushers	
38, 251	Wheeler, Zenas			
40, 874	Wheeler, Zenas			
40, 072	Whipple, James D.			
	Whipple File Manufacturing Company. (See Southwick,			
	Alpheus B., assignor.)			
	Whipple File Manufacturing Company. (See Mignault,			
	Southwick, Spofford, and Marshall, assignors.)			
	Whipple File Manufacturing Company. (See Southwick,			
	Alpheus B., assignor.)			
	Whipple File Manufacturing Company. (See Southwick			
	and Grandy, assignors.)			
	Whipple File Manufacturing Company. (See Shattuck,			
	David and John S., assignors.)			
	Whipple File Manufacturing Company. (See Spofford and			
	Southwick, assignors.)			
	Whipple File Manufacturing Company. (See Marshall and			
	Southwick, assignors.)			

DESCRIPTIONS AND CLAIMS OF PATENTS

ISSUED IN THE YEAR 1863.

ILLUSTRATED WITH ENGRAVINGS.

No. 37,266.—AUGUSTUS ALGOEVER, of New York, N. Y.—*Improved Wire-work for Fences.*—Patent dated January 6, 1863.—Straight rods of wire are crimped or bent into three depressions at intervals, the depth of each depression being a little more than half the diameter of the wire rod. The wires are placed diagonally a short distance apart, with others conversely, with the depressions up and between the rods. Straight and uncrimped rods are then placed through the upper and lower diagonal rods, through the passages formed by the depressions in the same. By applying the force of a hammer upon the intersecting portions it reduces the thickness to that of two layers of wire, and bends the straight rods in the same manner as the others were before being applied: thus forming a firm and secure intersection in which the wires will not separate from each other.

Claim.—The method of constructing wire fence and other wire work, by first crimping a portion of the wires to be used in such manner that, being laid in a proper position for the work intended to be made, the indentations formed in them will admit of the insertion of straight wires in such a manner that they will form a lock to the whole when finished, substantially as described.

No. 37,267.—JAMES S. & THOMAS B. ATTERBURY, of Pittsburg, Penn.—*Improvement in Kerosene Lamps.*—Patent dated January 6, 1863.—This invention consists of a glass lamp collar of peculiar construction, adapted to prevent the transmission of heat from the burner to the reservoir of oil.

Claim.—As a new article of manufacture, a glass collar C constructed and applied to a lamp in the manner and for the purpose substantially as set forth.

No. 37,268.—MELLEN BATTEL, of Albany, N. Y.—*Gold Washer and Amalgamator.*—Patent dated January 6, 1863.—This apparatus consists of a series of toothed annular plates secured to the casing of the machine and inclining down towards the centre, and a corresponding number of revolving toothed plates mounted on a vertical shaft, and occupying the spaces between the stationary plates. The material to be washed or scoured, falling on the outer part of the upper stationary plate, is acted on by the teeth of the revolving plate above, and passes inward by its own gravity until it falls on the centre of the revolving plate next below, whence it is carried outward by centrifugal action until it falls on the stationary plate next below, and so on to any extent required.

Claim.—The mode of constructing and using two or more concave plates, with points or pins passing between each other; one or two or more of these plates are stationary, as shown, A and I, with rims forming the recess for the revolving plates, as shown, S and T, and one or two or more revolving plates are hung on a vertical shaft on the under side of the stationary plates, as shown, E and F, substantially as before described.

No. 37,269.—GEORGE C. BEECHER, of Livonia, Livingston county, N. Y.—*Improvement in Anti-Friction Car Wheels.*—Patent dated January 6, 1863.—This invention consists in providing the car wheels with a friction wheel or band, held in place by a cap or section of the wheel, bolted to the other section, so as to secure the band, and yet admit of its free revolution in turning curves.

Claim.—The application to railroad car wheels of friction wheels or bands of wrought or cast iron, or any other suitable metal, and of any desired thickness, which will prevent friction in turning curves, by the independent revolutions of said friction wheels or bands, in the manner substantially as described.

No. 37,270.—LEWIS F. BETTS, of Albion, Calhoun county, Mich.—*Improvement in Chimney Caps.*—Patent dated January 6, 1863.—The object of this improvement is to secure a passage for the volatile results of combustion, under unfavorable circumstances, by the addition of flues which cause the wind from above to add to the current of the air within, and expel the smoke, &c., at the cowl.

Claim.—The peculiar arrangement of the two flues B B in combination with the openings or inlet passages X X, "guide plate" D and cowls E E, substantially in the manner and for the purposes specified.

No. 37,271.—D. G. BLUE, of Winfield, Iowa.—*Cultivator*.—Patent dated January 6, 1863.—In this invention the forward plough-stocks are made longer than the rear ones, and the draught so applied as to relieve the horses from the weight of the front of the plough. By the employment of removable shield, roller, and plough-stock, in the centre of the implement, it is adapted for use either as an ordinary cultivator or a corn plough.

Claim.—First, the rear posts, when made shorter than the front ones, in combination with the use of an adjustable draught connexion, substantially as and for the purposes set forth.

Second, the combination of the gauge runners *d d* with the front posts, substantially as and for the purposes stated.

Third, the combination with the frames of the removable shield box G, plough H, and roller I, substantially as set forth.

No. 37,272.—WILLIAM BOEKEL, of Philadelphia, Pa.—*Moulding Chilled-iron Projectiles*.—Patent dated January 6, 1863.—In this invention the chill is formed of a bottom piece, recessed at the top to receive a ring, composed of four segments, over which is placed the upper chill. The ring serves to make the annular groove by which the missile is attached to the metal. The sand flask rests on the upper chill. The sand mould is surmounted by a top piece having two holes, through which pins are inserted, one forming the gate for the molten metal to flow in, the other forming a vent for the air to escape, as the metal enters the mould. The ring in the bottom chill must consist of segments, so as to allow its being taken off after the missile is moulded.

Claim.—The described mode of moulding chilled-iron projectiles, when the sand mould employed in combination with a chill for any convenient number of castings is formed by means of the moulding irons E and F, and their appendages, substantially in the manner and for the purpose set forth.

Also, the employment of the ring *b* or its equivalent, in combination with the main body of the chill, for the purpose described.

No. 37,273.—L. F. BRONNUM, of Brooklyn, N. Y.—*Improvement in Canteens*.—Patent dated January 6, 1863.—The object of this invention is to produce a wooden canteen without unnecessary bulk or weight. It consists of two concave pieces cemented together and secured by a flanged hoop encircling their edges and fitting in grooves therein. The inner edges of the cheek pieces are grooved and receive a gasket or packing of any suitable material, to prevent leakage. The mouth-piece is screwed in.

Claim.—First, a canteen formed of concave cheek pieces of wood, attached together with a suitable packing or gasket at *b* to keep the joints water-tight, as set forth.

Second, a metal band surrounding the joints, in combination with the aforesaid cheek pieces, for the purposes and as specified.

No. 37,274.—WILLIAM F. BURDEN, of Troy, N. Y.—*Improvement in Rolling-Mill Stands, &c.*—Patent dated January 6, 1863.—In this rolling mill there are three rollers, the middle one fixed, and the others adjustable vertically; the invention consists in the method of supporting and securing them in their positions; the middle roller bears on arches which span the journals of the lower rollers and rest upon projections on the frame; the bearing upon the upper side of the middle roller journal is pressed down by set screws, which project through the upper piece of the main frame; above this bearing the lower seats or bearers of the upper roller journals are suspended by rods, and a bearing above said journals keeps them down; the lower rollers are supported by bearings actuated by screws through the sill-piece of the frame.

Claim.—First, in a rolling mill which has its middle roller fixed and its top and bottom rollers adjustable, the manner substantially as described of applying the screws E E, for the purpose of holding down the middle roll bearing *a'*.

Second, in a rolling mill which has its middle roller fixed and its top and bottom rollers adjustable, the arrangement of the screws H G and E with the top roller bearings *d f*, and upper bearing *a'* of the middle roller, substantially in the manner described.

Third, the combination of the bearings I, screws J, spur wheels K, pinions L, and key shafts M, with the bottom roller, substantially in the manner as described.

Fourth, in a rolling mill which has its middle roller fixed and its top and bottom rollers adjustable, the use of bearings *a a'* of arch or analogous form, so that the bearings I *d f* may be adjusted within the arch thereof, and thus compactness secured, substantially as described.

No. 37,275.—JOHN W. COCHRAN, of New York city, N. Y.—*Improvement in Percussion Fuse for Explosive Shells*.—Patent dated January 6, 1863.—The shell is of the usual exterior form, but is provided with a chamber at its anterior end, traversed by a hollow striker or piston which has a connexion in its axial tube between the cap on its end and the cavity of the shell; hooked into the screw cap at the point of the shell are wires which extend towards the

rear, and are bent behind the shoulder of the piston; the striker is weakly attached to the screw cap until the piece is discharged, when the inertia of the striker breaks the connexion.

Claim.—First, weakly attaching the striker D to the cap C at the front end of the projectile, substantially in the manner and so as to secure the advantages herein set forth.

Second, the construction and arrangement of the parts C D and F, so that the parts F F shall hook into the cavities C C, in the manner and for the purpose herein set forth.

Third, performing the triple function of first holding the striker directly connected to the front cap of the projectile until the discharge of the piece; second, partially overcoming the inertia of the striker before or in the act of their breakage; and third, absorbing the shock and inducing non-elasticity in the impact of the striker on the rear face of the chamber B, all by the employment of the same wires F F, or their equivalents, arranged and bent as herein shown.

No. 37,276.—JOSEPH H. CONNELLY, of Wheeling, Va.—*Improvement in Lamp Wicks*.—Patent dated January 6, 1863.—This improvement relates to hollow wicks and to the method of constructing them, and is sufficiently described in the claim.

Claim.—First, making a hollow wick for lamps of a folded strip of muslin or other textile fabric, by uniting the edges of the strip by means of a paste or cement, insoluble in the oil or burning fluid which is to be burned by the wick.

Second, inserting in an internally wrapped hollow or tubular lamp wick a strip or strips of porous paper, or raw cotton wrapped in paper, so as to give to the wick the requisite stiffness and shape, while increasing its capillary power.

Third, making hollow or tubular lamp wicks of muslin, linen, or other suitable textile fabric without nap, and filled with porous paper, paper pulp, raw cotton, or other substance possessing the requisite capillary property, substantially in the manner hereinbefore described.

No. 37,277.—JOHN A. DANN, WILLIAM F. DANN, and ISAAC N. DANN, of New Haven, Conn.—*Improved Folding Chair*.—Patent dated January 6, 1863.—The arms have slots in which pins upon the outside of the standards of the chair-back may slide. The seat is supported upon X-shaped legs, and as the latter are collapsed against the seat the back rocks forward on to the seat, the pins traversing the slotted arms.

Claim.—The arrangement of the slotted arms A, the bolts I, and standards F, in combination with the legs B C with the several parts, operating substantially as and for the purpose specified.

No. 37,278.—GUSTAVUS F. DEETKEN, of Nevada, California.—*Improved Apparatus for Extracting Gold from Pyrites*.—Patent dated January 6, 1863.—The pyrites, having been first roasted, is placed in a tight vat, and there exposed to a stream of chlorine gas; it is afterwards washed, and the solution of various chlorides collected and precipitated in carbonyls.

Claim.—The combination of the several devices and apparatus herein described, and operating substantially as illustrated and explained.

No. 37,279.—JAMES H. COON, of Deposit, Delaware county, N. Y.—*Improvement in Serr-ing Ordnance*.—Patent dated January 6, 1863.—The charge is deposited in a cradle, which is then elevated to a convenient height and position for loading; the breech of the gun is vibrated downwards, being hung upon trunnions so as to bring the bore in line with the charge; a rammer is then set in motion which drives the charge into the breech; the parts are returned to their original positions, and the piece fired. These operations are performed by machinery, the working of which is continuous and uninterrupted, even during the recoil of the piece and its being pushed in battery.

Claim.—First, the device composed of the two arms 54 and 55, and the crank rod 56, when combined and arranged in the manner hereinbefore described, and operated by the crank 59, so as to move the rammer 60, for the purpose set forth, and in the manner indicated.

Second, the device composed of the arm 30, and the two arms 34 and 35, the chains 39 and 40, in combination with the rods 66 and 67, and the cradle 75, and the lattice elevator 72, all combined with each other in the manner before described, and operated by the crank rod 28', for the purpose of lowering the forward end of the breech 33, and elevating the cradle 75, simultaneously with each other, as hereinbefore described and set forth.

Third, the combination of these two motions with each other, by means of the machinery hereinbefore described, so as to cause the depression of the breech 33, the elevation of the cradle 75, and the ascent of the rammer 60, simultaneously, together with all the minor and subsidiary operations, as hereinbefore described and for the purposes set forth.

No. 37,280.—SAMUEL H. DUBOIS, of Buffalo, N. Y.—*Improvement in Railroad Car Axles*.—Patent dated January 6, 1863.—From the under side of the truck is a dependent post supporting a journal-box, and into this are socketed the balls at the inner ends of the pair of axles.

Claim.—Forming a ball-journal on the inner end of each pair of axles, in combination and arrangement with an appropriate journal-box, having a central support upon the track, for the purposes and substantially as described.

No. 37,291.—M. B. DYOTT, of Philadelphia, Penn.—*Improvement in Coal Oil Burners*.—Patent dated January 6, 1863.—The burner consists of two parts; the upper one being raised and lowered inside of the lower by means of a partial rotation, causing pins on the outer cylinder to traverse slots in the spiral arms which project downwards from the upper piece containing the cone and chimney.

Claim.—A lamp burner constructed of two parts, A D, connected together by slotted spiral arms G, and pins *d*, arranged substantially as shown and described, to admit of the raising and lowering of the part D, cone E, and chimney, for the purpose set forth.

No. 37,292.—T. F. ENGLEBRECHT, of New York, N. Y., and R. BOEKLEN and M. STAEBLEN, of Brooklyn, N. Y.—*Improvement in Artificial Legs*.—Patent dated January 6, 1863.—The improvements consist in the arrangements for adjusting the length and shape of the limb and foot to the requirements of the user; in the articulation of the ankle joint whereby it is made to approximate the natural motions; and in the use of corrugated sheet metal for the rigid or permanent parts. The lower portion of the leg is adjustable vertically, slipping telescopically into the calf and retained by set screws. The instep is stuffed and padded to the requisite proportion and covered with a laced flap. The ball of the ankle is socketed to the lower end of the leg, and retained by a screw bolt suspended by a strap from a transverse rod, allowing a moderate "play" by the deflection of the strap. A modification of the ball and socket may be made, in which a ball on the end of the leg enters a screw socket on the foot, keeping the rigid parts from contact and having the intervening space occupied by an elastic membrane.

Claim.—First, the combination of the two pieces B and C, which form the exterior of the lower leg, substantially as herein described for the purpose set forth.

Second, the construction of the artificial foot with a cavity *m n*, in the place occupied by the instep of the natural foot, and with flaps F, and a lace *n*, or their equivalent, to receive and confine a packing *p*, substantially as and for the purpose herein described.

Third, the construction of the ankle joint with a ball and socket, or cup and spring, combined to operate substantially as herein described, and dispense with the use of stops or other bearings than the ball and its socket or cup.

Fourth, the construction of the joint of an artificial limb in such manner substantially as illustrated in Fig. 7, that the rigid parts connected by the joint do not lap over each other, but leave the opening between them protected by a surrounding spring.

Fifth, the construction of the rigid portions of an artificial limb of plate metal, having corrugations, the length of which runs lengthwise of the limb, substantially as and for the purpose herein specified.

No. 37,293.—JAMES W. EVANS, of New York, N. Y.—*Improvement in Railroad Car Springs*.—Patent dated January 6, 1863.—This machine consists of a number of groups of circular springs superimposed in a box with diaphragms between, and of a smaller diameter and increased number as they ascend in the series, so that the lower ones shall first be impressed by the load. Each group is arranged upon a collar on the diaphragm below it, and when unimpressed by the load is in a plane, but assumes under the imposition of weight the circular segmental form of the rigid surfaces of the diaphragm pistons and the box in which the series or groups of springs are contained.

Claim.—First, the peculiar form and construction of the intermediate un-elastic plate *c*, as regards the progressively increased length of lip in each, according to the number of springs in each group, and the ogree recess *c''*, near the angle.

Second, suspending and holding the elastic plates together at the centres and edges without fixed fastenings, as described.

Third, the combining and arranging the box or cover D with the other parts so as to hold together the whole as a complete spring with or without a bolt, and without any fixed fastenings of the working parts.

Fourth, the combining and arranging the elastic and non-elastic plates, with the above described manner of hanging the elastic plates loose at their centres, thereby rendering fracture or tearing of the plates almost impossible.

No. 37,294.—THOMAS FARRINGTON and LEWIS WHITE, of Washington county, Vt.—*Improved Wringing Machine*.—Patent dated January 6, 1863.—This is a device for bringing the end of an adjustable spring to bear upon the journals of the upper roller in a wringing machine; the ends of the U-shaped spring being wrapped around the end of a rod which passes through both standards of the machine, and is adjustable therein by thumb-screws.

Claim.—The thumb-screws F, the rod B, the slot *c*, the spring A, and the adjustable bearing E, arranged in the manner and for the purpose herein set forth and described.

No. 37,295.—GEORGE FEATHERSTONE, Ansable Forks, Clinton county, N. Y.—*Improved Carriers' Knife*.—Patent dated January 6, 1863.—The invention consists in placing the cross handle with its axis perpendicular to the surface of the blade.

Claim.—The combination of the cross handle *c* with the blade *b*, having upon it one or more double-cutting edges, when said handle is arranged with its axis perpendicular to the surface of the blade, or nearly so, as herein specified.

No. 37,286.—WILLIAM FINLEY, of Schoolcraft, Kalamazoo county, Mich.—*Improvement in Seeding Machines*.—Patent dated January 6, 1863.—The improvements consist in a suspended distributing box below the hopper and feed roller, which is provided with inclined chutes for the grain to roll upon in its descent; and also in the manner of engaging and raising the driving wheel and feed gear of the seeder, which is by a loose collar, working endwise on the shaft, and with four arms protruding between the spokes of the wheel into a disk plate on the end of the hub.

Claim.—First, the box H, suspended underneath the seed box F by a central pin or bolt, and provided with the inclined chutes *A*, as and for the purpose specified.

Second, the sleeve L, provided with the loose collar M and bars P, in combination with the fixed perforated plate *o* and ratchet pulley Q, all arranged as and for the purpose herein set forth.

No. 37,287.—CHARLES GOODYEAR, jr., of New York, N. Y.—*Improvement in Boot and Shoe Soles*.—Patent dated January 6, 1863.—The invention consists in imbedding in a vulcanized rubber shoe sole a piece of wire cloth, to give form and rigidity to the article.

Claim.—As a new manufacture, boot and shoe soles and parts of soles composed of vulcanized India-rubber, or other vulcanizable material, and wire cloth, or its equivalent, substantially as herein described.

No. 37,288.—WILLIAM K. GREEN, jr., of Amsterdam, Montgomery county, N. Y., and WM. M. PAWLING, of Hagaman's Mills, Montgomery county, N. Y.—*Improvement in Machines for Drying and Finishing Tubular Knit Fabrics*.—Patent dated January 6, 1863.—The claim fully explains the invention.

Claim.—First, the combination or arrangement together for conjoint use of an open hollow support for the tubular web, an apparatus for producing a blast of air, and a device for progressively drawing the tubular web from the said hollow web holder, substantially as herein described, whereby the tubular web may be progressively dried by a blast of air from the inside, in the manner herein set forth.

Second, the combination of a hollow web holder, an apparatus for producing a blast of air, a device for progressively drawing the tubular web endwise from the said web holder, and an internal web expander, substantially as herein described, whereby the tubular web may be progressively stretched transversely and lengthwise, and simultaneously dried by a blast of air from the inside, in the manner herein specified.

Third, the combination of a suitable support A for the long piece of washed tubular web, a pair of compressing draught rollers E E', and an internal web spreader E, of a flattened form, and arranged with its rear end *g*, Fig. 3, in the bight of the said draught rollers, substantially as herein described, whereby the tubular web may be progressively stretched flat widthwise and lengthwise, and compressed or calendered in such expanded condition, as herein set forth.

Fourth, the herein described arrangement of a flat web spreader E, in combination with calendering rolls E E', a hollow web support A, and a blower C, whereby the tubular web may be progressively dried and simultaneously stretched flat widthwise and lengthwise from the inside, and calendered while thus expanded, as herein set forth.

Fifth, the arrangement in combination of a support A for the long tubular web, a flat web spreader F, a pair of compressing draught rollers E E', and an incumbent take-up roller I, substantially as herein described, whereby the tubular web may be progressively stretched transversely and longitudinally, and calendered and wound into a roll in such expanded condition, as herein set forth.

Sixth, the arrangement in combination of a device C, for producing a blast of air, a hollow web holder A, a flattened web spreader F, draught rolls E E', and an incumbent take-up roller I, substantially as herein described, whereby the tubular web can be simultaneously dried and stretched laterally from the inside, and compressed and wound into a roll in such expanded condition as herein specified.

Seventh, the arrangement of friction wheels *o o* on the web expander F, combined with a web support A and draw-off mechanism E E', substantially as and for the purpose herein described.

No. 37,289.—W. H. GWYNE, of White Plains, Westchester county, N. Y.—*Improvement in the Manufacture of Illuminating Gas*.—Patent dated January 6, 1863.—The invention consists in obtaining gas by the usual machinery from wood and highly charged bituminous coal, placing the coal in the back part of the retort and the wood in front, then closing and luting the joint. Proportions, thirty pounds of coal to one hundred of wood.

Claim.—Obtaining illuminating gas from coal and wood placed together in a retort, in manner and proportions and treated substantially as described.

No. 37,290.—WILLIAM HALL, of Brookline, Norfolk county, Mass.—*Improvement in Locks*.—Patent dated January 6, 1863.—This lock is operated by a key with adjustable bits, which, on being introduced into the keyhole, operate a corresponding number of studded key slides, so as to adapt each of them to receive the opening or recess of the corresponding

tumbler in the throwing of the bolt. This latter motion is effected by the knob working by its projection or cam within a recess in the bolt. A bent lever latch catches into notches in the tumbler, to hold them in position during this operation. The latch is operated by the bolt slide L. The bits on the key are made reversible, end for end, in the forked frame, and thereby a greater number of changes afforded. An auxiliary bolt is previously withdrawn from the channel *t*, in which the key slides traverse; and in case of tampering with the lock by pressure on the slides, a projection on the auxiliary bolt enters a notch on the slides, allowing a little play, to prevent picking the lock by the tentation method.

Claim.—The combination and arrangement of one or more studded key slides N N, a corresponding number of tumblers K K, and catch lever M, and the auxiliary slide L, or its equivalent, the whole being applied to the main bolt substantially as specified.

Also, the arrangement and application of the main bolt B with its key slides N, tumblers K, catch lever M, and slide L.

Also, the combination and arrangement of the auxiliary bolt O and its actuating apparatus (or retracting spring and system of levers operated by the knob) with one or more studded key slides N N, a corresponding number of tumblers, a catch lever M, and a slide L, combined with the main bolt.

Also, the combination and arrangement of the tooth *z* and the notches *a2*, or mechanical equivalents therefor, with the auxiliary bolt and its system of key slides.

Also, the application of the auxiliary bolt to its supporting lever or to the lock, so that the said bolt and either of the key slides, when in engagement, may be capable of being moved together in manner and under circumstances substantially as specified.

Also, the key as constructed, with its bits separately revolvable on a pin, in order that either extremity of each bit may be employed in operating a key slide.

No. 37,291.—L. P. HARADON, of Independence, Buchanan county, Iowa.—*Improvement in Grain Distributors.*—Patent dated January 6, 1863.—This invention consists of an inclined telescopic tube, to be attached to the discharge spout of an elevator, by which the stream of grain can be discharged into any of a series of openings communicating with bins or chambers. These openings are in line, and, as the tube is prolonged or contracted, it is brought vertically over the opening to the proper bin. This motion of the tube is given by a chain and pulleys extending to the lower floor.

Claim.—First, the telescopic tube A, provided with the box C, and placed on an inclined framing B, which has a series of spouts D attached, in combination with the cord or chain E attached to the box C, and a windlass provided with a ratchet I and pawl J, or an equivalent device for drawing up the box C in line with the several spouts D, all arranged as and for the purpose specified.

Further, the valve L, in combination with the two inclined spouts C' C'', and the cord or chain N, arranged with the pulley O, loaded arm P, and the loaded lever M, as and for the purpose specified.

No. 37,292.—HENRY HISE, Ottawa, of La Salle county, Ill.—*Improvement in Gauge Cocks.*—Patent dated January 6, 1863.—This improvement consists in the application to a water-gauge cock of a collar, on which is placed a glass tube in which a ball valve of light material floats on the surface of the water; when the water in the boiler sinks below the valve-seat the ball settles thereon, almost hidden from the sight of the engineer, but is plainly visible in the tube at the proper height of water.

Claim.—The attachment of a glass tube to the column B B, in combination with the valve D and floating ball I, when applied to a cock, substantially as and for the purpose herein specified.

No. 37,293.—ANSELL N. KELLOGG, of Baraboo, Sauk county, Wis.—*Improvement in Printers' Press.*—Patent dated January 6, 1863.—This machine is designed as an improvement in the machine known as Newbury's Mountain Jobber and Card Press, patented July 5, 1859, and consists in improvements in delivering the printed cards or sheets, levelling the platen more readily and firmly, and effecting a more perfect distribution of ink upon the ink-roller. These parts are described in the claim with great particularity.

Claim.—First, the method of delivering the printed work substantially as follows: By the removal of the parts specified above as obstructing the free descent of the printed work, the spreading of the arms *a a* of the platen A, the lengthening of the joint-rod *b*, the inversion of the stop-arm *c*, and the construction of the hinge *e* in said arm *c*, the position and shape of the frisket bearers *g g*, the position of the frisket screws *h h*, of the springs *c c*, and of arms P P, the use of screw connexions at the ends of the rod *i*, and the flap *m*.

Second, the apparatus for piling, wherever used, substantially as shown and described, to wit: The box *k*, with lip *l*, and throat *n*, the adjustable back *o*, and raised edge *v*, the fly *p*, arms *g g*, shaft *r*, crank *t*, rod *u*, wrist *y*, and pivot *z*.

Third, the arrangement for levelling and holding the platen A, substantially as shown and described, to wit: The use of the shouldered screws *w w*, and the caps F F, with their fastenings G G' G' G'.

Fourth, the placing of the point of draught of the roller-frame forward of the centre, effected substantially as follows, to wit: By the use of the pivots I and the bar *m*, in the positions shown.

No. 37,294.—SAMUEL LEE, of Taunton, Bristol county, Massachusetts.—*Improvement in Tobacco-Cutters.*—Patent dated January 6, 1863.—This machine is constructed for cutting tobacco, squeezing corks, and cracking nuts, and consists of a lever whose jaws impinge upon the corresponding recesses on the upper edge of a vibrating arm, underneath which are a knife and nut-cracking arrangement.

Claim.—The machine or slicer as constructed either with the cork-squeezing jaws or the nut-cracking jaws, or both, arranged and combined with the levers and stand, applied in manner and so as to operate together, substantially as specified.

No. 37,295.—WILLIAM LECHLER and J. K. SCHUPP, of Cleveland, Cuyahoga county, Ohio.—*Improvement in Mould-Boxes for Casting Propeller Wheels.*—Patent dated January 6, 1863.—The propeller blades, having to assume in their relative positions the form of a screw, are moulded separately in boxes, which are afterwards suitably connected for a casting to be made of the complete propeller with its blades.

In the separate mould-boxes is a mould-block whose face is worked to correspond with the side of the pattern to be used, the pattern being the counterpart of the blade; the mould-block giving the position and inclination of the pattern in the mould so as to come together to its fellows with the right pitch.

Claim.—Making the mould-box for casting propeller wheels in sections A A A A, substantially as described, each section to correspond to a wing or blade of said wheels, which sections, when fitted together with the moulds in them, will constitute a complete mould for a solid propeller wheel, substantially in the manner described.

Also, in combination with the mould-box for a propeller wheel as herein described, the mould block or bed D, substantially in the manner and for the purposes herein set forth.

No. 37,296.—HENRY LEIBERT, of Norristown, Montgomery county, Pa.—*Improved Composition for Gunpowder.*—Patent dated January 6, 1863.—The proportions vary for different purposes. That for blasting may consist of prussiate of potash, two parts; chlorate of potash, one part; nitrate of soda, or other nitrous oxide, ten parts; sawdust or charcoal, four parts; sulphate of soda, one part; sulphur, four parts; quicklime, one part; sal ammoniac, two parts.

Claim.—Prussiate of potash, chlorate of potash, nitrate of soda or its equivalent, sawdust or its equivalent, sulphate of soda and sulphur or its equivalent, substantially as and for the purpose herein set forth.

No. 37,297.—JOHN MADDEN, of Youngstown, Mahoning county, Ohio.—*Improvement in Saw Sets.*—Patent dated January 6, 1863.—The object is to obtain a set of a peculiar character, in which the tooth is not merely deflected to an angle with the plane of the saw-blade, but receives a sharp deflection at the base of the tooth, and then resumes its original direction. This is accomplished by making the working edge of the upper or moving die of an outline to correspond with the desired set; and the anvil or lower die of two pieces, one lower than the other, over the joint between which the tooth is deflected, and again assumes upon the lower one its original line of direction.

Claim.—First, the male die G, in combination with the female dies J J' and M, when constructed and operating substantially as and for the purpose set forth.

Second, the peculiar form or shape of the teeth as shown in Fig. 7.

No. 37,298.—JOHN MARCHBANK, of Lansingburg, Rensselaer county, N. Y.—*Improvement in Printing Floor-Cloths, &c.*—Patent dated January 6, 1863.—The improvement consists in the preparation of a cell box, whose cells are charged with the appropriate colors, into which projecting pins of the printing block are dipped and transferred to the cloth.

The cells are filled by plates having movable pins, which are arranged to agree with the pattern, one plate to a color, and the pins dipped in color and then introduced into the cells discharging their paint therein—the pins being distributed in the plates by means of a perforated card.

Claim.—First, the printing of designs or patterns on oil and other floor-cloths by means of blocks provided with pins or projections arranged at such a distance apart and used in connexion with a box containing cells supplied with different colored paints or with a pad or cushion supplied therewith, substantially as herein described.

Second, the feeders or devices for supplying the cells or the pad or cushion H with the necessary colors, the same being composed of plates E E' E'' E''' provided with pins *d*, substantially as set forth.

Third, the perforated card or paper D as a means for disposing or distributing the pins *d* in the plates E E' E'' E''', so as to supply the cells *b* of the box B, or the pad or cushion with the several colors, that they may be taken up by the blocks to print the desired design or pattern.

No. 37,299.—HENRY MESSER, of Roxbury, Norfolk county, Mass.—*Improvement in Air Engines.*—Patent dated January 6, 1863.—In this single-acting engine the pump piston is stationary, and the pump cylinder has a vertical reciprocating motion to help the descent by

its weight. Within the stationary cylinder is a working piston, under which the heated air is admitted to raise it; upon this is a pump cylinder which, as it is elevated, causes the stationary pump piston relatively to descend, forcing the air contained in the pump cylinder through the pump piston head and the pipe connected therewith to the heated air jacket which surrounds the cylinder and the furnace, and from which the latter is supplied with air.

The space above the piston is in the meanwhile being supplied with exterior air by a valve. On the descent of the working piston and pump cylinder the air above the stationary piston is driven through the piston head as before described. Suitable induction and eduction valves are provided in a chamber with a removable cap to afford access thereto.

Claim.—First, the combination with a stationary pump piston of a pump cylinder attached to and having a reciprocating movement corresponding with the working piston, substantially as and for the purpose herein specified.

Second, the arrangement of the valve chest H, valves I J, and the movable front plate a of the chest, whereby provision is made for getting at the valves substantially as herein described.

No. 37,300.—DANIEL MILLS, of Paterson, Passaic county, N. J.—*Improvement in Window-blind Fastenings.*—Patent dated January 6, 1863.—This fastening is intended to hold in any position the slats of a Venetian blind shutter. The connecting bar is secured by an eyelet to each of the slats excepting one, to which it is attached by a hinge, one leaf of which is on the bar and the other on the slat; the pintle of this hinge is a thumb-screw, and clamped by it the slats are all held firmly.

Claim.—The combination and arrangement of the adjustable hinged fastening a b d with a window blind, substantially as and for the purpose described.

No. 37,301.—S. G. MORRISON, of Williamsport, Lycoming county, Pa.—*Improvement in Lamps.*—Patent dated January 6, 1863.—By means of a conducting wick of smaller sectional area than the flame wick, the supply of oil carried to the latter is diminished.

Claim.—The distributing tube B, with the composite wicks C C C, and flame wick d d, in connexion with the conducting wick A a, so as to lessen the amount of oil raised by capillary attraction to the flame, the amount of wick exposed to the oil reservoir being about one-third of that supplying the flame, the whole constructed and operating substantially as specified.

No. 37,302.—THOMAS NORTHEY, of St. Mayhew Parish, Cornwall, England.—*Improvement in Trunk Engines.*—Patent dated January 6, 1863.—This invention consists in the construction of the inductive and eductive valve by which the steam is admitted to the cylinder on that side of the piston on which the trunk is situated, and, after it has produced a stroke of the piston by its direct action on that side, to pass to the opposite one and produce the return stroke by the expansive action on the larger area of the latter side, producing a uniform development of power in both motions by the proportionment of the respective areas.

Claim.—The combination with a trunk engine of a valve G, applied and operating substantially as and for the purpose herein specified.

No. 37,303.—OSCAR B. OLMSTEAD, of Rockton, Winnebago county, Ill.—*Improved Sugar Evaporator.*—Patent dated January 6, 1863.—A smaller furnace is placed alongside of the main furnace, with its bottom on a lower level, so that the coals falling through the grating on to the false bottom of the main furnace may be raked into the auxiliary furnace and there utilized.

Claim.—First, the combination of the auxiliary furnace E with the main furnace A, when arranged and operating as described for the purpose set forth.

Second, constructing the main furnace A with a double bottom, substantially as and for the purpose specified.

No. 37,304.—STEPHEN R. PARKHURST, of New York, N. Y.—*Improvement in Machinery for Feeding Carding Engines.*—Patent dated January 6, 1863.—This table is a rotary wire-toothed cylinder, which receives the wool, carries it to the toothed roller, which passes it upon the table and thence to the picking cylinders, which revolve slowly and open the knots and bunches preparatory to their being removed by the "licker-in" to the carding engine. Any fibre which may have dropped during this operation is brought back to the revolving table by the endless apron which revolves beneath.

Claim.—First, the cylindrical rotary feeding table g, to supply the fibrous material to the cleaning or carding machine, substantially as specified.

Second, the roller l, in combination with the said cylindrical rotary feeding table g, for the purpose and as specified.

Third, the belts p p, screen r, and curved guard s, in combination with the said cylindrical rotary feeding table g, for the purposes and as specified.

Fourth, a series of toothed cylinders, in combination with the toothed feeding table, for opening, combining, and separating the fibres, as specified.

No. 37,305.—JAMES L. PLIMPTON, of New York, N. Y.—*Improvement in Skates.*—Patent dated January 6, 1863.—In this improvement the roller blocks are so attached to the foot-stand by downwardly projecting pintles that, as the foot is canted over in the act of turning the body, the plates in which the lower ends of said pintles are journaled throw the pintles out of the parallel line of direction and cause the rollers to follow a curved track agreeing to the bodily motion. The broad tread of the foot is fastened to the foot-stand by upcurved plates which embrace the edges of the sole, and these are operated by a spring under the foot sole, which forces them forward and keeps them engaged with the front edges of the slots.

Claim.—First, the attaching or applying of the rollers E, or runners E^o, to the stock or foot-stand A of a skate in such a manner that said rollers or runners will be turned, cramped, or adjusted, so as to run the skate in a curved line to the right or left by the turning or canting of the foot stand, or stock A, as set forth.

Second, the plate H-H, provided with hooks g at their ends, and racks f at their front edges, in combination with the spring I and plate G, the latter being applied to the stock or foot stand A, and provided with slots e at its ends, and all arranged as shown to form a fastening at the front part of the skate, as herein shown and described.

No. 37,306.—JOSEPH F. SARGEANT, of Boston, Mass.—*Improvement in Eyeletting Machines.*—Patent dated January 6, 1863.—This machine consists of arrangements by which eyelets thrown promiscuously into a hopper are properly arranged, presented to the work, and placed therein in readiness to be clinched; or, not assuming the proper presentation, are rejected and discharged. Also, in the arrangement of those portions of the sets which operate on the ends of the eyelets, with reference to the fulcrum of the levers carrying the sets. The details of the machinery by which these objects are accomplished are minutely described in the claim.

Claim.—First, the combination of a hopper with two side bars and cover and a vibrating bottom, constructed, arranged, and operating substantially as specified.

Second, the under-cut formation of the sides of the chute provided with the guard or deflector and a depression in the side boundary of the chute when arranged and operating together substantially as and for the purpose specified.

Third, the arrangement of those parts of the sets which operate on the ends of the eyelets relatively to the pivots or fulcrums from which the sets are vibrated substantially as described.

Fourth, in combination with a hollow set, a feeder having a point or points suitable for entering into an eyelet or eyelets, and motions forward and backward for the purpose of feeding, and motions toward and from the eyelets for the purpose of engaging with them; said combination operating to place successively and at the proper time one eyelet after another on the hollow set, and at all other times in conjunction with the set to prevent the eyelets from being placed thereon.

Fifth, the combination of a punch with an eyelet set, so that the punch will operate to form holes in advance of the place where the set operates and to space the distances between the holes substantially as described.

No. 37,307.—JOHN C. SCHOOLEY, of New York, N. Y.—*Improved Refrigerator.*—Patent dated January 6, 1863.—The object of this invention is to regulate the relative sizes of the provision chamber and ice chamber for convenience, and to economize the ice; this is accomplished by sliding the movable partition on horizontal cleats which project into grooves at the edges of the partition.

Claim.—The movable partition C, when used in combination with a refrigerator, and so arranged that the partition can be moved to and fro, substantially as and for the purposes as set forth.

No. 37,308.—SAMUEL J. SEELY, of Brooklyn, N. Y.—*Improvement in Machines for Bending Corrugated Sheet Metal.*—Patent dated January 6, 1863.—In a suitable frame three rollers are journaled, and corrugated to correspond with the pattern of the sheet. The upper roller is so superimposed upon the other two as to form the corrugated plate into a cylindrical shape by its passage between them.

Claim.—Bending corrugated sheet metal into the form of a cylinder which is corrugated around its circumference by means of three adjustable rollers having corrugated circumferential surfaces such as described, said surfaces meshing into one another and also revolving in concert and with an equal and positive motion, all substantially as herein set forth.

No. 37,309.—DANIEL S. STAFFORD, of Decatur, Macon county, Illinois.—*Improvement in Cultivators.*—Patent dated January 6, 1863.—There are two pairs of ploughs in this cultivator suspended from the frame by bolts which allow of their swinging back and forth; the drawing chains attached to a forward part of the machine pass over pulleys and connect the ploughs in pairs, so that if one meets with a detention the other will pull forward sufficiently to permit the former to ride over the obstacle. Also, the machine is so hinged to the tongue and hounds that by tilting the rear end up, the ploughs are all removed from the ground.

Claim.—The suspended and dually-connected arrangement of single ploughs in combination with each other and with a wheeled carriage so as to operate substantially as described.

Also, in combination with the suspended and connected arrangement of ploughs in pairs, so constructing and arranging the carrying frame thereof that it may be inclined by the driver so as to operate substantially as specified.

No. 37,310.—JOHN B. STRICKLER, of Milford, Iroquois county, Ill.—*Improvement in Bee-hives*.—Patent dated January 6, 1863.—This hive consists of two main divisions, the lower proper and the upper apartment for the honey boxes, which are three in number. The lower division is divided by vertical partitions into three apartments, the middle one the largest, and a space is taken off the lower part of this for a drawer which contains a frame, and a slotted slide for the entrance of the bees. In one of the honey boxes bait may be placed to entrap the queen bee and remove a colony. Sliding rods cross the main chambers for the attachment of the combs.

Claim.—The arrangement and combination of the drawers E F G with the compartments K L M, drawer P, slotted or perforated slide O, and frame Q, all arranged within the case A to form a new and improved bee-house, as herein set forth.

Also, the bait receptacle I in the drawer G, in combination with the compartment J, for the purpose of entrapping the queen and removing the surplus colony from the bee-house, as herein set forth.

Also, the sliding comb-supporting rods R, arranged as shown, for the purpose specified.

No. 37,311.—HENRY THOMASON, of Lafayette, Tippecanoe county, Ind.—*Improvement in Seeding Machines*.—Patent dated January 6, 1863.—These improvements relate to the attachment of the shares to the frame and to the method of constructing the seed-distributing disks of metal which are slit and the sections turned so as to make spiral or oblique flanges. The various parts involved are minutely described in the claim.

Claim.—First, attaching the shovels or shares J to plates *w* fitted loosely, or pendent rods *e** attached to the plates K of the frames in which the seed-boxes are secured in connexion with the plates K, having the plates *w* connected to them by rods *f**, and the former secured to the beam *a'* of the frame A, all arranged as and for the purpose of turning the shovels or shares, as specified.

Second, the manner of constructing the seed-distributing wheels *g*, as described, to wit: by cutting slits in circular disks and bending the portion of the disks between the slits obliquely with their shafts so as to form buckets or flanges to act upon or raise the seed and discharge the same from the seed-boxes, as set forth.

Third, securing the plates *v* of the shovels or shares J to the plates *w* by means of joints *a**, substantially as shown, in connexion with the staples *b** and wooden pins *d**, and the slots *c** in the plates *v*, all arranged to operate as and for the purpose herein set forth.

No. 37,312.—WILLIAM G. TUTTLE, of Geneva, Ontario county, N. Y.—*Improvement in Saws*.—Patent dated January 6, 1863.—The improvement in this saw consists in the dress of the teeth, which are formed of pairs, resting together with a narrow slit between them, alternating with straight, single, clearing teeth. The teeth constituting the pair are set one each way so as to form the kerf.

Claim.—The use of alternate triangular pairs of cutting teeth *a a'*, separated individually by the narrow slit *b*, and with their points resting closely together, in combination with the intermediate, single, straight, clearing teeth *d*, the whole arranged on a single saw blade, and operating substantially as and for the purpose herein set forth.

No. 37,313.—SYLVANUS WALKER, of Boston, Mass.—*Inkstand and Pen-rack*.—Patent issued January 6, 1863.—Antedated July 6, 1862.—This invention consists in the special arrangement of parts by which the interior is made to serve as a fountain inkstand, while the outside, besides the dipping and filling orifice, has projections and channels for holding pens.

Claim.—First, a fountain inkstand and pen-rack combined, all made of one piece of glass. Second, in combination therewith the horizontal grooves *a b c*, reservoir B, dipping-cup A, convex-bottom E, neck C, aperture *e*, and hood *f*, when combined and arranged as described for the purposes set forth.

No. 37,314.—A. WARNER, of Cleveland, Ohio.—*Improved Composition for Lemonade*.—Patent dated January 6, 1863.—Two pounds loaf sugar, one ounce oil of lemon, one pound tartaric acid, three ounces citric acid; bottle for use.

Claim.—The herein described compound, consisting of loaf-sugar, oil of lemon, tartaric acid and citric acid, prepared and combined substantially as and in the proportions herein set forth.

No. 37,315.—RANDALL MILTON WHIPPLE, of Cambridge, Mass.—*Improved Shoe Brush*.—Patent dated January 6, 1863.—From the end of the back of the brush there projects a scraper consisting of a piece of bent metal adapted to remove the thick dirt from boots. This is retracted against the end of the brush by means of a pin which works in a slot in the back and passes into the plate which slides in a space between the two pieces which form the back.

Claim.—The combination of the scraper with the brush, constructed and operating substantially as herein described.

No. 37,316.—JOHN ZENGELER, of Chicago, Ill.—*Improvement in Chimney Attachment for Lamps*.—Patent dated January 6, 1863.—In this lamp, the platform on which the chimney rests is tilted back by a thumb-piece and thrown completely out of the way while fixing the burner or lamp; underneath the thumb-piece of the platform is a spring which bears upon a friction roller in the act of turning.

Claim.—The combination of the friction roller *e* with the pivoted arm *b*, spring clamp B, and curved spring H, all constructed, arranged and employed in connexion with the lamp top A, in the manner and for the purposes herein shown and explained.

No. 37,317.—WILLIAM F. COCHRANE, of Springfield, Ohio, assignor to Himself and WARDER & CHILD, all of same place.—*Improvement in Bolting Flour*.—Patent dated January 6, 1863.—The object is to avoid the difficulty of rebolting flour from which the offal has been withdrawn, and this is accomplished by gradually increasing the fineness of the successive cylinders, the flour from each of which is conducted to a separate receptacle, and the offal fed from bolt to bolt. Certain grades are required, and, being mixed with offal, are again passed through the process, which is all assisted by a blast of air from a fan, and regulated by valves.

Claim.—First, bolting the meal over a series of reels covered with cloth of increasing fineness, in combination with a blast, substantially in the manner described.

Second, running the offal through the entire series of reels substantially in the manner described, for the purpose of making the flour bolt more freely.

Third, re-bolting the "white middlings" flour after re-grinding and mixing them with offal, substantially in the manner described.

Fourth, conducting the flour made upon each reel into a separate compartment, substantially in the manner described, for the purpose of making a variety of grades, or of mixing them in any proportion desired, as set forth.

No. 37,318.—WILLIAM F. COCHRANE, of Springfield, Ohio, assignor to Himself, WARDER & CHILD, all of same place.—*Improvement in Bolting Flour*.—Patent dated January 6, 1863.—The improvement consists in driving a blast of air, hot or cold, according to the necessities of the case, into the interior of the bolting cylinder, so as to keep the gum on the meshes of the bolting cloth free from moisture, and consequently from clogging; the air being afterwards conducted to a condensing chamber for the deposit of the fine flour before it is returned to the fan again; the fine flour escaping by a valve into the bolt again, the strength of the blast being controlled by valves in the air-pipes, and the amount of warm air returned to the fan being determined by a cast-off valve in the down-cast trunk.

Claim.—First, returning the blast air to the fan, substantially in the manner and for the purposes described.

Second, regulating the quantity of warm air returned to the fan by means of a cast-off valve in the return air-trunk, for the purposes set forth.

Third, controlling the strength of the blast by means of valves in the air-pipes, substantially in the manner and for the purpose described.

No. 37,319.—WILLIAM F. COCHRANE, of Springfield, Ohio, assignor to WARDER & CHILD, of same place.—*Improvement in Bolting Flour*.—Patent dated January 6, 1863.—The improvement has reference to the "pump," so called, by which the flour to be bolted is fed into the reel by the reciprocating motion of a plunger or shovel, which is intended to feed in the meal without allowing the air to escape. The plunger is constructed with steps, so as to feed from the bottom of what meal is in the spout to prevent packing, which is likewise assisted by having a flaring feed-spout. The length of the connecting rod of the plunger may be varied so as to regulate the amount of feed, according to the character of the grain, the state of the atmosphere, &c.

Claim.—First, feeding the meal to the bolting-reel by means of a pump, for the purpose set forth.

Second, making steps or off-sets 1 2 upon the plunger of the pump, for the purpose set forth.

Third, the combination of the plunger *d* and screw-rod *d3*, substantially in the manner described, for the purpose of regulating the amount of feed to the reel.

Fourth, the combination of a flaring feeding-spout with a pump, substantially in the manner described, for the purpose set forth.

No. 37,320.—WILLIAM F. COCHRANE, of Springfield, Ohio, assignor to WARDER & CHILD, of same place.—*Improvement in Bolting Flour*.—Patent dated January 6, 1863.—This invention has reference to the parts of the reel and valves and passages, by which the meal is passed consecutively through the required operations, and the various results of the process conveyed to their appropriate receptacles; these results are accomplished by constructing the blast reel, which revolves in the cylindrical bolt, with hollow perforated arms, which create a blast impinging immediately upon the meshes of the bolting cloth. To secure a means of conveying the meal into the bolt, the inner disk of the head is made stationary with a spout projecting through it, and the flanged rim of the revolving head runs with a groove on the

stationary central disk. The third point is fully explained in the claim. The fourth refers to the same device. The flour is conveyed to the conveyor by a rotating valve or pump, which prevents the escape of air. The sixth point is another expression of the same device. The seventh, eighth, and ninth, relate to the peculiar construction and adjustable parts of the rotating valve beneath the bolt cylinder, by which the flour and offal respectively are passed to their appropriate places without allowing the leakage of air.

Claim.—First, the combination of the reel-shaft E, bell-mouthed air-chambers E4, and reel-arms E1, with the perforated tubes E3, as and for the purpose described.

Second, the combination of the stationary reel-head e, revolving ring e1, and flanges e2 e2, when constructed and arranged as herein described for the purpose set forth.

Third, forming a dead-air chamber at the tail end of a bolting-reel into which the offal may fall, and thus be prevented from specking or mixing with the superfine flour, and preventing the flying dust from the flour chamber from passing into the offal, substantially in the manner herein described.

Fourth, the combination of a dividing-board or partition E7 and flanged ring e1, with a bolt-reel, substantially as described for the purpose set forth.

Fifth, conveying the fine flour from the bolting-reel to the conveyor or other receptacle by means of a valve or pump F, which passes the flour freely, but prevents the escape of air, substantially in the manner described.

Sixth, the combination of the reel E, valve shaft F, and conveyor N, substantially in the manner described.

Seventh, the combination of the valve shaft F, base-boards f, and adjustable concave blocks f, as described.

Eighth, the combination of the slotted shaft F', reciprocating board or plunger f2, channels f, and brackets f4, substantially as described.

Ninth, the combination of a pump trap or cut-off with the dead-air chamber E9, substantially in the manner described for the purpose of discharging the offal therefrom.

No. 37,321.—WILLIAM F. COCHRANE, of Springfield, Ohio, assignor to WARDER & CHILD, of same place.—*Improvement in Bolting Flour.*—Patent dated January 6, 1863.—The blast of air that comes from the reels is charged with fine flour, which is passed to the collecting and condensing chamber before it is returned to the fan, that the flour may be deposited upon the floor of said chamber, and returned by the revolution of the valve to the bolt.

Claim.—First, the condensing or collecting chamber H, when constructed, arranged, and operating as described, for the purpose specified.

Second, the combination of a collecting chamber H and valve I, substantially in the manner herein described, for the purpose set forth.

Third, the combination of a collecting chamber, a valve, and a bolting-reel, substantially in the manner and for the purpose described.

No. 37,322.—CHARLES HOWELL, of Cleveland, Ohio, assignor to PETER HANNAY, of Washington, D. C.—*Improvement in Machine for Pulverizing Quartz, &c.*—Patent dated January 6, 1863.—In this machine the ore is introduced between a rapidly revolving disk and an enclosing case. The edge of the disk is armed with teeth or projections, and violently projects the ore against the stationary case, and thus shatters it.

Claim.—Reducing minerals, bones, and similar substances to powder by percussion, substantially as described; that is to say, by means of a rotating projector and an impinging surface, both enclosed in a case; the relations of the rotating projector and the impinging surface being such that the materials will not be pulverized by being crushed between them, but only by the percussion resulting from the sudden checking of the motion given to the materials by the one against the surface of the other, substantially as described.

No. 37,323.—DELAPHIN MCDANIEL, of New Castle, Del., assignor to Himself and J. McCULLOUGH, of Cecil county, Md.—*Improvement in Pucking Sheet Metal for Transportation.*—Patent dated January 6, 1863.—Making the two exterior sheets larger than those contained between them and lapping the former over the latter as an envelope.

Claim.—Making one or both of the two outside sheets larger than those between them, and bending over the edge so as to form a box or covering of the two outside sheets to protect the sheets between them.

No. 37,324.—J. D. MERRIAM, of Ashburnham, Worcester county, Mass., assignor to E. W. VAILL, of Worcester, Mass.—*Improved Folding Chair.*—Patent dated January 6, 1863.—Of the curved X-shaped pieces which form the legs two are prolonged, and these furnished with a cap-piece constitute the back. The legs are suitably connected with each other by rounds, and the frame is provided with a flexible seat.

Claim.—As a new article of manufacture, a folding chair composed of curved pieces A A and D D, rounds or cross-bars E B B F, flexible seat G, back piece H, and connecting bar C, combined and arranged in the manner and for the purpose specified.

No. 37,325.—EDMUND LUCKOW and EDWARD HABEL, of Oidham, Lancashire, England, assignors to CHARLES LUCKOW, of Buffalo, N. Y.—*Improvement in Blowers.*—Patent dated January 6, 1863.—English patent, February 25, 1862.—This blower consists of a revolving conical hub with spiral flanges thereon rotating in a cylinder with wings or flanges projecting inwardly and having a spiral direction agreeing with that of the wings or flanges on the revolving hub. Fastened to the cylinder is a conical or bell-shaped chamber, in which one journal of the blower is stepped, receiving the wind from the blower and discharging it by the orifice into suitable conducting tubes.

Claim.—First, the arrangement and combination of an archimedian screw with a cylinder having catch wings a' upon the inside thereof, for the purposes and substantially as described.

Second, placing and using the blades of an archimedian screw upon a conical and bell-mouthed hub, for the purposes and substantially as set forth.

Third, the combination of the conical disk E with the cylinder A and archimedian screw, for the purposes and substantially as set forth.

No. 37,326.—HORACE C. WHITTIER, of Plymouth, Mass., assignor to Himself and JOS. L. BROWN, of same place.—*Portable Writing Apparatus.*—Patent dated January 6, 1863.—This consists in a folding cylinder divided longitudinally by a joint, one-half being a box and the other half its cover, which, when opened, exposes at one end of the case an ink-stand, while the rest of the space is occupied by a roll, which forms, when extended, a writing tablet. This tablet is composed of an elastic material with a backing of slats, which, brought into a plane by the junction of their edges, form a level surface and support for the writing paper.

Claim.—Improved portable writing apparatus, as made, with its folding tablet D, and the body or main part A, and cover B, of its case A2, arranged and applied substantially in manner and so as to operate as represented and described.

No. 37,327.—JOHN AIKEN, of Warner, N. H.—*Improved Cheese Press.*—Patent dated January 6, 1863.—The end pieces of the press are secured to a bed piece or platen G, to the top of which are four sets of levers b b b b; to the upper end of these are hinged other levers c c, whose lower ends are hinged to cross-pieces D beneath the platen G; to the upper ends of the levers c c are connected cords E, which wind on a windlass F.

Claim.—The particular combination and arrangement of the levers b b b b b b b b c c c c, B, platen G, with the cords or ropes e e e e, and beam F, substantially as set forth.

No. 37,328.—JACOB AUTENRIETH, of Philadelphia, Pa.—*Improved Eyelet for Lacing Shoes.*—Patent dated January 6, 1863.—The improvement consists in the construction of a projecting eyelet, through which the string may be passed without being clamped between the boot and foot.

Claim.—As an improved article of manufacture, a lacing eyelet made with a tubular projection or prongs a a', disk b, and eye e, as herein shown and described.

No. 37,329.—FORDYCE BEALS, of New Haven, Conn.—*Improvement in Rammer Connection for Revolving Fire-arms.*—Patent dated January 6, 1863.—The invention consists in an arrangement of a bar which is pivoted immediately below the barrel, and which retains the axis pin in position with the rammer lever, which, secured by its catch, fastens the pivoted bar to its place.

Claim.—The combination of the pivoted bar G, constructed as set forth, with the axis pin C and the rammer lever D, substantially in the manner herein shown and described.

No. 37,330.—JOHN T. BEVER, of Springfield, Sangamon county, Ill.—*Improvement in Operating Churns and Washing Machines.*—Patent dated January 6, 1863.—The object of this invention is to apply power derived from the dancing or plunging motion of the body to such operations as churning, washing, &c. The operator sits on a seat, and by a surge of his body depresses the lever, and the return motion is given by a spring. To the under side of the lever a bar is attached which may actuate a churn-dasher or a disk washing rubber, the latter being rotated by cords in the hands of the party or by the feet.

Claim.—The stand A, post c, lever B, post C, bar D, and spring E, arranged substantially as shown for the purposes herein set forth.

Also, in combination with the parts above named the seat F on the lever B, and the foot springs L L on the platform a, as and for the purpose specified.

Also, the foot-piece f on bar D, in combination with the hand-rod g, when said parts are used in connexion with the lever B, post c, and stand A, for the purposes specified.

No. 37,331.—CHEVALIER GAËTAN BONELLI, of Milan, Italy.—*Improvement in Delineating Telegraph.*—Patent dated January 6, 1863.—In this improvement the message is set up in metallic type or written with metallic ink upon non-conducting paper, or with an insulating ink upon conducting paper, and placed in the circuit, and is copied by electricity upon chemically prepared paper at the station to which it is sent.

Claim.—The employment, for producing the image of types or handwriting, of a number of conducting wires, when combined with two series of flexible, comb-like, metallic teeth or

elastic conductors, arranged nearly close together, but insulated from each other, and with a movable platform or platforms carrying the conducting types or handwriting, and the chemically prepared paper on which the image is to be produced, the whole operating substantially as herein specified.

No. 37,332.—JOHN G. CHAPMAN, of Charlestown, Middlesex county, Mass.—*Improvement in Machine for Drawing Bolts and Spikes*.—Patent dated January 6, 1863.—A frame consisting of side pieces and a bridge or cap is set over the article to be drawn, having a screw-shaft extending down, and at its lower extremity a foot-piece with its upward edge inclined towards the shaft; this foot-piece sets between a pair of jaws, and as the screw-shaft is rotated, and the foot-piece raised, the lower edges of the jaws are clamped against the spike, and it is raised out of its bed.

Claim.—The within described machine for drawing bolts, consisting of the combination of the frame A, the screw-shaft B, with its foot-piece D, and the jaws E, arranged and operating as set forth.

No. 37,333.—J. S. CLOUGH and J. N. BUNNELL, of Brooklyn, N. Y., and Unionville, Hartford county, Conn.—*Improvement in Tool Handles*.—Patent dated January 6, 1863.—This invention consists in applying an India-rubber cushion or pad to the head of a tool handle, or the butt, as it is often called, which comes in contact with the heel of the hand, to prevent bruising and blistering.

Claim.—In combination with the tool handle, the India-rubber cushion, applied as shown for the purpose specified.

No. 37,334.—A. CUSHING, of St. John, Province of New Brunswick.—*Improvement in Sawing Machines, for Edging, Slitting, and Re-sawing Lumber*.—Patent dated January 6, 1863.—The feed table and the platform upon which the attendant stands are moved simultaneously, so that he has but to attend to the presentation of his work to the saw, and the trouble of walking in following up his work is dispensed with.

Claim.—The combination of the feed table E, and stand or platform G, connected together, or so arranged as to be operated simultaneously as and for the purpose herein set forth.

No. 37,335.—A. CUSHING, of St. John, Province of New Brunswick.—*Improvement in Saw-mills*.—Patent dated January 6, 1863.—In this machine the logs in the "round" or squared are passed between pressure rollers above and below to the gang-saws, and the devices have reference to the means of feeding them and of bringing an equality of pressure under all the varying sizes and shapes of the same. The lower feed rollers run in permanent bearings and the upper ones hang vertically over the lower ones by arms from a shaft over the centre. Besides their own weight, upon the journal bearings of these upper rollers there are pitmen and racks working in pinions on the frame overhead.

Claim.—First, feeding or operating the upper or pressure rollers of gang-saws by a combination of means which will make them always work effectively and automatically upon all sizes and varieties of round logs with variable surfaces as well as flat timber, substantially as shown or by an equivalent arrangement.

Second, the lower feed rollers D D having their shafts E fitted in stationary bearings in combination with the upper yielding and adjustable rollers M M, when the same have their shafts N fitted in arms O connected to sliding frames Q Q, arranged with the racks a and pinions b, and both pairs of rollers operated through the medium of the gearing I' H G G L U U, as and for the purpose herein shown and described.

No. 37,336.—C. H. DE FOREST, of Birmingham, New Haven county, Conn.—*Improvement in Hooped Skirts*.—Patent dated January 6, 1863.—This improvement is adapted to that class of hooped skirts in which loops are woven on the supporting tapes to sustain the hoops, and consists of a clasp which is placed upon the intersections of the hoops and the tapes by which they are caused to maintain their relative positions.

Claim.—The employment of the clasp C or its equivalent, in combination with the hoops and pockets a of the hoop-supporting tapes, for preventing the displacement or derangement of the hoops in the pockets, substantially as hereinbefore described.

No. 37,337.—ELIAS DOHNER, of Lancaster, Pa., and A. M. BRUCKHART, of Brunnersville, Lancaster county, Pa.—*Improvement in Water Wheels*.—Patent dated January 6, 1863.—Within the space between the rim and the hub and between the usual buckets of the turbine are shorter buckets, following the same shape, intended for the more perfect utilizing of the percussive force of the water.

Claim.—The combination of the short intermediate buckets D with the buckets C, hub A, and rim B, all constructed and arranged in the manner and for the objects set forth.

No. 37,338.—THOMAS DOWLING, of Salem, Essex county, Mass.—*Improvement in Hot-air Registers*.—Patent dated January 6, 1863.—The improvement consists in the arrangement

of the pipes, &c., whereby a stream of cold air from the room is mingled with the heated air escaping from the hot-air pipe before its delivery into the room; the tubes which project into the room slip telescopically within each other so as by elevation to induce a current of heated air, and to be depressed out of the way when not in use.

Claim.—The combination and arrangement, substantially as described, of the case A, the tube F, and the perforated collar D, with the floor C, and its register J, and the hot-air inlet pipe B, whereby one or more air passages are so formed between the floor and hot-air pipe B as to cause, while hot air may be blowing out of the pipe B and from thence through the register, a current of cool air to flow downward through the collar D, and the passage between the case A and the tube F, and thence upward through the said tube F and the register, and commingle with the heated air discharged from the pipe B.

Also, the combination of one or more telescopic tubes H I with the register d, the case A, the tube F, and the inlet pipe B, the whole being so as to operate substantially as described.

No. 37,339.—F. D. DRAKE, of Four Corners, Huron county, Ohio.—*Improved Evaporator for Saccharine Liquids*.—Patent dated January 6, 1863.—The improvement consists in the arrangement of the furnace and flue under the evaporating pan in which it extends under the front side, then returns under the centre, and back again under the rear portions of the pan to the chimney, so that the heat is graduated from the front to the rear, and the scum is thrown to the coolest part of the pan to be removed.

Claim.—The arrangement of the flue c extending on one side of the furnace A, from front to rear end, then back through the middle to the front end, and back again to the chimney at the rear end of the furnace, in combination with the pan B, constructed and operating substantially as and for the purpose shown and described.

No. 37,340.—WILLIAM H. FIELD, of Taunton, Bristol county, Mass.—*Improvement in Machines for making Shoe Nails*.—Patent dated January 6, 1863.—The nail-plate passes through a furnace, which retains it at a suitable heat for the operation as it is fed continuously to the cutter.

Claim.—The employment or use of a furnace E in combination with the cutter A of a shoe-nail machine, and with the feeding tubes D, constructed and operating substantially in the manner and for the purpose specified.

No. 37,341.—CARLTON FOSTER, of Oshkosh, Winnebago county, Wis.—*Improved Device for Canting or Turning Logs during the Process of Sawing them into Lumber*.—Patent dated January 6, 1863.—In this device a crane is elevated above the log, and from it depends a chain and block with hook attached, the latter to be hooked under the log to cant it over; the chain returning passes over pulleys and to a shaft under the floor worked by the engine or other power, being connected or detached by levers working friction pulleys.

Claim.—The hook Q attached to a tackle, the chain L of which is connected in an adjustable shaft F, operated through the medium of friction pulleys or wheels D E thrown in and out of gear, or connected and disconnected by means of levers G H, so arranged that the former one G will have its fulcrum a in line or in the same plane with the tension or strain of chain L on shaft F, substantially as and for the purpose set forth.

No. 37,342.—W. R. GREENLEAF, of Silver Creek, Chautauque county, N. Y.—*Improvement in Valve Gear of Steam Engines*.—Patent dated January 6, 1863.—This invention consists in operating the two induction and eduction valves of a double engine by a single eccentric, and of shifting the eccentric for the purpose of varying the stroke and reversing the movement. The shaft is provided with a single eccentric, and upon this is a ring to which the valve rods are attached; when they are at half-stroke they are at the same relative angle as the cylinders. Behind the eccentric is a disk concentric with the axle, with slots in its face in which tongues on the eccentric work to reverse the action of the valves. This motion of the eccentric is accomplished by an inner eccentric, fast upon a sleeve which is loose upon the crank shaft and operated by suitable means.

Claim.—The combination and arrangement of the valves, valve stems or valve rock-shafts, and of the two eccentric rods c c, attached to the same eccentric, substantially as herein described, whereby the one eccentric is made to operate the valves of both cylinders of a double engine, as herein set forth.

Also, the employment for operating the inner eccentric D of two sleeves H I, the one moving around, the other sliding longitudinally upon the crank-shaft, the two combined by a spiral groove i and pin j, and the whole operating substantially as herein specified.

No. 37,343.—L. M. HILLS, of New Haven, Conn.—*Improvement in Steam Radiators*.—Patent dated January 6, 1863.—This steam radiator consists of an upper and lower chamber, joined by tubes properly luted with an unyielding cement to the plates into which they pass.

Claim.—The combination of the tube plates H and I, the tubes C, and plates E and F, when the same are constructed and joined with unyielding joints, in the manner and for the purpose substantially as herein set forth and described.

No. 37,344.—ABRAHAM HUFFER, of Hagerstown, Md.—*Improvement in the Combination of Steam and Water Power*.—Patent dated January 6, 1863.—This machine is intended to utilize exhaust steam from an engine necessarily employed in other work, by employing it to produce a vacuum by condensation, to raise a body of water to turn a wheel. For this purpose two or more chambers are employed to receive the exhaust steam, and two reservoirs are provided, one below the wheel and the other above it, and the steam is employed to raise the water from the lower to the upper one, which in its descent turns the wheel.

Claim.—The combination of a steam generator or steam generators with a water wheel or water wheels, and chambers or a chamber for elevating water by atmospheric pressure, and driving a water wheel or wheels, substantially in the manner and for the purpose set forth.

No. 37,345.—JOSEPH INGELS, of Milton, Wayne county, Ind.—*Improvement in Grain Drills*.—Patent dated January 6, 1863.—These improvements relate to the method of varying the rate of delivery of the seed by changing the intermediate gear wheels on the movable shaft, the raising of said shaft by the lifting of the hoes stopping the feed. The delivery hoppers of the seed trough are each of them constructed with its concave and sides cast in one piece, and with an inclined plate over the feed wheel. The bottom of the grass-seed box has brackets connecting the adjacent edges, and underneath these slides a gauge plate with apertures more or less covered by the brackets, as may be desired.

Claim.—First, the use of double reversible intermediate gear wheels, substantially as shown and described, to communicate motion at any desired speed from the main axle to the seed delivery apparatus.

Second, the manner of attaching the movable shaft M at any suitable position between the axle b and shaft k, to adapt it to the different sizes or positions of the intermediate wheels.

Third, the combination of the lever W and flange or cam u' with the pivoted bar U and wheel L, to disconnect the said wheel with the shaft k by the act of raising the hoes.

Fourth, the concave j of the secondary or delivery hopper, cast in one piece with cheeks j' j', all as herein shown and described.

Fifth, the combination of the concave j, inclined plate j2, cheeks j', and feed wheel K, all constructed and arranged substantially as herein shown and described.

Sixth, the movable bottom or gauge plate G, perforated with tapering apertures g in the described combination with the supporting brackets G', so arranged that the said brackets may cover any desired part of the apertures to regulate the delivery of seed, as explained.

No. 37,346.—GEORGE JONES, of Peekskill, Westchester county, N. Y.—*Improved Device for Tightening Window Sashes*.—Patent dated January 6, 1863.—An angle piece is fastened to the window frame, having a face towards the sash; through this face passes a thumb-screw which impinges against a plate attached to the sash, and by means of tightening this screw the sash is retained in position.

Claim.—The combination of the angle pieces C C, thumb-screws D D, and bearing plates d d, applied, respectively, to the window frame and sash, substantially as and for the purpose herein set forth.

No. 37,347.—LUKE KAVANAUGH, of Waterford, Saratoga county, N. Y.—*Improvement in Blades for Knitting Machine Sinkers*.—Patent dated January 6, 1863.—This blade is so constructed that in feeding and sinking the yarn into and between the needles in a knitting machine, the yarn, with its knots and large spots, in bending around the needles between the blades, can extend into the openings in the blades so as to leave more room between the blades for the needles, and avoid their binding against each other and bending or breaking the needles, or breaking the yarn by nipping it between the needle and the blade.

Claim.—A wing or blade for sinker-burrs of knitting machines, having through it a hole or opening b arranged in respect to a yarn-guide c on the blade, substantially as herein described.

No. 37,348.—J. A. LAFLER, of Albion, Orleans county, N. Y.—*Improvement in Brick Machines*.—Patent dated January 6, 1863.—Within the throat or press box of the tempering vat is a piston, operated by a platform below, which vibrates on a central point; the sides of the piston and the inside of the press box are therefore curved to correspond. The floor or bottom of the piston is grated, each slot corresponding to the divisions of the brick mould below, which latter is projected up into the press box by the elevation of the platform on which the mould lies pushing the piston before it. The mould is formed of parallel sides and ends, the partitions between the bricks extending down into the bottom board so as to separate the loose pallets which lie under the bricks, and upon which they are removed when the frame is raised and the bricks are left to be carried off.

The ends of the mould box are recessed to correspond with projections from the bottom board to serve as guides for the adjustment of the parts of the mould box.

Claim.—First, the combination of the curved and yielding clod-crusher F with the press box E and the mould G, in the manner herein shown and described.

Second, the combination with the pallets q and bottom board r of the bevelled side pieces m and the bevelled division pieces o of the mould box G, when the said side pieces are arranged to extend below the level of the pallets, all in the manner and for the purpose herein shown and described.

Third, the construction of the edges n n of the mould box G with recesses s s, in combination with the projections t upon the boards r, all as and for the purpose herein shown and described.

No. 37,349.—ALMON LEACH, of Utica, N. Y.—*Improvement in Coal-oil Lamps*.—Patent dated January 6, 1863.—This improvement is designed to render the burner detachable without interfering with the original plan of the lamp, patented by Wordin and Leach, July 23, 1861, and consists of a longer and a shorter cylinder H and K, with an annular perforated plate J connecting them, the whole secured to the burner, and the outer cylinder fitting into the jacket D.

It further consists in double reflectors of concave form, the centre of each being occupied by a convex circular projection.

Claim.—Securing the cylinder H, perforated plate J, and flange K, to the burner G, as shown, when said burner is screwed into the tube B, and all used in connexion with the cylinder or jacket D, for the purposes herein set forth.

Also, the combination of two reflectors L L, formed each of concave and convex surfaces h i constructed together angularly with each other and placed in relation with the flame of the lamp, as herein specified.

No. 37,350.—JACOB H. LIGHTER, of Freedom township, Carroll county, Ill.—*Improvement in Horse Powers*.—Patent dated January 6, 1863.—The centre pinion of the horse-power which is attached to the tumbling shaft is bevelled each way, and rotated by two horizontal crown wheels, operating upon one above and the other below, meshing with the double bevelled pinion.

Claim.—The application of two horizontal crown wheels B B placed on each side of the centre of the horse-power, in combination with a single pinion D bevelled each way from the centre, and working between the two horizontal crown wheels B B, as and for the purpose substantially as specified.

No. 37,351.—DAVID B. LUCKEY, of Bloomingburgh, Sullivan county, N. Y.—*Improvement in Harvesters*.—Patent dated January 1, 1863.—This improvement is designed for stony and rough ground, and consists in a device for balancing the weight of the cutter bar by weighted levers so that it may be readily raised vertically to pass over an impediment, with a lifting rake in the front of the cutters to raise "down" grass and present it to the cutters for their effective action.

Claim.—First, balancing the cutter bar and finger bar by the weighted levers b and K, and connecting them to the other means or devices herein set forth, so that when they come in contact with stones or other impediments they will be elevated in a vertical or nearly vertical direction, as described.

Second, in combination with a mower, the lifting rake, arranged and operated in front of the cutters, substantially as set forth.

No. 37,352.—HENRY F. MANN, of Laporte, Ind.—*Improvement in Securing Soft Metal Packing to Projectiles*.—Patent dated January 6, 1863.—In grooves running circumferentially around the ball there are bars which cross from side to side of the groove. Filling this groove is a body of soft metal, which surrounds the circumference of the bars, and is by them securely held to the ball.

Claim.—Providing around the circumference of shot, shell, or projectiles the bars B B, which are separated from one another and isolated from the bottom of the packing groove, and which extend from shoulder to shoulder of said groove and pass entirely through the soft metal packing; all in such a manner that the soft metal packing is held securely in place, both longitudinally and in line with the circumference of the projectiles, substantially as described.

No. 37,353.—PATRICK MCGLEW, of Des Moines, Polk county, Iowa.—*Improvement in Seeding Machines*.—Patent dated January 6, 1863.—The improvement consists in attaching behind the rollers, or wide wheels on which the frame is supported, a scraper to clear the dirt from the wheels. It is brought into connexion with the wheels, or detached by a lever and stirrup.

Claim.—The scrapers H H, attached to the bar G, fitted in guides g g, and connected to a lever J, the whole constructed, arranged, and operating in the manner and for the purpose herein set forth.

No. 37,354.—CHARLES E. MILLER, of Amelia, Clermont county, Ohio.—*Improvement in Seeders*.—Patent dated January 6, 1863.—This machine consists of a frame, which has underneath, in the advance, a clod-crusher, consisting of a roller with spike teeth, and at its rear a row of harrow teeth. In a position above the frame, and dropping its seed between the clod-crusher and the harrow, is a seed-box with a long slit or orifice beneath, which orifice is fitted with a register to regulate or close the opening.

Claim.—First, the seeding apparatus, consisting of the hopper E, having a long transverse ventage F, closable by the adjustable concavo-convex shield or register G, and supported by the bevelled staples K, in combination with the spiked clod-crushing roller B, arranged and operating in the manner specified.

Second, the described arrangement of the clod-crusher B D, harrow C, and seeding apparatus E F G H I J K L, as and for the purpose set forth.

No. 37,355.—JOHN M. MILLER, of Hamilton, Butler county, Ohio.—*Improvement in Water Wheels.*—Patent dated January 6, 1863.—For the purpose of utilizing the vertical fall of water more thoroughly and avoiding leakage from the buckets, which commences as soon as the horizontal point is passed, the buckets in this improvement are attached to endless chains, formed by gudgeons fitting in eyes, and the chains working upon a central wheel having depressions on its periphery in which the links are retained; by which arrangement the buckets are allowed to descend to the lowest point, and passing around a roller to again take their place upon the wheel and ascend to fulfil their round.

Claim.—First, in combination with the pulleys A and B, an endless chain of buckets C, constructed as described, with overlapping wings F, to prevent the waste of water, the whole operating in the manner and for the purpose set forth.

Second, connecting the said buckets C by gudgeons D', fitting in eyes D, the said parts being located directly over the centre of the buckets when full, and in other respects so arranged that each bucket shall be suspended in a perpendicular position, as explained.

No. 37,356.—JOHN C. NYE, of Cincinnati, Ohio.—*Improvement in Breech-loading Fire-arms.*—Patent dated January 6, 1863.—This is an attached stud to the rear end of and beneath the key or gate, so that, as the latter is raising for loading, the stud comes in contact with the end of the barrel, withdrawing the plunger about one-tenth of an inch, thus breaking the adhesion caused by firing.

Claim.—The arm G attached to the key or gate C, substantially as described in the specification and shown in the accompanying drawings.

No. 37,357.—MILTON J. PALMER, of Homer, Cortland county, N. Y., and HENRY R. INGALLS, of Groton, Tompkins county, N. Y.—*Improvement in Churn Dasher.*—Patent dated January 6, 1863.—This revolving churn dasher is rectangular, and consists of two arms, into which the journal pins are driven; these are connected at their ends by a couple of concave beaters or half cylinders, and the cylinders again connected by slats placed obliquely to the axis of rotation.

Claim.—The manner of setting the slats c c across the dash from float to float, with their side faces at an angle to the plane in which the dash revolves, when used in combination with said floats a a, substantially as above described.

No. 37,358.—CHARLES W. PEARCE, of Oakhill, Green county, N. Y.—*Improvement in Coffee and Spice Mill.*—Patent dated January 6, 1863.—This is a double mill, having a double rotary grinder on one shaft, with a hopper so constructed, with a partition and valve, as to direct the contents of the hopper to either side at will, so as to admit of the two sides being used for different purposes.

Claim.—The adjustable plate or valve G, placed in the hopper E, in combination with the double-rotary grinder A, placed within the case C, substantially as and for the purpose herein set forth.

No. 37,359.—WESLEY POWERS, of Preston, Chenango county, N. Y.—*Improved Window Clothes Dryer.*—Patent dated January 6, 1863.—This machine is intended for exposing clothes to dry outside of a window, and consists of an upright bar, stepped into a socket upon the window sill, and held at its upper end by an extension rod between the sides of the window frame. Through mortices in this bar sliding arms, arranged radially, extend out from the window in a fan-shape, and to the end of these arms are bars making them of a T-shape, with cords run around the spindle, and outwardly around the T-shaped heads of the radial rods for the clothes to be hung upon.

Claim.—First, the arrangement of a swivel bar A, secured by means of gudgeons a a' to the casing of a window, in combination with sliding arms C, provided with lines e, all constructed and operating substantially in the manner and for the purpose herein shown and described.

Second, the combination and arrangement of the swivel bar A, line-carrying arms C, and extension bar B, as and for the purpose specified.

Third, the arrangement and combination of the swivel bars A, line-carrying arms C, and movable stop g, as and for the purpose set forth.

No. 37,360.—JOSEPH RECKENDORFER, of New York, N. Y.—*Improvement in Lead Pencils.*—Patent dated January 6, 1863.—This black lead pencil has a different grade of hardness at each end, and a dividing line with indications on each half of the character of the contained lead.

Claim.—The new article of manufacture herein described, viz., a wood-cased black-lead pencil, having different grades of hardness at the opposite ends, and indicating on its exterior the character and the amount remaining of each grade, substantially as above set forth.

No. 37,361.—MICHAEL RITNER, of Vincennes, Knox county, Indiana.—*Improvement in Projectile for Ordnance.*—Patent dated January 6, 1863.—This improvement consists in attaching a vulcanized India-rubber or gutta-percha sabot to a leaden projectile.

Claim.—The combination of a leaden ordnance projectile with a vulcanized India-rubber or vulcanized gutta-percha, or a combination of vulcanized India-rubber and vulcanized gutta-percha wad or sabot, for the purpose set forth.

No. 37,362.—HENRY SIDDAL, of San Francisco, California.—*Improvement in Grain Separators.*—Patent dated January 6, 1863.—The grain is carried up by elevators and discharged into a narrow spout, in the throat of which are distributing-boards which spread it over a larger surface in descending; it is then exposed to an upward blast of air, which carries up all refuse, allowing the heavy grain to descend; the lighter grain and offal are then carried into another chamber, with several partitions, and deposited according to their comparative levity, the very light matters being entirely removed through the blast fan, while the heavier portion of the light grain is returned by a spout to the elevators.

Claim.—First, the spout A, provided with distributing spouts B, as described.

Second, spouts A C, relatively to blast spouts F, when constructed and operating as described, for the purpose set forth.

Third, the arrangement of chamber I, spout K, and elevator W X, for the purpose of returning a part of the grain, as herein set forth and described.

No. 37,363.—JOHN W. SMITH, of Iowa Point, Doniphan county, Kansas.—*Improvement in Beehives.*—Patent dated January 6, 1863.—For the purpose of killing the bee-moth and its progeny, a chamber beneath the hive is provided with salt. A perforated slide adjustable in the front of the hive is used to decrease the size of the bee entrance and permit ventilation. The sides of the hive, which stands on a metallic plate, are chamfered off so as to be shod with V-shaped zinc edges. The inside of the hive is coated with red oxide of mercury and beeswax, and a channel provided for uniting adjacent hives to prevent swarming by enlarging the habitation for future division.

Claim.—First, a metallic platform G, provided with a chamber H, in which is placed salt or its equivalent, for the purposes set forth.

Second, in combination with the platform so constructed, the chamfered beehive covered with zinc or other metal, as described, for the purposes set forth.

Third, coating the inside of the hive with a mixture of red oxide of mercury and beeswax, for the purpose described.

Fourth, the combination of the perforated slide G, with the avenue I, for the purposes described.

No. 37,364.—EDWIN A. STEVENS, of Hoboken, N. J.—*Improvement in Operating Ordnance.*—Patent dated January 6, 1863.—The muzzle of the gun is depressed to an aperture in the deck, so that it may be loaded from a lower deck; here, a charge on a vertically vibrating arm is raised by steam-power to a position in line and between the muzzle and the rammer; the rammer under the impulse of a piston in a steam cylinder then rams home the charge; after firing, the sponge is operated by the same means, and a water-pipe is conducted through the sponge block and provided with small ejecting tubes to wet the bore of the gun.

Claim.—First, so depressing the muzzle of a gun that it may be loaded from beneath the plane on which it is placed, through an aperture I in the floor or deck, in the manner and for the purpose substantially as set forth.

Second, the use of a steam cylinder J for loading and sponging a gun, substantially as described.

Third, the employment, in combination with a rammer L, operated by steam power, of a mechanical contrivance O o, substantially as described, for raising the charge and presenting it between the rammer and the muzzle of the gun.

Fourth, the use of a steam cylinder for elevating the charge, substantially in the manner explained.

Fifth, the employment, in combination with means for loading a gun by steam power, of means for injecting water into the bore, substantially as described.

No. 37,365.—EDWIN A. STEVENS, of Hoboken, N. J.—*Improvement in Sighting Guns.*—Patent dated January 6, 1863.—The object of this improvement is to provide means for training guns to a given angle with the axis of the vessel, or to train them on an object while the gunner remains beneath the gun deck. There is attached beneath the deck to the pintle of the pivoted gun, a graduated index plate by which its horizontal bearing may be read. A telescopic tube, with two rectangular bends and with reflecting mirrors at the angles, is so placed as to be used from beneath the deck; two of these may be so situated as to form a base of sufficient length to obtain by simultaneous observation the distance by triangulation. Two screw propellers, working in contrary directions, rotate the vessel so as to bring the guns to bear on the required point.

Claim.—First, the use of a graduated index plate, situated between the gun deck, for pointing the guns of war vessels, substantially as described.

Second, the use of graduated index plates for turning the guns of war vessels, in combination with two screw propellers for turning war vessels, for the purpose specified.

Third, a telescope F f, constructed substantially as described, in combination with a revolving gun-carriage, for the objects specified.

Fourth, the use of two telescopes, constructed substantially as described, for observing from within or below a protected structure the distance and position of an object, for the purpose specified.

No. 37,366.—HENRY H. SWIFT, of Hart's Village, Dutchess county, N. Y.—*Improved Mode of Attaching Chimneys to Lumps.*—Patent dated January 6, 1863.—A wire spring about the circumference of the inside of the burner, but of an oval shape, is attached through holes to the burner. The spring being sprung round, the glass is inserted, and when the spring is released it assumes the oval form and clamps on the shoulder or flange at the foot of the chimney.

Claim.—The spring E, bent or curved in bow form, and applied to the burner A, substantially as and for the purpose herein set forth.

No. 37,367.—LORENZO P. TEED, of White Deer Mills, Union county, Penn.—*Improvement in Shaker Frames for Threshing Machines.*—Patent dated January 6, 1863.—This frame has a longitudinal and vertical motion, and its bottom or floor consists of slats inclined towards the rear; from the forward edges of these slats project forked rods, which, under the impulse of the jerking reciprocating motion of the frame, push forward the light refuse which lies upon the frame while the grain falls down between the slats.

Claim.—A shaker frame having inclined slats E and forked rods d d, arranged and operating substantially as and for the purpose herein set forth.

No. 37,368.—SAMUEL VANSTONE, of Providence, R. I.—*Improvement in Machines for Rolling and Forging Metals.*—Patent dated January 6, 1863.—The object is to form by rolling and forging an article which has to assume a round exterior shape. The metal to be operated upon is placed on a rolling rest and clamped between disks. Shaping rollers, which are simultaneously rotated by gearing, are then brought in connexion with the heated metal, and, revolving by contact between these, it assumes an outline the counterpart of their shape. A hammer suitably operated works upon the upper edge or surface, and the metal is sustained below by an anvil roller.

Claim.—First, the combination and arrangement, as set forth, of the two shaping rollers B B' and the rolling rest or anvil roller D, in connexion with a suitable device for holding the metal while it is being rolled, substantially as herein shown and described, for the purpose specified.

Second, in combination with such arrangement of rollers, a suitable hammer for welding and assisting in shaping that portion of the metal which is being rolled, so that the metal may be rolled and hammered at the same time, substantially as herein specified.

Third, the construction and arrangement of the clamping disks J J, substantially as described for the purpose specified.

No. 37,369.—GEORGE W. WHITE, of New York, N. Y.—*Improvement in Breech-loading Fire-arms.*—Patent dated January 6, 1863.—This is a method of closing and opening the breech-piece for firing and reloading. A block or breech-pin, having a projection which enters and fits the bore, is first withdrawn toward the rear until the projection is clear of the bore and then depressed so as to leave the rear of the bore open for the introduction of a cartridge. These motions are effected by the partial rotation of a cylinder which works in a vertical slot in the gun-stock behind the barrel, being rotated by an arm which forms the trigger guard, and depressed by a pin fast to the stock which traverses a cam-shaped groove in the cylinder.

Claim.—First, the method of closing the bore by means of a breech-piece, constructed and operated substantially as set forth.

Second, the manner of giving to the breech-piece the two motions described, that is to say, the combination of the said piece with the rotating cylinder by the pin h, substantially as set forth.

No. 37,370.—HEMAN A. ASHLEY, of Springfield, Clark county, Ohio, assignor to WILLIAM RIDENOUR and MAHLON K. BISEN, of the same place.—*Improvement in Hay and Cotton Press.*—Patent dated January 6, 1863.—The object of this improvement is to construct a press in which the power exerted may be continuous and in the same direction. This is effected by throwing one or the other of the windlasses into gear with the spur-wheel which is rotated by the lever; in one case operating the toggle joint and bringing a powerful and gradually accumulative force to bear upon the hay, and in the other case withdrawing the followers to admit of the hay-box being recharged.

Claim.—The arrangement of windlasses J J', lever K, pinions I I', spur-wheel H, and cords L L, attached or connected respectively to the toggle M N, and directly to the pistons, in the manner and for the objects stated, when combined with hooks F F' hinged to each other and to the frame and adapted to open and close both doors E E' at once, in the manner set forth.

No. 37,371.—E. T. FORD, of Buffalo, N. Y., assignor to WALTER A. WOOD, Hoosick Falls, N. Y.—*Improvement in Harresters.*—Patent dated January 6, 1863.—The improvement consists in the construction in one piece of the yoke and tongue plate, in which is socketed the main axle which forms the pintle on which the yoke is hinged.

Claim.—An independent yoke or seat and tongue plate, cast in one piece, and hinged to the main axle, in the manner and for the purpose substantially as described.

No. 37,372.—JAMES HATFIELD, of Ogden, Henry county, Indiana, assignor to Himself and JOHN WALL, of Falmouth, Indiana.—*Improvement in Fences.*—Patent dated January 6, 1863.—The boards are nailed to vertical slats alternately on either side. A slot in the bottom of the slat sets over a foot piece placed on edge for a support; the two bottom boards of each panel are inserted through mortises in the foot piece, thus locking it fast.

Claim.—The manner of keying the posts to the foot stays or braces by means of the two bottom boards of each panel, as shown and described.

No. 37,373.—RUSSELL B. PERKINS, assignor to PARKER & PERKINS, of Meriden, Conn.—*Improved Tinned Iron Spoons.*—Patent dated January 6, 1863.—This improvement consists in extending the neck of the bowl to form a short flat tongue wide enough, when fully shaped, to partially enclose the handle and made to fit accurately by stumps and dies; a rivet is passed through to secure the two parts, which are then tinned as usual.

Claim.—Joining the handle and bowl of an iron spoon together, in the manner specifically set forth herein.

No. 37,374.—SAMUEL S. SHERWOOD, of Acquackanonk, Passaic county, N. J., assignor to Self and ALEXANDER DOUGLASS, of English Neighborhood, N. J.—*Improvement in Hooped Skirts.*—Patent dated January 6, 1863.—For each intersection of the suspending tape and hoop a mortised clasp of thin sheet metal is provided; the tape is slipped through the mortise, and the hoop being laid upon it, the ends of the clasp are bent over, embracing both and holding the tape with a half-round and turn.

Claim.—The mortised clasp, constructed as described, in combination with the tapes and hoops of the lady's skirt, substantially as set forth.

No. 37,375.—J. E. STURDY, of Augusta, Kennebec county, Maine, assignor to Himself and C. H. STURDY, of same place.—*Improvement in Water Elevators.*—Patent dated January 6, 1863.—In this elevator the discharging spout is attached to the bucket, and as it rises towards the top a cam, formed of two pieces or lips with a space between, comes in contact with a plate which draws the bucket round to a proper position, a stirrup under the spout is then caught by a hook, tilting the spout down and projecting the nose of it through the hole in the well-curb, and a lever operates a valve in the bottom of the bucket to discharge the water.

Claim.—First, the attaching of the spout I to the bucket D, substantially as shown, in combination with a lever H, and valve G, all arranged in the manner shown, so that said spout may be tilted at the proper time, and the valve raised in order to admit of the water being discharged from the bucket, as described.

Second, the cam N, and lips h h, attached to the bucket D, in combination with the pendant plate O attached to the rising and falling bar L, arranged to operate as and for the purpose specified.

No. 37,376.—LEROY S. WHITE, of Waterbury, Conn., assignor to Himself and HENRY A. CHAPIN, of Bridgeport, Conn.—*Improvement in Breech-loading Fire-arms.*—Patent dated January 6, 1863.—The sliding breech-piece works on guides at its forward and rear parts, and is withdrawn from contact with the barrel by depression of the lever guard, which, being attached at its forward end to the sliding breech-piece and to the stationary stock by a link, acts as a toggle to withdraw the breech-piece horizontally. When closed the square end of the link comes against a shoulder of the breech-piece to hold it against the recoil.

Claim.—First, so constructing the sliding breech-piece C and combining it with a non-sliding stock and a non-sliding barrel that its main or body portion is suspended in a space, without being supported by guides or ways, while its front portion d and its rear portion e are supported by guides. The said rear and front portions d e being solid with the body portion, substantially as and for the purpose described.

Second, the combination of the breech-piece C, when made with the parts d e solid to it, and the horizontal guides m n c, lever guard G, link H, non-sliding barrel A, non-sliding stock B, the whole constructed and operating as described.

Third, the combination of the shoulder p, link H, lever guard G, breech-piece C d e, stock B B' B2 B3, and play-hole q', all substantially in the manner and for the purpose described.

Fourth, the combination of the spring guard G, link H, breech-piece C d e, stock B B' B2 B3, and the pins q q2 q3, arranged so that they are out of line when the guard is closed, all substantially as and for the purpose set forth.

Fifth, so arranging the dovetail guide m that it serves the double function of keeping the mainspring in place and of holding the tail e of the breech-piece G in position, substantially as described.

Sixth, the combination of the hammer D and its actuating mechanism with the sliding breech-piece C d e, non-sliding barrel and non-sliding stock, all in the manner herein described.

No. 37,377.—BENJAMIN RHODES, of Old Ford Road Row, Middlesex, England, assignor to JAMES MCGEARY, of Salem, Mass.—*Improvement in Apparatus for the Manufacture of Tubes, Pipes, &c.*—Patent dated January 6, 1863.—Patented in England April 19, 1862.—This machine consists of a tank of melted bitumen with a furnace beneath, in which revolves a mandril in suitable bearing and turned by a crank. Above the mandril is a roller containing paper or other fabric, which is fed down continuously through a slot to the bath of bitumen and wound upon the revolving mandril until the cylinder of bitumenized paper, &c., is of sufficient strength and thickness. It is then taken out and revolved against a polishing cylinder, which, as well as the other cylinders, may be cooled by a circulation of cold water through them; and in place of the mandril, solid at the ends, a cylinder of wire gauze may be employed, upon which to wind the fabric and form the pipe.

Claim.—First, the general construction and arrangement of parts of the machinery or apparatus herein described and as shown in the accompanying drawings, for the purposes set forth.

Second, the use or employment of a perforated cylinder or roller, or a cylinder composed of wire gauze covering, revolving in a bath of bitumen, or its equivalent, for the purpose of insuring the more thorough saturation and coating of the material employment for forming pipes.

Third, the use or employment of cold water circulating through the top pressure roller and the cooling and polishing cylinder of pipe-making machines.

No. 37,378.—NORMAN ALLEN, of West Meriden, Conn.—*Improved Lamp-lighting Device.*—Patent dated January 13, 1863.—This invention consists of an oil chamber and a long wick tube, by means of which a lamp may be lighted without removing the chimney.

Claim.—The combination of the chimney or receptacle A, tube B, and wick C, all arranged substantially as shown and described to form a new and improved article for the purpose specified.

No. 37,379.—JOSEPH H. ATWATER, of Providence, R. I.—*Copying Press.*—Patent dated January 13, 1863.—The object of this invention is to provide a portable box copying press with an adjustable platen to suit the varying thickness of the copying book or paper.

Claim.—A box copying press, for the purpose of taking a copy of writing and for the protection and safe-keeping of the copying book, as herein described.

No. 37,380.—BENJAMIN T. BARBITT, of New York, N. Y.—*Improved Armor Plates for Ships and other Batteries.*—Patent dated January 13, 1863.—The invention consists in a peculiar dovetailed construction of the parts forming the armor plating, by an arrangement of bars laid crosswise, and cast metal filling.

Claim.—Having the bars B C made in wedge form and combined in the manner shown with the bars A and the cast metal filling, all as set forth.

No. 37,381.—JASON T. BARTLETT and EDWARD E. BUTMAN, of Boston, Suffolk county, Mass.—*Improvement in Trusses.*—Patent dated January 13, 1863.—This improvement consists in the adjustment of the pad to its position, and securing it there by means of a ball and socket joint with temper screws and an arm projecting from and secured to the spring.

Claim.—The arrangement of the two screws D E with the ball and socket of the pad and its arm C, substantially as specified, the arm being applied to its spring by devices to admit of its adjustment, substantially as explained.

No. 37,382.—EDWARD and JOHN BOURNE, of Pittsburg, Penn.—*Improvement in Steam Generators.*—Patent dated January 13, 1863.—This improvement consists in the application of a vertical rod with short levers attached, one operating on the fire door and the other on the ash-pit door, so as, by its upward motion, to open the feed door and damp the fire, and by its downward motion to open the ash-pit door and blow the fire, the rod being actuated to these movements by attachment to a lever and rod and elastic head in the steam chamber, and by its elevation to help raise the safety-valve when necessary.

Claim.—The combination and arrangement of the short levers T and K and rod W with the elastic head r in the chamber C, substantially in the manner and for the purposes as herein set forth.

Also, assisting the safety-valve to rise when necessary by means of the rod W acting against the lever H that holds the valve down for the purpose of enabling the steam to escape, as herein set forth.

No. 37,383.—FRANCIS S. BURT, of Mount Pleasant, Henry county, Iowa.—*Improvement in Pumps.*—Patent dated January 13, 1863.—This pump consists of a reciprocating piston

working in a submerged chamber in the well, and so arranged in combination with a sliding valve that at each throw of the valve it uncovers the ingress opening and discharges at the egress, the valve moving by the pressure of the water as the piston is moved.

Claim.—The combination of the piston D and the slide valve H, working in separate compartments E G in the pump chamber A, in connexion with the tube B and the water passage I in the side and top of the chamber A, and the induction openings g g g' in the side of the said chamber, all being constructed and arranged as and for the purpose herein set forth.

No. 37,384.—JOHN G. CHAPMAN, of Charlestown, Middlesex county, Mass.—*Improvement in Boring and Squaring Off Cylinders.*—Patent dated January 13, 1863.—This tool consists of an eccentric cylindrical cutter head hung upon an arbor between the centres of a lathe, to be rotated inside the cylinder to be operated upon. The cutters are set radially in the cutter head, and an annular sleeve on one end of the cutter head has a projection which prevents it from rotating, and pins are set in the periphery of the cutter head, which, as they come in contact with said projection, rotate the cutter head on its arbor, which continues to move, and by the screw within feeds the cutter head along longitudinally. By means of a slide at the end of the arbor rest, the tail screw is set eccentrically with the arbor to the necessary degree. The squaring-off tool is placed at the end, and its feed movement is radial, by sliding cutter heads operating within the recess of the face plate wheel, pinion, and screw through the shank of the cutter head.

Claim.—The cylinder, or cutter head, or stock E, with eccentric F attached, in combination with the ring G, placed on the eccentric, and having its periphery provided with pins n and the nut B, fitted within the ring, and connected with the ring G through the medium of the slot or groove m and roller l, the above parts being fitted on the arbor A as shown, and all arranged to operate as and for the purpose herein set forth.

Also, the cylinder H, with the eccentric U, having the ring T fitted on it with pins r attached, in combination with the plate I, provided with the toothed rim Q, the screw shaft O, gears P P, and cutter slides K K, all arranged substantially as and for the purpose set forth.

Also, the socket W, when arranged with a slide Y, containing the hole r for the centre point, as shown; but this is claimed only when used with the implement or tools herein shown and described.

No. 37,385.—GEORGE COMINGS and LOUIS MENSING, of New York, N. Y.—*Improvement in Machines for Manufacturing Chenille.*—Patent dated January 13, 1863.—The gimp and the two threads which are to form the warp are wound upon their respective rollers, and are so placed by guides that, as the web of the gimp is cut by the knife, one of the warp threads of the chenille is above and the other below the gimp, clasping the threads, while the original cords on which the gimp was wound pass away to a reel or otherwise. The two warp threads being twisted, the embraced gimp assumes its spiral character.

Claim.—The combination of a cylinder H and knife L with devices for conveying the gimp and thread, substantially as herein shown and described.

Also, having the gimp arranged and carried upon cords f, as herein set forth, so that chenille in pieces of any desired length may be produced as set forth.

No. 37,386.—FRANKLIN M. CROSSETT, of Piermont, Rockland county, N. Y.—*Improvement in Door Latches.*—Patent dated January 13, 1863.—The invention consists in making a loop on the inner end of the door latch, with a bevelled surface at its end, upon which a sloping projection on the spindle works by simply pulling, thus retracting the latch within the case.

Claim.—The loop D, formed at the inner end of the latch B, and provided with the bevelled end or surface e, in combination with the projection d on the sliding spindle E, all arranged substantially as and for the purpose herein set forth.

No. 37,387.—HENRY G. DAVIS, of New York, N. Y.—*Improvement in Crutches.*—Patent dated January 13, 1863.—This handle is adjusted vertically by a thimble and set-screw in the shaft of the crutch, and is on the outside.

Claim.—An adjustable handle E, constructed and arranged to serve, in connexion with the staff, as and so as to realize the advantages herein set forth.

No. 37,388.—ANDREW J. EDDY, of Brooklyn, N. Y.—*Improvement in Moulds for Casting Shells.*—Patent dated January 13, 1863.—This improvement consists in the employment of a shouldered metal bush around the core, to support it independently of the sand of which the mould is formed, to prevent the displacement of the core. The core bar and metal bush are made fast to the bed piece.

Claim.—The metal bush or collar H, constructed and applied in combination with the flask B, bed piece A, and core bar E, substantially as and for the purpose herein specified.

No. 37,389.—J. P. DRIVER, of Marengo, Iowa.—*Improvement in Machines for Casting Bullets.*—Patent dated January 13, 1863.—A series of mould blocks, each carrying a hemispherical depression in each of its faces, are attached to an endless band or chain, and are

thus fed under a spout by which melted lead is poured into them. From this they pass to a roller, which, as it slightly sways the apron up, partially opens the moulds, whose upper edges have a depression which connects the gates of the moulds, and the lead in this depression forms a "sprue" which is removed by the cutter, leaving the bullet clean. As the endless band passes over the roller at its point of descent, the moulds are opened and the bullet taken out by a picker.

Claim.—First, the employment in casting bullets of an endless series of moulds carried by one or more endless belts or chains, or connected together to form an endless chain, by whose movement around two drums the moulds are opened and closed, substantially as herein specified.

Second, the combination with the endless series of moulds of a knife or knives, applied substantially as herein described, to cut off the sprues of the bullets.

Third, the roller G, applied in combination with the endless series of moulds, substantially as and for the purpose herein specified.

Fourth, the toothed springs *i i*, applied in combination with the endless series of moulds, and operating as herein specified.

Fifth, the combination of the endless series of moulds, the roller G, the melting pot E, the knives *e e e*, and the toothed springs *g g g*, the whole arranged and operating substantially as herein described.

No. 37,390.—HENRY H. ELWELL, of South Norwalk, Fairfield county, Conn.—*Improvement in Locks.*—Patent dated January 13, 1863.—The object of this invention is to so construct a lock that it may be made to answer for a right or left-hand door by inversion, and in both cases admit of the key being introduced in a proper position; that is to say, bit downward. The bolt of the lock consists of the usual square-projecting stud, and has a wide plate, with an opening into which the key is inserted. The interior edge of this opening is of such a shape as to receive the impact of the key introduced in either position, and the bolt is retained when thrown by duplicate tumblers, which are so pivoted together as to act simultaneously when one is lifted by the bit of the key in the act of locking.

Claim.—The plate D, with bolt C attached, and provided with the opening E, in connexion with the tumblers H H and keyhole F, arranged substantially as and for the purpose herein set forth.

No. 37,391.—GEORGE ESTERLY, of White Water, Walworth county, Wis.—*Improvement in Harvesters.*—Patent dated January 13, 1863.—The improvements consist in the form and construction of the frame of the machine. The side of the main frame is straight towards the platform, and angular on the off side, being connected to the draught frame by a hinged plank, and also by a draught chain which passes over a windlass under the driver's seat. From the front end of the main stem extends a short sill, to which is suspended, by bolts and eyes, the finger bar. The point of the gatherer at the end of the finger bar is adjustable vertically by a slotted arc, a beam, and set-screw; and the rear end of the beam and of the main frame are connected by a curved rod, which spans the intervening space and keeps the finger bar from sagging; and this, acting as a brace, is called a back beam.

Claim.—First, the metal draught frame A, with its left side nearly straight and its right side angling, and the whole otherwise constructed substantially as described, in combination with the wooden plank D, driver's seat F, and foot guard *e*, substantially as and for the purposes set forth.

Second, the arrangement consisting of the windlass H, draught chain I, and connexion J, or their equivalents, in combination with a draught frame and the main frame B, substantially in the manner described, so that the draught of the machine is always on the draught chain, whether the sill G is stationary or being raised or lowered.

Third, the eye bolts *q q*, eyes *o' o'*, and tongued and grooved plates *o* and *p*, for the purpose of forming a jointed connexion between the short sill G and finger bar K, substantially in the manner described.

Fourth, the combination with the elements named in the third claim of the slotted standard L, slotted timber or beam N *s*, and the bolts *w t*, substantially in the manner and for the purpose described.

Fifth, the metal back beam O, substantially in the form represented, applied to the top of the rear part of the main frame B B and to the top of the beam N, and standing diagonally over the platform or across the space occupied thereby, and by its arched and otherwise bent form being thrown high up above the same, substantially as and for the purposes set forth.

Sixth, the construction of the back beam in form substantially as represented, in combination with the diagonal arrangement thereof between the frame B and the beam N, and with the bolts *z z* and washer *y*, or the equivalent thereof, for the purpose of taking the sag out of the grain end of the finger bar, substantially in the manner described.

Seventh, the combination of the back beam O, constructed in form substantially as represented, and an adjustable platform U, substantially as described, for the purpose of affording a free discharge from the platform of the grain by means of a rake, although the platform may have been elevated at its rear end to a considerable height, as set forth.

Eighth, the combination of the back beam O, constructed substantially in form as represented, and the hinged or adjustable platform U and rake stand T, located at the inner corner of the platform, substantially as described and shown.

No. 37,392.—GEORGE ESTERLY, of White Water, Walworth county, Wis.—*Improvement in Header Attachments to Harvesting Machines.*—Patent dated January 13, 1863.—This improvement is intended to be attached to the harvester (patent No. 37,391) when it is desired to head the grain. Behind the finger bar is a spout or box, and in this is an endless apron, with slats which carry the heads to the side, where they are raised between aprons up an inclined way, which is supported by a brace from the main frame, and are discharged by a conductor in one row by means of the spout, which drags upon the stubble and lays it all one way for the reception of the heads. The spout which receives the heads from the cutter is hung by hinges to the finger beam, and at the back is suspended from the curved back beam which connects the rear part of the main frame with the rear part of the grain-gathering shoe, which projects into the standing grain.

Claim.—First, the header attachment for harvesters combining the several elements described herein and represented in the drawing, or the equivalent thereof, for use in connexion with the main frame Q, or its equivalent, of a reaper or mower, by being attached to the short sill of said frame, substantially as described.

Second, in a detached header organization, substantially as described, I claim the construction of the horizontal and inclined portions A A' of the spout in one piece, in combination with the supporting of the horizontal portion by hinges on the finger beam, and by chains or rods on a curved back beam, and with the supporting and adjusting of both portions together by means of an adjusting bracket of the main frame Q of a harvester, substantially as and for the purpose set forth.

Third, in connexion with an adjustable or hinged spout A A' of a detached header, the arrangement of the adjusting, supporting brace *z*, substantially as and for the purpose described.

Fourth, leaning the stubble of the field all one way for the deposit of the grain upon it by means of the hinged or swinging portion E, or its equivalent, of the conductor D, substantially as described.

Fifth, the combination of the back beam L, constructed substantially as described, with the sustaining rod or chain *r*, bracket *y*, support *z*, and grain side beam *m*, and with the main frame Q, spout A A', and conductor D D, substantially in the manner and for the purpose described.

Sixth, providing the main frame Q with the brackets *y*, support *z*, friction rollers 2 2, and the grooved eccentric P, to receive a header attachment, substantially as set forth.

Seventh, the combination of the independently adjustable finger beam H and divider I with an independently adjustable spout A A', aprons B B, and conductor D E, substantially as and for the purpose described.

No. 37,393.—NEWTON FOSTER, of Palmyra, N. Y.—*Improvement in Broadcast Seed and Manure Sowers.*—Patent dated January 13, 1863.—This improvement consists of a seed box or hopper with vertical sides and inclined bottom, at the lower angle of which are openings with a register plate. Pivoted to the bottom and attached at their upper ends to a reciprocating bar are a series of stirrers whose points project over the openings, and vibrating there prevent the clogging of the seed or pulverulent manure.

Claim.—The combination of the obliquely pivoted vibrating stirrers B and driving bar E, with the inclined seed box bottom *c*, angular slotted portion *f*, and regulating slides C D, all in the manner herein shown and described.

No. 37,394.—MINOR H. FOWLER, of New York, N. Y.—*Improvement in Lanterns for Burning Coal-oil.*—Patent dated January 13, 1863.—This improvement is intended to prevent the deflection of the flame caused by swinging the lantern, and consists in admitting the air by perforations in the flanged foot of the lantern and in the base of the lamp; and in making ledges or bearings on the lamp base, which, in connexion with the enveloping lantern foot and the inner projecting rim, at the foot of the cylinder, divide that space into chambers.

Claim.—First, the perforations *b* in the flange or base *a* of the part A of the lantern, when used in connexion with perforations *h* in the base *e* of the lamp E, or with other suitable air spaces in the bottom of the lantern and with or without the perforations *d* in the rim *c*, as and for the purpose herein set forth.

Second, constructing the base *e* of the lamp B with ledges or bearings *f*, substantially as shown and described, in connexion with the rim *c*, or other equivalent bearing attached to the part A, for the purpose of admitting air spaces *g* around the base *e*, as set forth.

Third, the combination of the perforations *b* in the flange or base *a* of the part A of the lantern; the perforations *h* in the base *e* of the lamp; the air spaces *g* found by the ledges or bearings *f* on the base *e* and the rim *c*, or its equivalent, all arranged as and for the purpose herein set forth.

No. 37,395.—HENRY GETTY, of Brooklyn, N. Y.—*Improvement in Pipe Tongs*.—Patent dated January 13, 1863.—A hooked jaw is pivoted to a lever, whose cam-shaped head has a toothed surface; between the jaw and the cam the pipe is gripped, and according as the jaw is opened by pressure upon the thumb-piece it becomes adapted to receive a larger pipe.

Claim.—First, the hook-jaw constructed as shown in combination with a stationary serrated cam lever, for the purpose specified.

Second, in combination with the same, the finger rest D, for the purpose set forth.

No. 37,396.—R. D. GRANGER, of Albany, N. Y.—*Improvement in Cooking Stoves*.—Patent dated January 13, 1863. The invention consists in providing an air-chamber under the elevated oven, between it and the flue, and communicating by a pipe with the outside air so as to moderate the heat of that part of the oven; and further, in making connexion by apertures between the flue, air-chamber, and oven.

Claim.—First, in combination with the elevated oven, making the bottom of the oven double with an air space between the two, provided with a pipe *p*, or its equivalent, for the supply of cold air, substantially as described, whether such air space be made to communicate directly with the flue or with the oven as described, to insure the circulation of air through the said air-chamber, and thereby prevent the overheating of the bottom of the oven.

Second, in combination with the elevated oven and the air-chamber, at the bottom of the oven, substantially as described, connecting the said oven by apertures with the said air-chamber and the flue spaces, substantially as described, so as to cause a circulation of heated air through the oven, as described.

Third, in combination with the two compartments, one above the other and separated by a plate, the arrangement, substantially as described, of the apertures for the circulation of air through the said ovens, whether the air be admitted so as to circulate in the lower oven from the ends to the middle, and in the upper one from the middle toward the ends, or *vice versa*, as described.

No. 37,397.—ROBERT HITCHCOCK, of Watertown, New York.—*Improvement in Winding Clocks by Currents of Air*.—Patent dated January 13, 1863. This clock is intended to be driven by a spring, which is kept wound by a flutter-wheel of the "ventilator" pattern, set in a chimney or other position where a draught of air will rotate it; the vanes are hinged, and made self-opening and closing, and may be used in connexion with other vanes permanently attached to the shaft. The fourth claim describes an arrangement by which the obliquity of the vanes is regulated from the main-spring barrel so as to diminish the power of the flutter-wheel when the spring is nearly at its full tension.

Claim.—First, in combination with the shaft of a clock-operating spring, a flutter-wheel constructed as described, having its vanes so connected and hinged to radial spindles on said shaft as that the said vanes shall be allowed of being opened and closed and be made self-opening by their weight, essentially as shown and described.

Second, the combination for joint operation of fore-and-aft flutter-wheels, the one having movable or opening and closing vanes, and the other immovable ones, as described.

Third, controlling the opening and closing of the movable vanes of a flutter-wheel by the action of the main-spring of a clock, substantially as specified.

Fourth, the combination of devices consisting of the stop or stud on the main-spring barrel, the notched wheel gearing at intervals from the former and provided with an inclined plane, the sliding collar on the main-spring arbor and lever, hand and sliding collar operated thereby, or the equivalents of these devices, for the purpose herein described.

No. 37,398.—SETH HOKE, of Union City, Randolph county, Indiana.—*Improvement in Machines for Cutting Files*.—Patent dated January 13, 1863.—The file blank being secured on the bed, the cutter which is secured in a vertically vibrating frame pivoted to standards is exposed to the blows of a hammer which is also pivoted upon standards rising from the bed of the machine. The motion is given to the hammer by means of a wheel actuating a pendant rod from the end of the vibrating bar or hammer handle. Further, the shaft on which this wheel rotates has another wheel which actuates the cutter bar by the impingement of a cam-shaped projection on the pin of a vertically sliding bar attached to the cutter bar. The prolongation of the shaft forms a screw which moves the rest and feeds the file blank under the cutter.

Claim.—The hammer handle I, having the pendant bar K attached to it and provided with the ledge or shoulder M, in connexion with the frame Q, provided with the cutter R, and the bar U, provided with the projection *o*, the wheels E G, provided with the pins *a' b*, the bed B, and screw D, all arranged substantially as and for the purpose set forth.

Also, pivoting the cutter frame Q, in slides O O, for the purpose of regulating the height of said frame as described, but this only when the frame is used in connexion and arranged with the parts herein specified for the purpose set forth.

No. 37,399.—J. HOPE, of Castleton, Vt.—*Improvement in Camp Stoves*.—Patent dated January 13, 1863.—This stove consists of a box top of sheet metal provided with holes for the

chimney and for a kettle, and the whole having a wide flange or bottom plate intended to be set upon the ground, and span a trench cut in the ground which acts as a furnace; the stove being pivoted to the ground through holes in its flanged base.

Claim.—The top or cover A, with its flange B, its aperture *d*, its holes and pins *c c c c*, its slide or door G, in combination, constructed substantially as herein described.

No. 37,400.—SOLOMON HUNT, of Danville, Hendricks county, Indiana.—*Improvement in Sheet Metal Cans*.—Patent dated January 13, 1863.—This appliance for the use of the tinner consists of an expansible block around which to form and fasten the joints of a can without sewing. The segmental blocks forming the shape are connected with spring levers, and these are hinged to a centre block so as to have a simultaneous action.

Claim.—The combination of the levers B, springs C D, bearing piece F, and segments A, with or without the slide G, arranged for joint operation as and for the purpose specified.

No. 37,401.—FREDERICK KETTLER, of Milwaukee, Wisconsin.—*Improved Mode of Raising Sunken Vessels*.—Patent dated January 13, 1863.—The apparatus consists of an auger to be screwed into the deck of a sunken vessel, to give a point of attachment for floats with which to buoy the vessel to the surface. The auger is rotated and screwed into the wooden deck by sinking rods shod with sharp points, to a point near the auger shaft, by which it may be rotated, and the screw at the foot caused to penetrate the deck. A roller is upon the auger-shaft and one upon the operating rod, and a rope being passed around them and carried to the surface is worked so as to rotate the auger and cause the thread to bury itself.

Claim.—First, the construction of the screw auger *a b*, as herein described.

Second, the screw auger, as combined with rods 11 and 12, plate 13, pulleys 14, ropes 16, teeth *c*, and balloons *d*, when arranged as herein specified, to form the instrument or machine C for raising sunken vessels.

No. 37,402.—GERVASE B. MANLEY, of Danville, Montour county, Penn.—*Improved Defensive Armor for Ships and other Batteries*.—Patent dated January 13, 1863.—The side of the vessel or battery is built up of plates which are dovetailed together by tongues passing longitudinally between the layers, and extending into each other, or a rib upon one fitting a corresponding recess in the other; bolts perpendicular to the plates pass through the whole series of dovetailed tongues and plates and fasten them together.

Claim.—The combination of the plates *a*, tongues *c* or *c'*, and bolts or rivets *b*, when the said plates are placed in planes perpendicular to the surface to be protected, the bolts or rivets passed directly through the tongues in the centre of the plates and perpendicularly to the latter, and all the parts constructed, arranged and secured, in the manner and for the purposes specified.

No. 37,403.—SYLVESTER MARSH, of Chicago, Ill.—*Improvement in Drying Grain, Malt, &c.*—Patent dated January 13, 1863.—The improvement consists in forcing a blast or current of fresh air over an open anthracite or coke fire, and into or through the mass of grain or other substance to be dried.

Claim.—The method of drying hops, broom corn, grain, and other like substances, by the employment, in combination with anthracite coal or coke as fuel, of any artificial current of air over the fire, substantially as herein shown and set forth.

No. 37,404.—THEOPHILUS MAYHEW, of Poughkeepsie, N. Y.—*Improvement in Feeders for Lamps*.—Patent dated January 13, 1863.—Attached to the lower part of the burner is a tube which fits telescopically into a tube which is fast to the collar on the lamp, so that the burner may be withdrawn without unscrewing.

Claim.—The screw thimble formed by the sockets *c* and *d*, applied between the burner and the collar on the lamp in the manner specified, whereby said burner and lamp are connected, but the lamp burner can be raised for filling the reservoir without unscrewing the burner, as specified.

No. 37,405.—ELIHU C. and JOHN W. NEWLAND, of Bedford, Lawrence county, Ind.—*Improvement in Hoes*.—Patent dated January 13, 1863.—Attached to a handle is a metallic socket having a projecting flange to fit a corresponding depression in the blade of the hoe and a central orifice for the insertion of a headed screw, which passes through the blade and into the handle to secure them together.

Claim.—The arrangement of the socket A provided with the projections P P', and the plate H, having corresponding notches and attached to the socket by means of the screw S, all constructed and operating as and for the purpose described.

No. 37,406.—JOHN OLIPHANT, of Uniontown, Fayette county, Penn.—*Improvement in Safety Nipple-guard for Fire-arms*.—Patent dated January 13, 1863.—This improvement consists of a slotted bar which is adapted to slide back, embracing the nipple between flanges, so as to receive the blow of the hammer and prevent the latter from coming in contact with the cap on the nipple, so long as the slide is in that position.

Claim.—The gun-nipple-guard J provided with the inclined planes *g g*, and slit *n*, the slot *m*, screw *k*, and spring *o*, arranged and constructed as shown and described for the purpose set forth.

No. 37,407.—JOHN OLIPHANT, of Uniontown, Penn.—*Improvement in Breech-loading Fire-arms*.—Patent dated January 13, 1863.—Within a yoke at the rear of the barrel are a vibrating charge-chamber and breech-block. These both vibrate vertically on horizontal pins which pass through the sides of the yoke; the breech-block being raised, the charge-chamber is retracted to the rear so as to bring its forward end clear of the barrel; it is then raised to a convenient position for loading, the pin on which it is vibrated being provided with a nipple. The hammer strikes from the side of the gun, and the flange on the end admits of the withdrawal of the nipple which is attached to the reciprocating charge-chamber without raising the hammer. A sliding pin in the trigger is made to impinge against a projection on the tumbler and raise the hammer and disengage it without previous cocking when so desired. When cocked, the tumbler is released and the hammer sprung by the impingement of an inclined face on the side of the rear part of the trigger upon an inclination on the cam attached to the sere which withdraws the pawl from the notch.

Claim.—First, the steel pin *r* provided with the nipple *s*, in combination with a vibrating reciprocating charge-chamber, as described, &c.

Second, the hammer *F* constructed with the flange *m'*, arranged as described, working on the side of the gun, in combination with a reciprocating nipple, substantially as described and for the purposes set forth.

Third, the cam *f'* attached to the tumbler of a gun lock, in combination with the sliding steel pin *G''*, constructed and operating substantially as described.

Fourth, the cam *g'* attached to the sere of a gun lock in combination with the trigger *G'*, the steel sliding pin *G''*, and the cam-shaped projection *f'*, substantially and for the purposes described.

No. 37,408.—THEODORE PALMER, of Catskill, Green county, N. Y.—*Improvement in Raking and Binding attachment to Harrows*.—Patent dated January 13, 1863.—In this machine the grain is gathered from the platform and bound with cord, which is tied into a knot by power derived from the driving wheels. The grain is drawn from the slatted platform by a reciprocating rake, when it is caught up by cradle hooks, clamped and bound by a series of operations which involve details that cannot be condensed within the limits of this abstract.

Claim.—First, the combination of the rake *B*, endless chain *D*, guide *e'*, ledges *k'' k'''*, and bevelled bar *l*, all arranged as shown to admit of the rake *B*, operating as and for the purpose herein set forth.

Second, the manner as shown of operating the hooks *t*, or turning the shaft *J*, thereof, to wit, by means of the wheel *M*, provided with a smooth and toothed periphery, the plate *d'*, connected with the India-rubber *g'*, the bar *j'*, provided with the pawl *m'*, and the cam projections *r* *r'* *r''* on wheel *I*, all arranged as and for the purpose herein set forth.

Third, the combination and arrangement of the lever *R*, arm *T*, hook *s'*, cutter *Y*, arm *Z*, with the projection or knob *i''* at its end, arm *u'*, and the slide *A'* on the central tooth *p* of the shaft *G*, all arranged to operate as and for the purpose specified.

No. 37,409.—DAVID C. PERRIS, of Roxbury, Mass.—*Improved Manufacture of Palm-leaf Hats and Bonnets*.—Patent dated January 13, 1863.—The fabric from which these garments are made consists of a thread warp, with a filling of palm-leaf strips, strengthened by a backing of cotton cloth, and is intended as a substitute for straw braid. The warp threads are arranged to bind the strands of palm leaf between them, and spaces are left in the rows of warp threads, forming them into clusters of the desired width, so as to allow the fabric after the backing has been applied to be cut into strips through the filling and in an interval between the warp threads. The ribbon or strip thus obtained is sized and pressed to be afterwards worked as straw braid.

Claim.—The palm-leaf strip made in the manner substantially as above described for the purpose specified.

No. 37,410.—JOHN SIDDONS, of Rochester, N. Y.—*Improvement in Machines for Seaming Metallic Roofing*.—Patent dated January 13, 1863.—This consists of a travelling seamer running upon rollers and spanning the upturned edges of the plates to be seamed. A pair of horizontally rotating rollers clamp the upturned edges closely; a closing roller with a deep groove follows and turns the more elevated edge over the other, and other succeeding rollers compress the down turned edge firmly. Appliances are provided to allow of the yielding of the closing roller to inequalities in the seam, and to prevent tilting of the machine, which is driven by a hand crank by a rider.

Claim.—First, inclining the axes of the folding rollers *C* and *E*, as described, so that their rotation by means of the friction between them and the sides of the seam shall cause them to hug the roof effectually.

Second, the employment of the closing roller *D*, constructed and arranged in the manner specified, in combination with the folding rollers *C* and *E*, and the compressing roller *C'*.

Third, the combination of the spring *g*, and set screw *h*, with the adjustable box *B''*, whereby the roller *E* is allowed to yield and adapt itself to any inequalities of thickness in the seam, such as cross seams, and the different thickness of metals used.

Fourth, preventing the rear end of the machine from rising from the roof while in operation, by means of the shoulder of the gain *p*, in the right-hand compressing roller *C'*, of the rear set, catching under the fold of the seam, as specified.

Fifth, the self-adjusting seat *S*, constructed and arranged substantially as described, in combination with the other parts of the machine.

No. 37,411.—EDWIN A. STEVENS, of Hoboken, N. J.—*Improved Construction and Defence of War Vessels*.—Patent dated January 13, 1863.—This improvement consists in making vessels with double sides, the intervening space being divided into compartments. Further, in making the deck double, with the space between the said decks divided off, so that the vital parts of the vessel (the room necessary for engine and appurtenances, and the crew, with accommodations for them, and for working the deck gun which is operated from below) may be protected from projectiles by a casing of water, the deck being submerged below the water-line, and flotation insured in case of accident to the bulwarks by buoyant indestructible structures on deck. Elastic chambers or bags of air are submerged in the protecting water space, so as to give elasticity by contraction on the concussion of the projectiles.

Claim.—First, lowering a war vessel in the water so that a water-protected deck shall be lower than the surface of the water outside, substantially in the manner and for the purpose described.

Second, the buoyant structure, substantially as described, applied to a partially or wholly submerged war vessel to impart stability and buoyancy thereto.

Third, the buoyant structure referred to in the foregoing claim, in combination with a protected deck situated or placed below the water-line of a war vessel, substantially as described.

Fourth, an air vessel constructed in any suitable manner and combined with any of the water compartments or vessels specified, substantially as and for the objects described.

No. 37,412.—WILLIAM GEORGE VALLENTIN, of Oxford street, London, England.—*Improvement in Coking Coal and Generating Gases*.—Patent dated January 13, 1863.—Patented in England February 13, 1862.—In this improvement the coal is exposed in a heated close chamber of a high, long, and narrow shape, with a funnel-shaped feed opening and a movable bottom for the discharge of coke. The chambers are heated by the burning of the gas evolved in the coking process, the gas being introduced around the chambers in numerous flues, together with the requisite amount of atmospheric air.

Claim.—Coking coal in close chambers or retorts heated externally by the combustion of gases generated from similar previous coking operations and applied in the manner herein set forth.

Also, the use of the vertical close chambers or retorts *a*, in combination with the external flues or heating channels supplied with combustible gases and air from the burners *f*.

Also, the use and application of the combination of parts whether for coking coal or generating combustible gases for heating and lighting purposes.

No. 37,413.—THOMAS C. WALES, of Dorchester, Mass.—*Improved Water-proof Shoes*.—Patent dated January 13, 1863.—This improvement in the mode of finishing the edges of the "upper" in shoes, consists in lapping a band around a binding cord, the said band being embraced between the two folds of the upper.

Claim.—The improved cemented or water-proof shoe or combination of a binding cord *e* and a lapping band or cover *d* together, and with the two folds or layers *e f*, of the upper, substantially as hereinbefore specified.

No. 37,414.—THEODORE W. MAYHEW, of Nettle Lake, Williams county, Ohio.—*Improvement in Beehives*.—Patent dated January 13, 1863.—At the front and sides of the hive and near the floor are openings covered with wire gauze, and at the upper part of the hive, projecting from under the eaves, are spouts or passage ways with openings in their roof and floors guarded with wire gauze.

Claim.—The arrangement of the gauze openings *E F* and the passage ways *M N* with the gauze openings *m n*, in combination with the hive, substantially as set forth.

No. 37,415.—WILLIAM CANTER, of New York, N. Y., assignor to SAMUEL BERNSTEIN, of the same place.—*Improvement in Machinery for Manufacturing Chenille*.—Patent dated January 13, 1863.—This invention consists of appliances by which the twist is given to the chenille at the proper point, but not allowed to run back to the point where the plush is cut; a method of guiding and feeding, and a device for taking up the slack of the wire, which becomes stretched in the process. These are accomplished by running the cord which draws the chenille over a roller and through a hollow revolving head, which gives it the required twist, a pair of rollers, over which it has previously passed, preventing the twist from running back; being fed and guided in the place where the chenille is wrapped by a continuous wire, the slack of which is taken up and due tension preserved by an adjustable pulley and sheaves.

Claim.—First, the employment in the chenille machines of the revolving sheave or wheel *N* operating in combination with the cords *M* and *Q* and swivel *P*, substantially as herein set forth.

Second, the employment in chenille machines of the surface G or H, or both, to restrain the twist of the goods, substantially as herein set forth.

Third, the use in chenille machines of the continuous wire W, or its equivalent, arranged to operate substantially in the manner and with the advantage herein set forth.

Fourth, the employment in machines for making chenille of the sheave 3, or its equivalent, arranged to operate in combination with the continuous wire or cord W, substantially as and for the purpose herein set forth.

No. 37,416.—WILLIAM WHEELER, of Poultney, Rutland county, Vt., assignor to Himself and JOSHUA POOR, of the same place.—*Improvement in Stoves*.—Patent dated January 13, 1863.—This stove is constructed with an interior heating furnace and an exterior air-chamber surrounded by a soapstone casing, which is held at certain points by flanges projecting outwardly from the iron furnace contained in it. A slide below the furnace has an aperture for the purpose of moderating the draught. Upon a tilting grate is a perforated arch to introduce air to the centre of the fire and assist in breaking the crust. Above the fire is a feeding cylinder occupying the central portion of the upper part of the body of the stove, which is closed by a cover except when introducing fuel, and is surrounded by an annular flue space.

Claim.—The soapstone or other equivalent slowly-conducting radiating case, combined with an interior furnace and a close air space S, which is next to and immediately surrounds the furnace and its flue, substantially as and for the purpose herein specified.

Also, the slide U with the draught aperture u between the grate and ash-pan, substantially as and for the purpose set forth.

Also, the perforated chamber W when attached to and used in combination with a tilting grate N, so as to receive lateral vibratory motion therefrom, and thereby serve the additional purpose of breaking the coal crust at the top, substantially as specified.

Also, the double-flanged flange-plates F G H I K L, constructed and arranged substantially as described, in combination with the soapstone staves, for the purpose specified.

Also, the combination of the annular flue Q with the annular door air-space S and slowly-conducting radiating case, substantially as herein set forth.

No. 37,417.—LINSON DE FOREST, of Birmingham, Conn., assignor to Himself and THOS. B. DE FOREST, of the same place.—*Improvement in Eyeletting Machines*.—Patent dated January 13, 1863.—The work is laid upon a table and passed over the point where the upper and lower dies operate. Here a conduit in the table connects with a supply of eyelets from a hopper, by which they are fed to the machine. A feed-bar carries one to its place on the lower die, when the perforating punch descending pierces the work and enters the eyelet. The lower die now ascending opens the jaws and the square faces of the dies bring the eyelet to its bearings in a double-circular flange upon the work.

Claim.—The employment of a table or supporting surface to sustain the work or material being eyeleted, substantially as hereinbefore set forth.

Also, the employment, in combination with the work-supporting table, of two sets of dies d and d', the lower one receiving and carrying up the eyelet through the work-table, and the two operating together to clinch the eyelet, substantially as hereinbefore described.

Also, the combination of the two dies d and d' with a perforating punch c and work-supporting table or surface, the whole operating substantially as described for the purpose set forth.

Also, forming a conduit or passage in the table H, in combination with a feeder I, or its equivalent, whereby an eyelet deposited in the said conduit is led into the die d, substantially as described.

Also, the employment of a chute I, constructed substantially as described, in combination with a hopper J, whereby the eyelets thrown promiscuously in the said hopper are fed or conducted in a given position to the mechanism for presenting them to and securing them in the work, substantially as hereinbefore described.

No. 37,418.—THOMAS DE FOREST, of Birmingham, Conn., assignor to Himself and LINSON DE FOREST, of the same place.—*Improvement in Eyeletting Machines*.—Patent dated January 13, 1863.—This improvement consists in the arrangements for feeding the eyelets to the machine, by which, when they are thrown promiscuously in a hopper they are fed into line, turned into the proper position, or if they prove intractable, discharged from the machine. This is done by placing them in an inclined chute with divisions, &c., which arrest the salient points of the cap until it assumes that position in which it fits the shape of the conveyor, and is carried to the feeding bar which waits upon the dies.

Claim.—The employment, in combination with a hopper and shaking table, substantially as described, of a mechanism for turning those eyelets which start in a wrong position over into the proper position, substantially as set forth.

Also, in combination with a conductor J, or its equivalent, a device for discharging from it all eyelets which may have entered it in a wrong position, substantially as hereinbefore described.

Also, forming a lip 19, or its equivalent, on the forward end of the feeder to prevent the displacement of the eyelets, substantially as hereinbefore set forth.

No. 37,419.—MAJOR H. FISHER, of Bridgeport, Conn., assignor to THE FRANKLIN FILE COMPANY, of the same place.—*Improvement in Machines for Cutting Files*.—Patent dated January 13, 1863. The improvement consists in the method of attachment of the chisel within the oblique slot of the chisel-arm, by attaching a steel point to the under side of the chisel-arm which projects into an inclined notch in the chisel; a circular spring in front of the chisel presses against it, and holds it to a proper angle, being adjusted by a set-screw.

Claim.—First, the inclined notch i in the chisel.

Second, the adjustable spring c in combination with the notch i, substantially as and for the purposes described.

No. 37,420.—BENJAMIN A. JOHNSON, of North Auburn, Androscoggin county, Me., assignor to Himself and EARL BLOSSOM, of the same place.—*Improvement in Railroad Snow Ploughs*.—Patent dated January 13, 1863.—This snow plough consists of a wheeled truck to precede the locomotive, on which is an inclined plane to enter below the snow and lift it between walls or siding, to be discharged upon the snow bank at each side by mould boards. A prow cleaves the upper layers of snow when it is deep, and a swinging centre board divides it so as to pass up the inclined plane to be discharged at each side. The machine is guided by a wheel, chain, and pulleys, so as to preserve the centre of the track in curves.

Claim.—The side walls c, side slides S, swing bar B B, grooves P P, top covering t, and the opening or space through which the snow passes, combined and operating in connexion with the wheels W, draw bar D, frame-work A A, pulleys x, chain L, rope R, spring S S, break or upright shaft O, mould boards M and i, inclined plane P, and swing centre board A, substantially as set forth, and for the purpose specified.

No. 37,421.—HENRY RANDALL, of San Francisco, Cal., assignor to Himself and J. P. BALDWIN, of New York, N. Y.—*Improved Construction and Location of Paddle Wheels*.—Patent dated January 13, 1863.—Four wheels are used, each pair driven by independent engines, the after pair being larger than, and located in the comparatively still water abaft the forward pair.

The object being to secure safety by the distribution of the weight of the engines and boilers, and by the diminution of the chances of the machinery being disabled, as well as to facilitate her passage through the water.

Claim.—Not the use of four wheels to a steamer, but their peculiar location in combination with the ship, the engines, and with each other, namely:

The application of four wheels, (two pairs,) when each pair is disconnected from the other, driven by independent engines, and the after pair is so much larger than the forward pair as to take up the slip of the latter when making the same number of revolutions, substantially as described; said after pair, moreover, being located at such distance from the other pair as to be in the water made comparatively smooth by the latter; and finally, so located in regard to the hull of the ship, and their buckets so arranged as to throw the water well inward under the run of the vessel and relieve her from the dead or partially towing-water, substantially as described; the whole being for the objects and reasons explained.

No. 37,422.—FRANKLIN SMITH, of Dorchester, Mass., assignor to Himself and GEORGE W. SMITH, of the same place; SYLVANUS A. DENIO, CHARLES ROBERTS, and ANNIE SMITH, of Boston, Mass.; and JOSEPH LOVETT, of Somerville, Mass.—*Tool for Inserting Putty beneath Vault Glasses*.—Patent dated January 13, 1863.—This tool consists of a cylinder filled with putty, having a piston operated by a screw and a nozzle with an annular orifice, which is pushed up the opening into which the glass is to be inserted; a portion of the putty being expressed and left upon the ledge for the glass to rest upon.

Claim.—The within-described tool, constructed and operating substantially as set forth, for the purpose specified.

No. 37,423.—BARNEY H. MONKE, of Cincinnati, Ohio, assignor to CHAMBERLAIN & Co., of the same place.—*Improvement in Teakettles*.—Patent dated January 13, 1863.—The improvement consists in the method of attaching the lid to the kettle. A projection is cast upon the kettle having a conical neck and an enlarged head; over this by means of a slot the lid is passed, and the two retained in position by the bail or handle.

Claim.—The pot or kettle A, having the described chamfer-headed and conical-necked ear D and correspondingly perforated lid B, the whole being secured by the insertion of the bail, in the manner set forth.

No. 37,424.—A. MYERS, of Springfield, Ohio.—*Improved Sorghum Wine*.—Patent issued January 13, 1863.—Antedated July 13, 1862.—The wine is made by the evaporation of the juice to a density of from 15° to 25° Baume, and then removing to a cellar for fermentation; care being taken to use no neutralizing material in the boiling process.

Claim.—First, sorghum wine, prepared substantially as described.

Second, the process of fermentation, substantially as described.

No. 37,425.—RICHARD C. ROBBINS, of Jersey City, N. J.—*Improvement in Gas Pipe Joints*.—Patent dated January 13, 1863.—Around the interior of the socket, into which the

next section of the pipe is to be inserted, is an annular recess, which is cast full of lead, leaving the lead projecting as a circular flange. The next pipe has a slightly conical end, and is forced in by a yoke and screws, so as to jam firmly against the lead and make a tight joint.

Claim.—The method of forming the packing by means of casting lead or other suitable material in a circular groove in the mouth of the socket of the pipe, and into which the tapering end of the succeeding pipe is intended to be forced in the manner and for the purpose substantially as set forth.

No. 37,426.—ALEXANDER SCHULTZ, of Mulhouse, Lyons, France.—*Improved Mordant for Fixing Aniline Colors.*—Patent dated January 13, 1863.—This mordant is intended as a substitute for albumen, gluten, tannin, &c., used to fix aniline colors, and arsenite of soda for fixing coloring matters extracted from coal oil, and in the preparation of lakes derived from that source.

Claim.—The preparation and use of the mordant hereinbefore described for fixing aniline or other coloring matter extracted from coal tar upon fibrous or textile material, the said mordant consisting essentially in the combination in various proportions of acetate of alumina with arsenite of soda, and whether used separately from but in connexion with or as a mixture with the said coloring matter or otherwise, substantially as herein set forth.

No. 37,427.—RICHARD N. ALLEN, of Cleveland, Ohio.—*Improved Oil Barrel.*—Patent dated January 20, 1863.—The inventor makes a cylinder of metal, the heads or disks of which are inserted by making their diameter larger than that of the cylinder, then turning the edges at right angles until the lips thus formed fit exactly in the cylinder to which they are riveted or otherwise fastened. Around this cylinder are placed wooden staves fastened in the usual manner. The bung-hole consists of a metal ring, screwed into the head, and provided with a cap. Through the bung runs an air-vent pipe turning at right angles and running parallel with and near the head of the barrel to near its side, allowing the air to enter when emptying, or to escape when filling the cask.

Claim.—The herein-described oil barrel or cask in which the parts are constructed, combined, and arranged in the manner and for the purpose set forth, the same being a new article of manufacture.

No. 37,428.—G. W. ANSLEY, of Cleveland, Cuyahoga county, Ohio.—*Improvement in Skates.*—Patent dated January 20, 1863.—The invention consist in making a spring skate which shall be adjustable to the weight of the wearer as well as possessing perfect elasticity.

Claim.—The arrangement of the spring C, stem E, pivoted or jointed to the runner, adjustable plate H, and socket D, substantially as and for the purpose set forth.

No. 37,429.—DANIEL ARMEL, of Somerset, Somerset county, Pa.—*Improvement in Hay Rakes.*—Patent dated January 20, 1863.—The object of this invention is to provide modes of placing the rake under the control of the driver. This is effected by two foot levers on a roller on the foot board of the driver, one of which trips the rake and discharges the hay, and the other restores it to its working position.

Claim.—The combination of the tread-lever C with the platform A, seat b, and arms f f', substantially as and for the purpose described.

No. 37,430.—J. BERGSTRESSER, of Berrysburg, Dauphin county, Pa.—*Improvement in Grain Scouring Machines.*—Patent dated January 20, 1863.—This improvement consists of a cylindrical chamber with openings or slits in the periphery, within which a vertical shaft revolves, having upon it a continuous spiral flange with projections on the upper side.

Claim.—The shape and construction of the spiral scourer B, with its projections J, for scouring grain, substantially as described.

No. 37,431.—CHARLES K. BROWN, of Troy, N. Y.—*Improvement in Paper Shirt Collars.*—Patent dated January 20, 1863.—The invention consists in strengthening the parts exposed to the most strain in putting on, or in use, by the addition of a piece of muslin around the button holes of the collar.

Claim.—A paper shirt collar having the parts at or around the button holes d therein made thicker and stronger than the main portion thereof, by means of a piece or pieces c of thin muslin or other suitable strengthening material pasted or otherwise cemented in or to the layer or united layers of paper constituting the main portion or body of the collar, substantially as here described.

No. 37,432.—JAMES A. CAMPBELL, Buffalo, N. Y.—*Improvement in Machine for Printing Addresses on Newspapers, &c.*—Patent dated January 20, 1863.—This machine is constructed to be used in connexion with a common chase, over which it is supported by end pieces and automatically advanced after each depression of the platen; resting upon ways, which span the chase, is a traversing bed piece with an upright, affording a pivoted attachment for a lever, which alternately depresses and elevates a platen on the guide rod. The

upward motion of the lever by means of the toggle, actuates the wheel, which, mashing into a rack, advances the platen to deliver another impression on an advanced point.

Claim.—First, the combination of the levers E K, bar L, wheels I J, sleeve n, rack M, gills H, and a sliding bed-piece B, whereby the machine is automatically advanced after each depression of the platen by devices independent of the chase.

Second, the combination with an addressing machine, substantially such as described, of the gills or ways A A and cross-pieces a a, adapting the machine to fit over a common chase placed upon a common table, and to be moved in a right line from end to end or from side to side of the said chase.

No. 37,433.—CHARLES W. COE, of Carmina, Shiawassee county, Michigan.—*Improvement in Drilling and Screw-cutting Machine.*—Patent dated January 20, 1863.—The machine consists of an upright drill stock, which rotates in bearings under the impulse of a bevel wheel gearing into a pinion, which is fastened to the drill stock by a pin which allows the stock to slip through vertically. The bevel wheel is driven by a hand crank, and has a pinion shaft and fly-wheel to secure steadiness of motion. A screw, working in a nut in the upper bearing and attached to the upper end of the drill stock by a swivel joint, projects the tool and a ratchet and a pawl; the latter actuated by a cam on the face of the bevel wheel is the automatic feed for the drill stock. Jaws with lugs fitting into holes in the bench form adjustable clamps for holding the plate, &c., to be operated upon.

Claim.—The combination of the gearing D E H with the screw K, ratchet M, adjustable pawl N, shaft I, cam Q, and the moving or rising and falling jaws S S', all arranged for joint operation as and for the purpose herein set forth.

No. 37,434.—FRANKLIN K. COSGROVE and RUDOLPH WESTERMAN, of Fort Wayne, Allen county, Indiana.—*Improvement in Fences.*—Patent dated January 20, 1863.—The fence is made in ordinary lengths of, say, five board sections, and braces are placed on each side, which by their bill-shaped ends hook over the third board, and are keyed down on to it by wedges f e under the next higher board. The feet of the braces are secured by stakes driven into the ground.

Claim.—The arrangement of the bill-shaped ends c of the braces B, in combination with chamfered edges of the mortises d in the battens b b', and with gibs e, keys f, and anchor stakes g, all constructed and applied in the manner and for the purpose herein shown and described.

No. 37,435.—LYMAN DERBY, of New York, N. Y.—*Improvement in Screw Nuts.*—Patent dated January 20, 1863.—The invention consists in making the nut in two parts transversely of the axis, and forming semicircular inclined planes on their matching faces of a pitch greater than the thread of the bolt, so that after screwing them up together to the shoulder the outer one may be unscrewed a little to cause the inclined surfaces to climb one on the other and make a jamb nut of it to hold both in position.

Claim.—The construction of a screw nut, substantially as hereinbefore described, and operating in the manner and for the purposes set forth.

No. 37,436.—H. W. DOPP, of Buffalo, N. Y.—*Improvement in Apparatus for Burning Coal Oil for Heating Purposes.*—Patent dated January 20, 1863.—The burner is first brought to a proper heat by an alcohol lamp, and then a stream of coal oil being turned on it is burnt beneath a distributing plate, which in turn communicates its heat to the tubes in which the oil is passing, to generate the gas for continued ignition.

Claim.—The distributing plate A, with solid centre a and generator B, or their equivalent, so arranged that the vapor shall escape from one or more small orifices into the unconfined atmosphere, and be arrested by means of the solid part of the plate A, or its equivalent, for the purpose of causing its combustion after it is thus arrested, sufficient heat being obtained thereby to keep up continuous vaporization, substantially as described.

Also, the combination of the crank pin and the cam groove to obtain an up-and-down motion of the graduating valve C, substantially as and for the purpose herein described.

No. 37,437.—J. B. EDGELL, E. A. ALEXANDER, and H. C. KELLOG, of Quasqueton, Buchanan county, Iowa.—*Improvement in Churns.*—Patent dated January 20, 1863.—The churn is set upon a bench or a frame, and the dasher is suspended from the top of a vertical shaft which passes up through a tube which is fast to the bottom and occupies the central portion of the churn.

Claim.—First, suspending the dasher F from the top end of a vertical shaft C, substantially in the manner and for the purpose herein shown and described.

Second, the arrangement of the central tube b fastened to the bottom of the tub A in combination with the vertical shaft C, constructed and operating as and for the purpose herein specified.

No. 37,438.—PETER E. FALCON, Cohasset, Norfolk county, Mass.—*Improved mode of Raising Sunk Vessels.*—Patent dated January 20, 1863.—The invention consists in attach-

ing to, or placing in a sunken vessel a number of casks, bunghole down, and then by means of an air pump and pipe introducing air into the casks so as to cause the vessel to ascend by their comparative levity.

Claim.—Improved process of raising sunken vessels by means of casks or contrivances of like character, the same consisting in arranging the said casks filled with water, on or within a vessel, and with their bungholes downward, as set forth, introducing an air conduit into the bungholes of the casks successively, and forcing air through such pipe and into each cask, and expelling the water of such cask out of the bunghole, and with respect to the said air pipe, substantially as specified.

No. 37,439.—THOMAS FARNSWORTH, of Cleveland, Ohio.—*Improved Combined Washing, Wringing, and Mangling Machine.*—Patent dated January 20, 1863.—The invention consists of a series of appliances. The clothes are beaten between a vibrating gate, the slats of whose lower part correspond with the intervals between cleats on the sides of the box; they are then run between rollers rotating in standards, being driven by a hand crank wheel and pinion. The clothes are fed to the rollers by an endless apron, and after wringing fall upon a shelf table.

Claim.—The sections A B, the beater, Fig. 5, the rollers J K, wheel M, and pinion N, in combination with the table S and endless apron T, when all these parts are arranged and operated as and for the purpose specified.

No. 37,440.—JOHN FAULKNER, of Dansville, Livingston county, N. Y.—*Improvement in Grain Separators.*—Patent dated January 20, 1863.—The invention consists in making a sieve of sheet metal with long square-sided apertures through it; it is further defined to consist in making them parallel with the course of the grain over them and transverse to the motion of the shaking shoe.

Claim.—First, a sheet-metal sieve A, with apertures *a*, arranged in the manner and for the purpose described.

Second, a sheet-metal sieve with apertures *a* in line with the flow of the grain over it, and at right angles to the movement of the shoe D of the fanning mill, in the manner and for the purpose described.

No. 37,441.—F. H. FURNISS and F. R. MYERS, of Cleveland, Ohio.—*Improvement in Railroad Baggage Checks.*—Patent dated January 20, 1863.—On this baggage check the necessary numbers, one for each station, are stamped and have a corresponding slot. The strap is fastened to the end, and is brought through the plate in the slot opposite to that name which answers to the station for which the checked baggage is designed.

Claim.—Placing the number or names of stations on baggage checks, in consecutive order, with intermediate or corresponding openings or slots for the insertion of the strap, as and for the purpose specified.

No. 37,442.—BENJAMIN GARVEY, of New York, N. Y.—*Improvement in Lamps.*—Patent dated January 20, 1863.—The wick tube is made of porcelain, or other material that does not readily conduct heat, so as to confine the heat to the point of combustion and prevent the conduction of heat to the reservoir. These tubes may imitate candles of wax or paraffine; and the wick is made with an incombustible surface and an absorbent core, such as a roll of cotton in wire gauze.

Claim.—Incombustible wicks for lamps, formed of the materials and in the manner substantially as described in the accompanying specification.

Also, the application to lamps of tubes of glass, glazed pottery, or other such material, which is a bad conductor of heat, and is at the same time impervious to the fuel, for the purpose of protecting the wick from the cooling effects of external air, and of confining the heat of the flame, as far as possible, to the wick, in the manner set forth substantially in the accompanying specification.

Also, wick tubes of any suitable material in imitation of candles or tapers of wax, spermaceti, paraffine, &c., in the manner described in the accompanying specification.

No. 37,443.—VALENTINE HAEFFNER, of Dobbs Ferry, Westchester county, N. Y.—*Improved Beer-Cooler.*—Patent dated January 20, 1863.—This invention consists in a series of metallic troughs of semicircular section, placed at a certain distance apart for the circulation of air between them, and connected at the ends with similar transverse troughs; the said troughs being traversed through their whole extent by cold-water pipes.

Claim.—The arrangement of the air spaces *a* between the troughs A, when the latter are used in combination with cold-water pipes C, substantially in the manner and for the purpose herein shown and described.

No. 37,444.—PETER HAMMOND, of Castleton, Richmond county, N. Y.—*Improvement in Surface Condensers.*—Patent dated January 20, 1863.—The steam in this surface condenser is compelled to pass in a wavy track between walls of corrugated sheet-iron, which are sharpened on their edges, and strips driven on so as to make a tight joint the length of the plate; the steam then enters a segmental chamber and is returned between another pair of corrugated plates, and so on as may be necessary.

Claim.—Combining the plates A A, or their equivalents, which constitute the cooling surfaces of the condenser or cooler by means of strips C C applied and clamped in their places, substantially as herein set forth.

No. 37,445.—WILLIAM CLEVELAND HICKS, of New York, N. Y.—*Improvement in Drop Presses.*—Patent dated January 20, 1863.—The hammer being raised by the winding drum, touches the rod connected with the unshipping clutch and causes the weight to descend; it is so proportioned that as soon as the hammer commences to fall, the clutch on the winding shaft is thrown in gear and begins to tighten the lifting strap as the blow is struck, so that on the recoil of the hammer it is retained and not allowed to make a second uncertain blow.

Claim.—The method of unwinding the hammer belt immediately upon its reaching the requisite elevation by the employment, in combination with the ordinary winding drum, shipping clutch and appurtenances, of auxiliary friction rolls or drums, the whole being arranged to operate substantially in the manner and for the purposes set forth.

Also, preventing the hammer from rebounding by the means and in the manner hereinbefore described, or in any other manner substantially the same.

No. 37,446.—LIVERAS HULL, of Charlestown, Mass.—*Improved Machine for Cutting Caoutchouc, &c., into Strips and Threads.*—Patent dated January 20, 1863.—The caoutchouc is stretched upon a drum or cylinder so as to be rotated against the edge of a revolving circular cutter, which is mounted upon a traversing slide rest, having a motion to and from the cylinder to bring it into action or remove it and determine the depth of the cut, and a feed motion parallel to the axis of the cylinder so as to cut the whole covering of the cylinder into a continuous strip.

Claim.—My improved caoutchouc-cutting machine, having its several parts constructed and arranged in manner and so as to operate substantially as described, such machine not only having a single drum or cylinder to support, and a revolving knife to cut a sheet of caoutchouc, as explained, but having machinery for traversing the rotary knife with reference to the drum, and also having machinery for moving such knife toward and away from the drum, as specified.

No. 37,447.—BENJAMIN IRVING, of New York, N. Y.—*Improvement in Skates.*—Patent dated January 20, 1863.—The foot being placed upon the skate and the adjustable clamps brought up to it so as to fit the various parts they are intended to engage, the heel-piece or clamp is violently retracted forward by the movement of the toggles on the side of the skate so as to bring the boot firmly against all the bearings with which it is in connexion.

Claim.—First, actuating the clamp *k i*, by means of the system of levers *m n*, thereby engaging it and the adjustable clamp *d e* to the boot or shoe, when the whole are combined, arranged and operated substantially as described.

Second, the combination of the especially-adjustable heel clamp *k i* with the toggle levers, when arranged and operated substantially as described.

Third, the combination of the toe, side and heel clamps, when adjustable severally and in relation to each other, substantially as described.

No. 37,448.—JOEL C. JACKSON, of Rochester, N. Y.—*Improvement in Bumpers and Draw-head Springs for Railroad Cars.*—Patent dated January 20, 1863.—Attached to the bumper is a draw-bar with a disk flange working in a spring box. The disk on the draw-bar occupies the centre of the cylindrical box, and the space at both ends is filled with elastic material so as to resist pressure in either direction.

Claim.—The draw-bar *c*, and disk *e*, in combination with the springs *f* and *g*, and draw-box *b*, for the purposes and as specified.

No. 37,449.—ADOLPH LANGE, of Glashütte, near Dresden, Saxony.—*Improvement in Watch Cases.*—Patent dated January 20, 1863.—The bezel holding the glass is usually attached to the case outside of the movement, but in this improvement the bezel for the glass is placed directly upon the movement itself.

Claim.—Attaching the bezel for the glass in a hunting-case watch directly to the movement, in the manner and for the purpose substantially as set forth herein.

No. 37,450.—VALENTINE LASSERRE, of Paris, France.—*Improvement in Roofs.*—Patent dated January 20, 1863.—The object is to make a tightly-fitting joint at the point where the screw or bolt passes through the metallic roofing plate to secure it to the lath or sheathing of the roof. This is accomplished by raising a boss or projection upon the plates, and over this a cup, upon the crown of which is an orifice through which the screw is inserted. The head of the screw, and the chamfered socket in which it is inserted, are then further covered by a screw cap.

Claim.—The combination of the raised portion or boss, made upon the upper or both plates, the screw or bolt C, the washer B, the opening in the side washer being closed at the top by a cap D, or by other means which shall answer the purpose.

No. 37,451.—CHARLES LEAVITT, of Cleveland, Ohio.—*Improvement in Carriage Hub.*—Patent dated January 20, 1863.—The improvement is in the manner of covering in and securing the burr on the end of the pipe or spindle, and consists of a cap having a thread on its inner cylindrical edge which screws into the end of the axle box until a flange or shoulder comes in contact with the end of the hub. The central portion of this metallic cap has a hole for the insertion of grease, and when it is closed by a screw the end of the spindle and the burr are securely boxed in.

Claim.—The cap I, shoulder I', chamber J, and hole L, when combined with the pipe box B, all the parts being arranged and operating as and for the purpose herein set forth.

No. 37,452.—JOEL LEE, of Galesburg, Knox county, Ill.—*Improved Washing and Wringing Machine.*—Patent dated January 20, 1863.—In this combined machine the clothes are first rubbed between the convex rubber and the concave disk, both armed with slats or rollers, and are then passed between wringing rollers, in which the upper one is held down upon the lower by means of a link and weighted lever.

Claim.—The combination of oscillating arms E with the rubber B, the rollers L, the link I, and weighted levers C, all arranged substantially as and for the purposes specified.

No. 37,453.—C. LIEBRICH and L. UITTING, of Philadelphia, Pa.—*Improved Belt-Fastener.*—Patent dated January 20, 1863.—Two eccentric rollers are journaled into plates, and the surfaces more distant from their centre of rotation are serrated, the ends of a strap being brought between the rollers, the smooth surfaces being presented, they are rotated and bind the ends of the strap firmly between their serrated edges.

Claim.—The plates C and C', and eccentric rollers B and B', each roller having a portion of its surface grooved or serrated, and the whole being arranged for application to the two ends of a belt, as and for the purpose herein set forth.

No. 37,454.—SAMUEL N. MAXAM, of Shelburne Falls, Franklin county, Mass.—*Improvement in Sinks.*—Patent dated January 20, 1863.—The pan upon and in which the appliances are placed has a square depression at one end, and a round one at the other, the latter forming a basin with a discharging orifice in the centre. A movable sliding grate rests upon the bottom of the pan, and above this another grating with transverse wooden bars. A washbowl pivoted to a yoke slides upon a rod at one end, and may be swung over the sink or outside at pleasure.

Claim.—The combination and arrangement of the top slide grate A with the transverse wooden bars F, and the lower slide grate B, and the basin C, and the movable washbowl D, resting in and upon the yoke E, and sliding upon the rod G, for the purpose of a sink, and as above set forth.

No. 37,455.—G. B. McDONALD, of Louisville, Ky.—*Improvement in Steam Boilers.*—Patent dated January 20, 1863.—Passing through a stuffing box at the end of the boiler is a rod, to the inner end of which is a brush, which, by being moved backwards and forwards lengthways of the boiler, brushes the sediment into a mud well.

Claim.—The employment, conjointly with the mud well B of the boiler, of a brush C having an attached rod working through a stuffing box in one end of the boiler, and operating substantially as herein specified, for the purpose set forth.

No. 37,456.—JOHN C. MILLIGAN, of Elizabeth City, N. J.—*Improvement in Camp Kettles.*—Patent dated January 20, 1863.—This oval kettle is filled up with various utensils in such a way as scarcely to admit of a minute description within the limits of an abstract. Each larger utensil is made to contain the smaller vessels, and are surmounted by a frying pan, the lid forming a tureen.

Claim.—The peculiar construction of the dished cover or tureen B and its arrangement with the kettle A, and, together with the coffee-pot H, sauce-pan J, frying pan M, gridiron K, plates G, and ration boxes D E F, in the manner and for the purpose specified.

No. 37,457.—ROBERT MORRISON, of Newcastle-upon-Tyne, England.—*Improvement in Valve Gearing for Steam Hammers.*—Patent dated January 20, 1863.—Patented in England December 16, 1859.—The invention consists in so connecting the hammer and valve that the latter follows the motion of the former. At the upper end of the hammer bar is a roller which works in the slot of a curved link, which has a lever attached actuating the valve rod. The curve of this slot link may be regular or irregular, so that for a given motion of the hammer a corresponding motion may be given to the valve, or otherwise; and the valves are so arranged on their shafts as with a given motion to admit steam either above or below the hammer piston at any definite point, to vary the length of its stroke and to regulate the force of the blow.

Claim.—First, the use of a slot link, or its equivalent, to operate the valves of steam hammers for the purpose of maintaining the reciprocating motion of the hammer and valve in the same relative direction during any number of strokes, if so desired, or when less than the full motion of the valve is required, causing the parts, approaching contact to produce this motion, to move at a less velocity than the hammer, substantially as and for the purpose described.

Second, connecting the valve or valves of steam hammers to the slot link as described, or its equivalent, in such a manner that the whole or any portion of the motion due to the link or its equivalent may be imparted to the valve or valves, substantially as described and for the purpose specified.

Third, the use of a valve or valves in steam hammers, so connected with the hammer as to be capable of maintaining with it a continuous movement when the hammer and valve are at full stroke, whilst at the same time the relative positions of the valves and parts may be varied, substantially as and for the purpose specified.

No. 37,458.—ISAAC PEACOCK, of Shortsville, Ontario county, N. Y., assignor to Himself and S. S. SAWYER, of the same place.—*Improvement in Making Steel Horseshoes.*—Patent dated January 20, 1863.—The shoe is formed upon an inner die, having a central block of the shape desired, mounted upon a movable axis, and having punches operated from below to make the nail-holes.

The outer die is operated by a rack and pinion from any prime mover, and is pushed against the bar of metal, turning it around the forming die, and holding it while the nail-holes are punched.

Claim.—The combination of the forming die A A', having detachable punches and a shifting axis, and the pivoted jaws D D, having inclined planes and shoulders on their outer edges, and the compressor and expander E E, having the wedge hooks h h and holding-down flanges or ledges on the front portions, substantially as described or the equivalent thereof for the purpose set forth.

Second, making steel horseshoes of the construction represented by a combination of machine and hand work, substantially as described.

No. 37,459.—NORTON PORTER, of Youngstown, Niagara county, N. Y.—*Improvement in Wrenches.*—Patent dated January 20, 1863.—The shank of this wrench has a serrated edge, and within the socket that traverses upon it is a slide with similar serrations; pivoted in lugs on this socket is an eccentric with a thumb-piece attached, which, when brought into action, presses down the serrated slide so as to make it mesh into the teeth on the shank and prevent the motion relatively of the jaws until the slide is raised.

Claim.—The slide E fitted in the socket D of the jaw C, and provided with a serrated inner surface h and an eccentric e, with a thumb-piece e attached, in combination with the serrated surface i of the shank A, all arranged as and for the purpose herein set forth.

No. 37,460.—GEORGE B. RANSOM, of Chester, Middlesex county, Conn.—*Improved Meat Boiler.*—Patent dated January 20, 1863.—This improvement consists of a pair of hinged metallic pans with handles; from the floor of each of the pans rise points or ribs, and the meat being laid upon these in one pan, the other is shut down and the meat held between them, out of contact with the surface of the pan.

Claim.—A meat boiler constructed substantially as above described, so as to enclose the meat or other article, and boil the same without close contact with the bottom or top of the boiler, substantially as set forth.

No. 37,461.—JOHN SCOTT, of Lawrenceville, Alleghany county, Pa.—*Improved Car for Carrying Petroleum.*—Patent dated January 20, 1863.—This car is lined with sheet metal and has longitudinal and transverse vertical partitions, which have perforations near their lower edges to admit of the filling and emptying of all simultaneously, but prevents it from swaying back and forth and splashing.

Claim.—The employment of a railroad car A lined with sheet metal, substantially as herein described, for the purpose of carrying on a railroad petroleum or other liquid in the bulk.

Also, the arrangement of the partitions e f, perforated near the bottom with holes h in the interior of the car A, as and for the purpose specified.

No. 37,462.—SAMUEL J. SEELY, of Brooklyn, N. Y.—*Improvement in Machines for Bending Corrugated Sheet Metal.*—Patent dated January 20, 1863.—The object is to form cylinders of corrugated sheet metal in which the corrugations shall be around their circumferences, and not longitudinal, and to remove the cylinder endways from the roller without springing it.

Four corrugated rollers are placed in a frame and driven by gearing, the wheels at the opposite ends being connected by a central shaft. The upper and lower rollers are journaled in levers which, by suitable mechanism, are raised or lowered to adjust them relatively to each other, and to free one end so as to slip the corrugated cylinder off the roller on which it is formed. The rollers may be in sections for adapting them to work requiring an inverted or flanged edge.

Claim.—First, the combination of four rollers, corrugated around their circumferences, in a machine for bending corrugated sheet metal into corrugated cylinders, substantially as described.

Second, the arrangement of four corrugated rollers, so that the corrugations of one mesh into the corrugations of another, and all are driven by a positive motion and from a central shaft, substantially as and for the purposes set forth.

Third, the arrangement of the machine so that the corrugated rollers may be adjusted with respect to one another, and so that the corrugated cylinders may be removed endwise from the rollers, substantially as described.

Fourth, the construction, arrangement, and combination of the adjustable parts B B¹ B² B³, stationary parts A A¹ A² A³, rollers C C¹ C² C³, rock-shafts I I', worms J J', and segments K K', substantially as and for the purpose set forth.

Fifth, the combination of one or more movable sections *b c* with the permanent corrugated portions of the roller surface, the said sections being adapted for finishing large or small casks with a plain flange or chine being inverted, substantially as and for the purpose set forth.

No. 37,463.—ISAAC B. SNYDER, of Clay Township, Lancaster county, Pa.—*Improvement in Raking Attachments for Harvesters*.—Patent dated January 20, 1863.—This raking attachment is operated from a quarter-cogged wheel on the main shaft which turns a pinion, and, by means of connexions, causes a rake to come quickly forward and rake the grain off the platform. These two motions are effected in one-quarter of the time occupied by the revolution of the driving wheel, and the rake is at rest, at the point of its discharge, the balance of the time, with its roller lying in a depression of the inclined plane which elevates it so as to let the grain drop vertically to the ground.

Claim.—The specific arrangement of the inclined planes O P for giving the necessary elevation to the sweep rake at each end of its stroke, in combination with the means of holding the rake during its interval of rest, and operating it in the manner specified.

No. 37,464.—SAMUEL B. SPAULDING, of Brandon, Vt.—*Improvement in Stoves for Boiling Sap*.—Patent dated January 20, 1863.—This evaporator consists of a furnace surmounted by a kettle, around which is a metallic casing forming a hot-air chamber or flue; an annular ring sets on the top of the furnace, and on this is the kettle; the heat rising strikes the middle of the kettle, and by flue plates is deflected right and left and through openings into the chamber around the sides of the kettle, from whence it passes to the stove-pipe.

By opening the damper the heated air passes immediately to the flue.

Claim.—The peculiar air-chamber C, in combination with the stove A and boiler D, the bottom of the latter being embraced by the fire space E and flues, whilst its upper part is embraced by the top of the hot-air chamber, substantially in the manner and for the purposes set forth.

No. 37,465.—C. E. STELLER, of Genesee, Waukesha county, Wisconsin.—*Improvement in Seeding Machines*.—Patent dated January 20, 1863.—This machine is made adjustable for different sizes of seed, and has a rotary cylinder with rows of different sized adjustable seed holes revolving immediately under a transversely adjustable slide provided with rows of openings so as to correspond with and fill either of the sets of seed cells in the cylinder.

The machine has an inner hopper in addition to the usual one, so that small seed may be sown with larger—as grass seed with wheat, or clover with oats; this smaller hopper is situated above the slide and discharges with the other grain through the orifices in the slide into the cells of the roller.

Claim.—First, the arrangement of one or more transversely adjustable slides G G¹ G², with two or more sets of holes or apertures *b' c' d' a'*, in combination with the seed-distributing roller E rotating close under said slide or slides, and provided with adjustable seed-cells *a b c*, all constructed and operating in the manner and for the purpose described.

Second, the arrangement of the secondary hoppers H¹, in combination with the main hopper H, slide G², and seed distributing roller F, constructed and operating as and for the purpose specified.

No. 37,466.—RICHARD STILEMAN, of Philadelphia, Pa.—*Improvement in Hydrants*.—Patent dated January 20, 1863.—At the foot of the fire-plug where the water main or pipe assumes a horizontal position is a sluice valve working vertically in a casing under the impulse of a screw operating by a key from above; this, when retracted, is completely out of the way, forming no impediment to the flow of water.

Claim.—The sluice valve D, with its casing C C', when combined with and arranged in respect to the stem A of a fire-plug, as and for the purpose set forth.

No. 37,467.—THOMAS C. VICE, of New Haven, Conn.—*Improved Apparatus for Stirring and Drying Grain*.—Patent dated January 20, 1863.—This machine consists of a platform and a movable carriage carrying stirrers.

The bed of the platform is formed of iron bars with projecting lugs or ledges on their sides supporting cast-iron plates with slots in them; the carriage has a rack into which a pinion gears, giving it a reciprocating motion, and the stirrers or scoops pass back and forth ploughing up the grain to expose it to the air.

Claim.—First, the arrangement of the cast-iron tiles C forming the platform of a machine for drying grain, &c., in combination with ledges or lugs *a* projecting from the beams B, as and for the purpose shown and described.

Second, the arrangement of several rows of semicircular scoops H, either rigid or adjustable, in combination with the reciprocating carriage E and tiles C, all constructed and operating substantially as and for the purpose specified.

No. 37,468.—LOWELL WILBER, of Putney, Windham county, Vt.—*Improvement in Brake Mechanism for Carriages*.—Patent dated January 20, 1863.—The holding back of the horses upon the neck yoke draws a chain which passes around a pulley on the end of the tongue, and operates a rod under the tongue, which in turn draws upon a chain which passes over two pulleys above the tongue bounds, pushes a sliding bar on the coupling pole, and operates the lock bar, thrusting the rubber blocks against the wheels.

Claim.—The application or arrangement of the slide bar G, its spring H, chain *b*, and pulleys *c d*, relatively to the perch E E' and the rocker bar C, the front axle A, and the tongue J, provided with a draught rod I, operated by the chain *f*, connected with the yoke or bar L, and going around a pulley *e*, as described.

No. 37,469.—WILLIAM J. WILCOX, of New York, N. Y.—*Improved Machine for Stirring Lard*.—Patent dated January 20, 1863.—This stirrer operates in a rectangular tank and consists of two sets of dashers hinged to arms and suspended from rods to which a reciprocating motion is given by a two-throw crank, so that the dashers suspended from the respective rods shall move in opposite directions.

Claim.—The employment or use, for the purpose of stirring lard, of flat perforated dashers E E', attached by hinge joints to staves F F', which are secured to reciprocating rods C C', moving in opposite directions, all constructed and operating substantially in the manner and for the purpose herein shown and described.

No. 37,470.—FREDERICK WILLIS, of Marathon, Cortland county, N. Y.—*Improvement in Extension Ladders*.—Patent dated January 20, 1863.—This ladder is made in sections or lengths which are attached by bands, and slip upon each other by means of cords and pulleys; the upper section being jointed so as to be laid on the roof of a house.

Claim.—Making a hinge joint in the upper section of the ladder so that the part above the joint may be laid on the roof of a house substantially as described.

Also, in combination with the jointed section, the other sections provided with the devices described for raising or pushing them up in succession substantially as described.

No. 37,471.—DUDLEY B. CHAPMAN, of Milford, Worcester county, Mass., assignor to Himself and EBENEZER D. DRAPER of same place.—*Improvement in the Manufacture of Soap*.—Patent dated January 20, 1863.—This improvement is fully explained in the claim.

Claim.—As an improved manufacture, a soap made in the improved manner hereinbefore described, viz., of a hot fatty matter or matters and a solution of alkaline silicate combined at one operation without the process of being boiled after the addition of the solution of silicate to the hot fat.

No. 37,472.—DANIEL B. CLEMENT, of Milton, Norfolk county, Mass., assignor to Himself and DANIEL A. SCHERMERHORN, of Boston, Mass.—*Improved Clothes Wringer*.—Patent dated January 20, 1863.—The journals of the lower roller rest upon wedge-shaped blocks, which by being drawn in or out raise it in its bearings; this motion is given by screws, which likewise depress the clamps upon the sides of the tub.

Claim.—First, raising or lowering the journals of the lower roll B, for the purpose of applying or releasing the pressure, in the manner substantially as set forth.

Second, moving the bearings *d*, by the same power which opens or closes the clamps D, substantially as described.

No. 37,473.—FREEMAN GRAHAM, of Rockford, Winnebago county, Ill., assignor to RALPH EMERSON, Jr., of same place.—*Improvement in Pitmans*.—Patent dated January 20, 1863.—This pitman, with a cast-iron head, but wrought-iron arm or shank, is especially adapted for use when rapidly vibrated as in a harvester. In such situations a wrought-iron head enclosing the wrist pin is apt to cut out more rapidly, while cast-iron is unfit for the shank, as it is subject to jurs and strains.

Claim.—A pitman composed of a cast-iron head to sustain friction, and a wrought-iron arm to resist strains, when constructed and combined substantially in the manner described.

No. 37,474.—CHARLES W. S. HEATON, of Belleville, St. Clair county, Ill., assignor to JAMES I. PIGGOTT and H. RENTCHLER, of same place.—*Improvement in Cultivators*.—Patent dated January 20, 1863.—This cultivator consists of a frame on wheels with a seat for the driver; above this, an upper frame is supported by links, and from it the plough standards are suspended by ropes which are attached to arms on a rock shaft. The various combinations are explained at length in the claims and shown in the drawings.

Claim.—First, a cultivator frame, folding and expanding vertically on the plan of a parallel rule, substantially as and for the purposes described.

Second, the combination of the slotted beams B B, slotted links O O, and vertically folding and expanding parallel rule frame, substantially as and for the purposes described.

Third, the combination of the elevated cultivator frame A A¹ A² A³, clutch pulley H, or its equivalent, propelling wheels E, cross-shaft F, and pendent cultivator beams Q', substantially as and for the purposes set forth.

Fourth, the combination of the ratchet wheel, lever pawl and brake with the pendant cultivator beams, substantially as and for the purposes set forth.

Fifth, the combination of the lever M, with the pawl, brake, ratchet wheel, and pendant cultivator beams, substantially as and for the purpose set forth.

Sixth, the combination of the swinging lever P and pendant cultivator beams in a machine operated substantially as herein described.

Seventh, guards or poles 6, in combination with a back yoke 8, as set forth, or the equivalent thereof.

Eighth, the poles 6, when applied and used for the purpose set forth.

Ninth, the back yoke 8, when applied and used as and for the purpose set forth.

Tenth, in a cultivator for cultivating growing crops, and which employs pendant beams Q', and a vertically expanding and folding parallel rule frame, the combination therewith of the adjustable standard 3 and adjustable brace 4, made in two pieces and with a loose joint, substantially in the manner and for the purpose described.

Eleventh, the arrangement together on the same machine of the ratchet wheel K, the brake N, and foot and hand levers M L I, and P all combined as shown and described.

No. 37,475.—JOHN KUEBLER, of Belleville, St. Clair county, Ill., assignor to J. I. PIGGOTT and HENRY RENTCHLER, of same place.—*Improvement in Presses*.—Patent dated January 20, 1863.—The arrangement of this press is such that the screw may be revolved rapidly while the nut remains stationary so long as the follower is suspended from the screw; and also that the nut may be revolved slowly while the screw remains stationary, when the follower has come in contact with the article to be pressed and the screw is pressing upon it. This is accomplished by a changeable connexion between the end of the screw and the follower, by which the round portion of the socket is in contact with the round end of the screw, while the follower is suspended and admits of the screw being revolved; but when the screw rests with force upon the follower, the square portion of the socket and of the screw come into position and hold the screw while the nut is revolved.

Claim.—The construction of a press or other similar mechanical power in such manner that the screw and nut may be alternately revolved, and when thus revolved the connexion between the follower and the screw will automatically adapt itself thereto, substantially as and for the purposes set forth.

No. 37,476.—JOHN E. SEAVEY, of Kennebunkport, York county, Maine, assignor to Self and GEORGE E. TORREY, of same place.—*Improved Jib and Stay Connexion*.—Patent dated January 20, 1863.—The claim and drawings clearly explain this invention.

Claim.—My improved jib and stay connector, the same consisting of the hinged annulus B and the shackle A, constructed, arranged, and combined together in manner and so as to operate as specified.

No. 37,477.—ABEL THOMPSON, of Brooklyn, N. Y., assignor to Himself and DANIEL RICHARDS, of New York, N. Y.—*Improvement in Casks and Barrels for Oil*.—Patent dated January 20, 1863.—These casks are formed with a bulge, and are lined throughout with sheet metal, including the bung-hole, which has a screw socket attached to the cylindrical inner casing. The staves are connected with each other by intervening plates and points to secure them in their relative cylindrical position.

Claim.—Lining a barrel or cask for petroleum or coal oils with sheet metal, said lining setting against the interior of the barrel or cask, for the purposes and as specified.

The metal screw bung-hole *c*, attached to the cylinder *a*, and passing through the staves, for the purposes specified.

The wings *e e*, attached to the cylinder *a*, and running between the staves, for the purposes specified.

Also, the staves formed as segments of a cylinder, tapering on the outside, and receiving the wooden heads and the hoops to form a barrel or cask, as set forth, in combination with an interior lining, whereby said barrel or cask is adapted to contain coal oil, as specified.

No. 37,478.—DARIUS WELLINGTON, of Boston, Mass., assignor to CORNELIUS WELLINGTON, of same place.—*Improvement in Washbasin Faucets*.—Patent dated January 20, 1863.—The object of this improvement is to prevent leakage from the joint, or from the discharging orifice, running down upon the outside surface of the faucet, or upon the stand in which the washbasin is set when the water is turned off by the partial rotation of the spout. This is effected by making a communication between the chamber to which the nozzle is attached and a discharging pipe at the level of the stand, which intercepts and discharges all mere leakage water which may remain or accumulate in the passages.

Claim.—The improved basin faucet, as constructed with the leakage intercepting chamber *a* and its conduit *b*, arranged within the standard A, and with respect to the joint of the movable nozzle B and the plug *c*, substantially as specified.

Also, in combination with the leakage intercepting chamber *a* and its outlet *b*, arranged on the stand A of the faucet, as specified, the auxiliary intercepting chamber *e*, or its equivalent, and the conduit *g*, or its equivalent, in the turning nozzle B, the whole being arranged to operate together, substantially as and for the purpose or objects as hereinbefore set forth.

No. 37,479.—HARMON G. WEIBLING, of Denver city, Arapahoe county, Colorado Terr.—*Improvement in Axles*.—Patent dated January 20, 1863.—This axle box is constructed with flanges at its outer and inner ends, and with an oil chamber on the top, just clear of the hub, which trickles its contents into the end of a spiral groove in the spindle, keeping the working surfaces lubricated.

Claim.—The peculiar construction of my axle boxes or thimbles with the flanges H R, oil chamber F, and aperture *l*, when connected with a spiral groove, terminating in a canal in which are placed friction rollers *e*, the whole combined and operating as described.

No. 37,480.—HARMON G. WEIBLING, of Denver city, Arapahoe county, Colorado Territory.—*Improvement in Carriage Wheels*.—Patent dated January 20, 1863.—The thimble in this improvement is made with recesses in its shoulder for rollers to lie in, to avoid the friction of the inner end of the hub; and with a strap skein under the lower side, fastened with a nut at the point of the thimble skein and bolted to the axle inside of the band; it has also longitudinal lubricating grooves on the spindle for the retention of grease.

Claim.—My peculiar method of constructing the axle boxes or thimbles, and attaching them to the axles by means of the gutta-percha packing A and screws, when the boxes or thimbles are made to taper, as described, having a canal lined with Babbitt's metal, in which rollers *e* are placed, the whole used in construction with the strap *d* on the under side of the axle and the bolt *j*, the friction rollers, spiral groove, and lubricator, all as described and set forth.

No. 37,481.—CHARLES R. ALSOP, of Middletown, Conn.—*Improvement in Cartridges*.—Patent dated January 27, 1863.—A tube of rubber is charged with powder and shot, separated from each other by a paper disk. A wad, covered with tallow, is inserted over the shot, and is secured by overlapping the ends of the tube.

Claim.—As a new article of manufacture, a powder and shot cartridge, constructed in the manner and for the purpose set forth.

No. 37,482.—H. A. AMELUNG, of Chicago, Ill.—*Improvement in Separating Fatty Matter from Animal Substances*.—Patent dated January 27, 1863.—This invention consists in the appliance of heat during the grinding and mashing of animal substances, whereby fatty matter is more rapidly and effectually separated than by grinding and mashing, or by boiling alone.

Claim.—The separating of fatty matter from animal substances by subjecting the same to a gentle heat during the crushing, grinding, or comminuting of the same, in the manner substantially as herein set forth.

No. 37,483.—AMOS C. BARSTOW, of Providence, R. I.—*Improvement in Teakettles*.—Patent dated January 27, 1863.—The invention consists in making depressions in the rims of cast-iron teakettles, with corresponding hooks on the lid, by which the lid may be secure from falling off except at the identical point of entry.

Claim.—The formation of depressions in the rim of cast-iron teakettles, in combination with a flanged cover having corresponding pendent hooks, the whole being constructed and arranged substantially as described to operate in the manner and for the purposes set forth.

No. 37,484.—AMOS C. BARSTOW, of Providence, R. I.—*Improvement in Metallic Burial Cases*.—Patent dated January 27, 1863.—This invention consists in making the surface of the lower shell in two planes, which meet at the point of greatest width, and the lid agreeing in form thereto.

Claim.—The method herein described of constructing metallic burial cases, by dividing the upper shell or covering lid from the lower shell, according to a line situated in two planes, forming an angle at that part of the case which presents the greatest width transversely.

No. 37,485.—AUGUSTUS A. BENNETT, of Cincinnati, Ohio.—*Improvement in Cartridge Boxes*.—Patent dated January 27, 1863.—This invention consists in operating automatically the cover of a cartridge box by one or more springs suitably located.

Claim.—The cartridge box A B, whose cover C D is made self-closing by means of one or more metallic springs H H', constructed, adapted, and operating in the manner described.

No. 37,486.—BENJAMIN S. BENSON, of Baltimore, Md.—*Improvement in Sounds for the Uterus*.—Patent dated January 27, 1863.—The invention consists in the combination in one instrument of a uterine sound and a porte caustic, whose limb is indexed in combination with a graduated slit in the tube as a measure of the amount of powder to be applied.

Claim.—First, the combination in one instrument of a uterine sound and porte caustic as described.

Second, the combination and arrangement of the tube A, piston E, index F, and graduated slit G, in the manner and for the purpose specified.

No. 37,487.—ISAAC BICKHART, of Harlan, Allen county, Ind.—*Improvement in Boot and Shoe Blacking Apparatus*.—Patent dated January 27, 1863.—The invention consists of revolving brush wheels with a yielding support for the boot.

Claim.—The revolving brush wheels E E, one or more constructed substantially as shown, in combination with the yielding foot-stands D D, arranged substantially as and for the purpose herein set forth.

No. 37,488.—JOHN C. BIRDELL, of West Marietta, Monroe county, N. Y.—*Improvement in Clover Thresher and Huller*.—Patent dated January 27, 1863.—The object of the invention is to complete the "getting out" of clover seed by one operation, and this is accomplished by placing a threshing concave above, and a hulling concave below, the seed being fed in over-shot. With this is combined hulling or roughened surfaces between the teeth on the cylinder, on the concave, and on the teeth; the ribs on the picking cylinder are on a perforated screen, to assist in separating the seed from the chaff, and the crank shaft arranged to operate the bolt at the rear of the machine.

Claim.—A rotating threshing and hulling cylinder with a threshing concave or arch above and a hulling concave or arch below, substantially as described, so as to thresh the seed from the straw and stalks, and hull it at one operation with one and the same cylinder.

Also, providing a toothed threshing cylinder with a rough or hulling surface between the teeth.

Also, in combination with a toothed threshing cylinder having a roughened or hulling surface between the teeth, a ribbed concave or arch, with a roughened or hulling surface on the face of the ribs, with grooves between the ribs for the threshing teeth of the cylinder to travel in or through, substantially as described.

Also, in combination with a picking cylinder, the ribs on a perforated, concave screen, to hold up the straw and stalks, and allow the bolls and seed to fall through the screen, and prevent the straw and stalks from dragging or carrying the bolls and seed across the holes in the screen.

Also, arranging the crank shaft to operate the bolt at the rear end of the machine when said crank shaft is also used to carry the conveying apron or belt K', substantially as described.

No. 37,489.—WILLIAM U. BOHM, of San Francisco, Cal.—*Improved Buckle for Waist Belt*.—Patent dated January 27, 1863.—This buckle consists of the usual rim and a rod behind it, (as it is worn,) which has holes for the entry of the teeth of a clasp, which is hinged to the rim, and opens forwards. Between the rim and the rod the belt is slipped, and the clasp being pushed down and fastened, retains it in position.

Claim.—The entire machinery of the buckle (with the exception of the rim) as set forth in the foregoing specification, together with the application and use of said machinery, to the purposes set forth in the petition and specification.

No. 37,490.—HOWARD C. BRISTOL, of Chicago, Ill.—*Improved Letter Envelope*.—Patent dated January 27, 1863.—There is one more section to this envelope than usual, which consists of a fair surface lap that covers the ordinary angular joints on the back of an envelope, and it is lapped over and fastened on the front. At the centre of the upper edge of the letter, a hole is left in the envelope, so that while the letter is exposed, the sealing or attachment of the stamp fastens it in its cover as well as secures the parts of the envelope together, and thus the letter is fastened as well as enclosed.

Claim.—First, a letter envelope having sealing laps b b, substantially as and for the purpose set forth.

Second, providing the body portion of an envelope with an opening or perforation as at d, so that when the letter stamp is placed over the same, a portion of said stamp will adhere to the inner sealing lap, substantially as and for the purpose described.

No. 37,491.—LEWIS B. BRUEN, of Brooklyn, N. Y.—*Improvement in Shot Cartridges*.—Patent dated January 27, 1863.—A casing being made of muslin, and filled with shot, it is dipped in collodion and dried in the air; the wads are attached to the cartridge before dipping, and dried with them, or afterwards attached by glue or cement.

Claim.—First, the method herein described of forming bird and buck-shot cartridges by dipping cases filled with shot in collodion, in the manner and for the purposes herein set forth.

Second, in combination with the above, the use of wads made in the manner and for the purpose set forth.

No. 37,492.—CLARK O. BUSH, Michigan Bluff, Placer county, Cal.—*Improvement in Water Elevators*.—Patent dated January 27, 1863.—This elevator consists of a series of larger buckets operated by a fall of water, and upon the same shaft which they pass over is another smaller set of buckets which elevate water from a lower to a higher level.

Claim.—First, the endless chains of buckets B and inclined troughs or conduits f, in combination with the endless chain of buckets A, when the latter is operated by the water lifted by the former, as specified.

Second, the curb H, splash boards c c, and inclined trough or conduit f, in combination with the endless chain of buckets A, when arranged to operate in the manner and for the purpose specified.

No. 37,493.—C. BYRNE, of Kingsville, Ashtabula county, Ohio.—*Improvement in Railroad Switch Lamps*.—Patent dated January 27, 1863.—The body of the lamp is double, forming an annular chamber, the air being admitted by holes through the outer plate, and the smoke discharged at a ventilator hole in the roof, so as to insure combustion of the mineral oil by a direct current of air; the oil-cup is supported upon springs, and surrounded by elastic packing to avoid concussion or jarring of the passing train, and the sliding window frames made double and practically air-tight so as to secure combustion of the mineral oil.

Claim.—First, constructing the body of the lamp practically air-tight with the double walls F F', and openings G and P and P', for the purpose specified.

Second, supporting the oil-cup and wick upon delicate springs, and surrounding the same with elastic packing, as and for the purpose set forth.

Third, the double grooves for the sliding panel for the purpose described.

No. 37,494.—JONATHAN S. CHATHAM, of Seneca Falls, N. Y.—*Improved Composition for Water Pipes, &c.*—Patent dated January 27, 1863.—After removing the inflammable portions of coal tar, the residuum is stirred up with clean sand so long as the tar will receive it, and composition thus obtained cast into the required form.

Claim.—The composition above described, consisting of the residuum of the burned coal tar and sharp sand, prepared and compounded substantially as and for the purposes specified.

No. 37,495.—HENRY N. DEGRAU, of Newburgh, Orange county, N. Y.—*Improved Device for Adjusting Wicks in Lamp Tubes*.—Patent dated January 27, 1863.—This invention consists of a pair of tongs with sharp forked ends, a spring at their point, and a sliding ring by which the wick in the narrow flat passage of a burner may be introduced, flattened, and adjusted.

Claim.—The implement or device constructed as herein shown and described, to wit, of a wire or rod bent so as to form two arms a a, and a spring b, with a slide c, placed on the arms, for the purpose set forth.

No. 37,496.—L. A. ENSWORTH and B. BARKER, of Williamsport, Lycoming county, Pa.—*Improved Machine for Edging Lumber*.—Patent dated January 27, 1863.—The lumber is fed endwise upon a bed, on each side of which is a circular saw; one in a fixed frame, and the other in an adjustable frame, so as to be set at any required distance from each other by the rack and pinion.

Claim.—The arrangement of the two saws E F, upon independent arbors C G, placed upon the same plane, opposite to each other, with an open space between them; the saw F being made laterally adjustable, all as herein shown and described.

Also, the combination of the two independent saws and arbors with the adjustable frame H, rack b, pinion I, frame N, and rollers L L M M, all in the manner herein shown and described.

No. 37,497.—A. H. EMERY, of New York, N. Y.—*Improvement in Founding*.—Patent dated January 27, 1863.—To secure the gradual cooling of the casting, it is enveloped with a casing of molten metal, a thin mould intervening between the casting and its metal envelope.

Claim.—The process of retarding the cooling of any part or portion of a casting during the process of founding by means of a casing or envelope of melted metal covering surrounding such parts and portion of the casting as may in any case be desired, and separated therefrom by a thin mould, substantially as and for the purpose herein described and set forth.

Also, the arrangement of the sleeve k, or its equivalent, with the coal barrel D, for the purpose of retarding the cooling of the sinking-head and chase of gun-castings, arranged substantially as and for the purposes herein described and set forth.

No. 37,498.—SAMUEL H. DUDLEY, of Milton, Litchfield county, Conn.—*Improvement in Dirt Scraper*.—Patent dated January 27, 1863.—The improvement in this scraper consists in attaching a transverse bar to the handles, and by a rod to the scraper, so as to catch the latter upon the draught hooks when upset, and prevent it falling flat on the ground and breaking the handles or accumulating dirt on the back of the scraper.

Claim.—The arrangement and combination of the bar B, and the rods P and P', with the bows H and H, or their equivalents, for the purpose and in manner as above set forth.

No. 37,499.—LEVI FLEISCHMAN, of Rochester, N. Y.—*Improved Device for Holding Clothes in Trunks*.—Patent dated January 27, 1863.—Affixed to the ends of the trunks, inside, are vertical guides, on which a bar with slotted ends is adjusted vertically and held down by pins. Underneath this bar is a spread, or cloth, with transverse slats, and this being placed over the clothes, they are packed down firmly and held so as to admit of other lighter articles being laid over without danger of being crushed when the trunk is turned upside down.

Claim.—The combination of the adjustable bar or bars B, guides C C, and pins d d, with a trunk or valise, when they are used in the inside of the same, for the purpose of packing clothes and holding them during transportation, the whole arranged and operating substantially as herein set forth. In combination with the bar B, the spread D, constructed and arranged substantially as specified.

No. 37,500.—PETER FONTAIN, New York, N. Y.—*Improvement in Gas Regulators and Purifiers.*—Patent dated January 27, 1863.—The invention consists in providing the enlarged double conical chamber with an outlet and stopper, by which the purifying materials contained in said chamber may be extracted, and fresh materials introduced.

Claim.—The opening or outlet D, (provided with a suitable stopper,) in combination with the chamber C and its contents, substantially as and for the purpose set forth.

No. 37,501.—LEONARD GEIGER, of Hudson, Columbia county, N. Y.—*Improvement in Breech-loading Fire-arms.*—Patent dated January 27, 1863.—The improvement consists in the arrangement of the breech-piece and hammer, which are both pivoted to the side plates of the lock chamber, and are retracted by backward vibration to cock and load. They are provided with shoulders so arranged that when the piece is fired the hammer shall impinge upon the rear of the breech-piece to brace and sustain it against recoil.

Claim.—Combining the swinging breech C and the hammer E, by means of suitable shoulders d e on each, in such a manner that the hammer is made to form a brace to brace and lock the breech against the back pressure consequent upon the explosion of the charge, substantially as herein specified.

No. 37,502.—W. O. GROVER, of Boston, Mass.—*Improvement in Sewing Machines.*—Patent dated January 27, 1863.—The invention consists of a clevis-shaped vibrating arm, which is pivoted in the centre of its bend, and oscillates vertically, the upper one of its extremities being furnished with a needle, and the other one being connected with the horizontal shaft immediately under the feed plate, and also with the driving mechanism.

Claim.—A long, bent vibrating arm, one of whose ends drives a needle in combination with a horizontal shaft arranged under the feed and actuating the feed when that same shaft is also connected directly to one end of such bent arm extending under the spot where the needle perforates the cloth, or nearly so, the whole arranged, connected, and acting substantially in the manner and for the purposes hereinbefore set forth.

No. 37,503.—STUART GWYNN, of New York, N. Y.—*Improved Steering Apparatus.*—Patent dated January 27, 1863.—The object of this invention is to bring an elastic force to bear upon the rudder, so that when the blade of it is struck by a cross sea, it shall not by its rigidity expose the rudder to fracture, or the helmsman to injury. This is effected by annular elastic springs on the shaft of the tiller screw, so that while the action of the prime mover is uniform, the motion of the rudder-head is modified by the degree of resistance.

Claim.—The mechanism herein described for imparting to the rudder-head the requisite motion according to the resistance to be overcome, so that while the action on the prime mover is uniform, the rudder-head will rotate with more or less speed as the resistance increases or decreases, substantially as set forth.

Also, the combination with the rudder-head of a pintle, extending upwards in line with the axis of the rudder-head and supporting said pintle by a suitable overhead frame, substantially as herein shown and described.

Also, applying the tiller to the rudder-head between two points of support thereof, said tiller being operated from a screw shaft having annular rubber springs arranged upon it substantially in the manner and for the purpose set forth.

No. 37,504.—NOAH E. HALE, of Nashua, Hillsboro' county, N. H.—*Improvement in Machines for Making Roving.*—Patent dated January 27, 1863.—The sliver passes through the trumpet mouth of a lever, and between a stationary and a gravitating jaw, which latter is hinged to the lever. From these, it passes to the draught rollers and is drawn to such an extent as to keep the tail of the trumpet-mouthed lever out of the way of collision with the arm of a rocker-shaft which rotates below. When a sliver breaks, the tail of the lever falls and arrests the revolution of the rocker-shaft, while other appliances are operated which turn the driving belt from the fast to the loose pulley, and stop the machine.

Claim.—The stationary and gravitating jaws c d, or their mechanical equivalent, in combination with the trumpet guide A or A', and a stop motion or mechanism connected therewith, and operating substantially in manner and for the purpose as specified.

Also, the combination of the crank S, the connecting rod R, or mechanical equivalents therefor, tri-armed lever K, latch-lifter L, and disk I, with tappets f g, the same being applied to the armed rocker-shaft H, one of the draught rollers and the latch of the belt-shifter, in manner and so as to operate substantially as specified.

No. 37,605.—FRANK HENRY, of Bridgeport, Conn.—*Improvement in Hemming, Tucking, and Folding Guide, for Sewing Machines.*—Patent dated January 27, 1863.—This guide is

attached to the foot-piece and slips back and forth so as to be adjusted to the desired width of the lap, tuck, hem, or seam.

Claim.—The combination with the hem-turner a b c, and foot-piece A, of the adjustable guide d, constructed with shank f, bar h, plate i, all substantially in the manner herein shown and described.

No. 37,506.—BENJAMIN J. C. HOWE, of Syracuse, N. Y.—*Improvement in Mica Chimney for Lamp.*—Patent dated January 27, 1863.—The thin lamina of mica is surrounded by a light frame of sheet metal, and then bent so as to be slipped into the grooves of two posts which form the uprights of a chimney frame. A similar lamina is fitted to the other sides of the posts, and oval rings above and below are slipped on and secured to the posts to complete the chimney.

Claim.—The oval base Fig. 6, the construction of the frame as described, and the translatable sheets of mica a a.

No. 37,507.—WILLIAM W. HUSE, of Brooklyn, N. Y.—*Improvement in Tobacco Presses.*—Patent dated January 27, 1863.—The tobacco is laid in cells in the rim of a wheel, the partition between the cells being sliding gates operated by a cam; the wheel is then rotated against a pressure wheel which presses the tobacco in the cells and slides in the partitions so as to be retracted by the cam and free the pressed plug.

Claim.—The combination of the wheel of troughs or cells, the radial sliding partitions forming the ends of the cells, the cams for operating the sliding partitions, and the pressure wheel for rolling and pressing the plugs of tobacco in the cells, substantially as described.

No. 37,508.—WILLIAM W. HUSE, of Brooklyn, N. Y.—*Improvement in Machine for Pressing and Cutting Tobacco.*—Patent dated January 27, 1863.—The tobacco is placed upon the feeding chain or endless carrier, and from thence is taken by two endless belts and transferred to the pressure wheel, which has a deeply recessed periphery; in this the tobacco is pressed by a roller which enters the recess and brings the required pressure upon it. After leaving the point of pressure it becomes detached, and being suspended is fed down between a cutting and a plain surface roller, where it is divided into pieces of the required length.

Claim.—The wheel trough, that is, the wheel flanches each side of its periphery, into which the slivers of tobacco are to be placed and compressed in combination with the two endless belts or equivalent rollers, for introducing the slivers of tobacco to the trough-like periphery of the wheel, and the pressure roller for compressing the tobacco after it has been introduced into the trough-like periphery of the wheel, substantially as and for the purpose specified.

Also, the endless feeding chain substantially as described, in combination with the trough wheel, the two belts or equivalent rollers for transforming the slivers from the feeding chain to the wheel trough, and with the pressure roller for compressing the tobacco into the wheel trough, substantially as and for the purpose specified.

Also, in combination with the wheel trough and pressure rollers, a cutting mechanism, substantially as described for cutting the compressed sliver of tobacco into plugs of the required length, as set forth.

No. 37,509.—WILLIAM W. HUSE, of Brooklyn, N. Y.—*Improvement in Machine for Drying Tobacco.*—Patent dated January 27, 1863.—This machine consists of an upright rotating spindle with an alternate skeleton shelf and an annular clamp. The green tobacco plants are laid on the shelf with their butts toward the spindle, and their tops projecting radially; the clamp is then placed on them like a wide hoop, which retains them in position; then another shelf and another hoop, and so on. The spindle is then revolved at a high speed and the moisture driven out by centrifugal force.

Claim.—The combination of a series of clamps with the rotating spindle substantially as described, for securing the stems of tobacco leaves to the spindle, that they may be dried by centrifugal action, as set forth.

Also, the series of shelves on which to place the tobacco substantially as described, in combination with the series of clamps and the spindle, substantially as described.

No. 37,510.—SAMUEL KEELER, of Lancaster, Penn.—*Improvement in Apple Mills.*—Patent dated January 27, 1863.—The invention consists in the form of the tooth, which has a shoulder on each side, the transverse section resembling a triangle erected upon a trapezoid whose widest parallel side forms the base of the figure.

Claim.—The combination and construction of the double or compound toothing of the crushing cylinders C D, made in the manner and for the purpose specified.

No. 37,511.—ALFRED, JOHN and CHARLES LAMB, of Jeffersonville, Sullivan county, New York.—*Improvement in Device for Operating Churns.*—Patent dated January 27, 1863.—The improvement consists in so arranging the operating devices of a churn as to impart a reciprocating and rotary motion to the dashers; it is accomplished by forming the upper part of the dasher shaft with a worm or screw which works in a nut in an arm projecting over the central axis of the churn, which rotates the dasher as it is raised by the hand lever.

Claim.—The combination of the sliding nut E and arm F with the bar G, lever I, screw D', and dasher C', in the manner herein shown and described.

No. 37,512.—JOHN B. LEAROCK, of Boston, Mass.—*Improvement in Back Sights for Fire-arms.*—Patent dated January 27, 1863.—A vertical frame is attached to the breech of the gun by a screw, and within this frame is a sliding block with an eye-piece. The sides of the frame are graduated to make degrees of elevation on one side, and the ascertained elevation for distances in hundreds of yards on the other side. The vertical motion is given by a single screw under the slide, the shank of the elevating screw passing into the hollow screw by which the sight is secured to the breech.

Claim.—The arrangement of a single elevating screw C within the frame A and its support or holding screw a, and so as to enable the slider or carrier B and its eye-piece D to be either elevated or depressed by the revolution of one screw, as described.

No. 37,513.—ALVIN S. LYON, of Lawrence, Mass.—*Improvement in Shuttle Drivers for Power Looms.*—Patent dated January 27, 1863.—The rocker at the foot of the picker-staff has a curved base, on which it oscillates, a side flange projecting downwards over the base has a diagonal slot in which a stationary pin works as the rocker vibrates.

Claim.—In combination with flanged rocker the diagonal slot B and the fulcrum pin S, or their equivalent, for the purpose specified substantially as described.

No. 37,514.—ANDREAS MAYER, of New York, N. Y.—*Improvement in Sugar Moulds.*—Patent dated January 27, 1863.—The improvement, which is fully described in the claim, consists in coating with tin or soft solder all the exposed edges and surfaces that are liable to rust by exposure to moisture.

Claim.—The application of the tin or soft solder to the top and bottom edges of the body of a sugar mould, and to the hoop and upper part of the cast-iron tip, and also to the rivets previous to connecting said parts, and in dipping their joints into molten tin or soft solder after the several parts have been united, substantially as and for the purpose specified.

No. 37,515.—JAMES C. MIX, of Terryville, Litchfield, Conn.—*Improvement in Locks.*—Patent dated January 27, 1863.—This padlock is constructed with a double notch on the shackle, into which projections on two tumblers or pairs of tumblers interlock. These are rotated towards each other by a spring and retained by a dog. The introduction of a key with its double ward through the ward plate, and its rotation between the tumblers, spreads them so as to release the shackle.

Claim.—First, the dog E and spring F, arranged respectively in relation with the tumbler catches C and shackle B, to operate as and for the purpose set forth.

Second, the ward plate G, in combination with the tumbler catches C, for the purpose specified.

No. 37,516.—JAMES F. and EDWIN P. MONROE, of Fitchburg, Mass.—*Improved Apple-Paring Machine.*—Patent dated January 27, 1863.—The turn-table through which the knife shaft projects, and by which it is carried around the apple, is rotated through the medium of a connecting rod by a cam-wheel which is operated by gearing from the hand-shaft. The effect of this connexion is to cause the turn-table to retrace its course after performing its effective stroke.

Claim.—The combination of the turn-table N with the cam wheel F, arranged and operating as described for the purpose specified.

No. 37,517.—CHARLES S. MORRISON, of Keokuk, Lee county, Iowa.—*Improved Steam Steering Apparatus.*—Patent dated January 27, 1863.—The invention is fully described in the claim, and consists of an auxiliary paddle-wheel near the stern propelling wheel, and with its axis at right angles thereto, so as to assist the vessel in obeying the helm.

Claim.—The use of a reserve paddle-wheel acting perpendicularly to the longitudinal axis of a vessel, and having its shaft above the water-line, in combination with ordinary rudders or steers; ordinary propellers and auxiliary engines acting directly upon the longitudinal shaft, the whole being arranged substantially in the manner and for the purpose set forth.

No. 37,518.—MORITZ PINNER, of New York, N. Y.—*Improvement in Ambulances.*—Patent dated January 27, 1863.—The novelty in this invention consists in the adaptation of a cooking stove and its accessories to a travelling carriage.

Claim.—First, the combination of a cooking stove with the body of a wagon, arranged and operating for use as an ambulance and kitchen, substantially as set forth and described.

Second, The combination of a cooking stove with water tanks and a wagon, arranged for use as an ambulance or locomotive kitchen, either separately or combined, substantially as set forth and described.

Third, an ambulance wagon combining the following features, to-wit: an ambulance, a medicine chest, a wagon, compartments for storing provisions, a cooking stove, and a baking oven, the whole arranged and operating substantially as set forth and described.

No. 37,519.—JOHN WYATT REID, of New York, N. Y.—*Improvement in Fortifications.*—Patent dated January 27, 1863.—The invention consists in constructing walls to resist shot, of solid blocks of iron locked together by cavities and projections; and further, in making walls of cast-iron blocks whose weight shall oppose an effective resistance to shot.

Claim.—Locking together solid blocks of metal to form fortification walls by means of corresponding projections and cavities on the opposite sides of the blocks, when the said projections and cavities are formed and arranged in the manner herein shown and described, to avoid injurious weakening of the blocks and prevent their displacement horizontally in any direction.

Also, the application of heavy masses of cast-iron in lieu of stones to form the battery fronts of forts, and to the re-enforcing of existing forts, in the manner substantially as set forth. The application of cast-iron in the form of plates or sheets is not claimed, but only in the form of masses or blocks, and where the purpose is to destroy the effect of the shot by the superior weight of the opposing masses composing the wall or casing.

No. 37,520.—HORACE RESLEY, of Cumberland, Md.—*Improvement in Explosive Shells for Ordnance.*—Patent dated January 27, 1863.—To avoid the explosion of the projectile until it has entered the desired distance into the object fired at, the charge is ignited by a hammer or hammers projecting from the body of the shell, which are pushed in when the piece is being loaded, and are projected by springs so soon as the shell leaves the muzzle of the gun, to be exploded when they come in contact with the object.

Claim.—The arrangement of the means or devices set forth for protecting the operating mechanism, and providing for the discharge when desired.

No. 37,521.—N. A. RHODES, of Waterbury, Vt.—*Improved Clothes-Wringer.*—Patent dated January 27, 1863.—This improvement is in the sliding jaw or adjustable clamp by which the wringer is fastened to the edge of the wash-tub; it consists of an angle-shaped piece of metal, one arm of which is slotted and ridged so as to bear a set screw and enter a groove on the side of the standard, and the descending arm is fastened by a thumb-screw whose end bears upon a circular socket-piece against the side of the tub.

Claim.—First, the combination of the sliding jaw D and its clamp screw B, with the screw C, or the equivalent thereof, as applied to the said part D, substantially as and for the purpose specified.

Second, the combination of the sliding jaw D and its clamp screw B with the screw E, or the equivalent thereof, as applied to the said part D, substantially as and for the purpose specified.

Third, the combination of the rib d and groove a, or the mechanical equivalent thereof, with the sliding jaw D, its clamp screw B, and the screw C, as applied to the part D, substantially as and for the purpose specified.

Fourth, the combination of the rib d and groove a, or the mechanical equivalent thereof, with the sliding jaw D, its clamp screw B, and the screw E, as applied to the part D, substantially as and for the purpose specified.

Fifth, the adjustable bearing or swivel pad, in combination with the sliding jaw and screw, substantially as shown and for the purpose described.

No. 37,522.—FRANCIS B. RICHARDSON, of Boston, Mass.—*Improvement in Elastic Bulb Exema Syringes.*—Patent dated January 27, 1863.—This improvement consists in a more effective compress for the neck of the bulb, in which it is drawn over the annular projection of the plug and firmly clamped by the shoulder and projecting flange of the screw cap.

Claim.—Improvement in a syringe connexion, the same consisting not only in having a bearing neck e, extending below the annular projection or shoulder b, or its equivalent, made upon the plug A, but in having the bulb neck D embrace the neck e, and the annular projection or shoulder b, and be compressed on the latter by the screw-cap C, substantially as specified.

No. 37,523.—EDWARD A. L. ROBERTS, of New York, N. Y.—*Improved Vulcanizing Machine.*—Patent dated January 27, 1863.—This vulcanizer consists of a chamber, for containing the requisite water and the goods to be treated, with a tightly fitting top, and a fusible plug to prevent explosion. The chamber is suspended in a furnace which surrounds it, and the heat below is derived from gas or spirit which is allowed to flow in graduated quantity from a reservoir hard by.

Claim.—First, the construction and arrangement of the vulcanizer, substantially as described, whereby the process of vulcanization is carried on and effected in the same vessel or chamber in which the water is contained.

Second, a plug or disk in combination with a vulcanized chamber, substantially as and for the purpose set forth and described.

No. 37,524.—HENRY A. ROE, of Madison, Lake county, Ohio.—*Improvement in Cheese Vats.*—Patent dated January 27, 1863.—The cheese vat is set into and supported by the upper edges of a water vat or tank. Underneath this water tank is a furnace and boiler, and the hot water of the latter communicates by means of pipes with the space around the cheese

vat, so as to place the latter in a hot-water bath. The orifices of the pipes which connect the boiler with the bath are controlled by valves which open downwards, and are operated simultaneously by a rod and bent arms. Inverted troughs, underneath the cheese vat, direct the course of the heated water as it rises from the boiler through the openings and distribute it to the more remote portions of the vat.

Claim.—First, the combination with the heater and vat of a valve or valves, arranged within the heater, and so as to close against the water in the vat or pipe or pipes leading from the heater thereto, substantially as specified.

Second, the employment of two or more valves in connexion with the heater and vat, arranged to control the supply to the vat on opposite sides of it, substantially as set forth.

Third, so arranging the valves which control the supply of hot water to the vat as that they shall close simultaneously, and when closed any pressure in the heater will act to prevent rather than force the circulation, and when released by handle *h*, rod *g*, and elbows *i j*, the valves will open by their own gravity, substantially as specified.

Fourth, the combination with the milk vat *F* and the slats *H H H* of the inverted distributing trough *J J*, substantially as and for the purposes specified.

No. 37,525.—C. G. SHAW, of Florence, Hampshire county, Mass.—*Improvement in Counter Shafts.*—Patent dated January 27, 1863.—The invention consists in fitting a loose pulley upon a countershaft, and connecting them by means of two bevel gear wheels; one of which is fast to the cone pulley, and the other to the shaft, with a third bevel wheel to transmit motion from one to the other. By this arrangement the shaft and the pulley are rotated in opposite directions; and a backward or forward motion of the pulley may be obtained by shifting the driving belt to and from a pulley fast to the shaft, and a pulley fast to the cone.

Claim.—The combination of the loose cone pulley with the shaft *A*, in the manner and for the purpose substantially as specified.

No. 37,526.—ELIAS SHOPBELL, of Ashland, Ohio.—*Improvement in Patterns for Cutting Boots.*—Patent dated January 27, 1863.—Around a central plate are a double series of plates, so arranged as to slide out by the traversing of pins in certain angular slots, and so combined together as to produce equal expansion and contraction of the corresponding parts simultaneously.

Claim.—The plate *A*, in combination with the pairs of plates *B B'*, *C C'* and *D D'*, with their respective slots and angles, producing the simultaneous movement of the several pairs of plates and the consequent unequal enlargement and contraction of the pattern, substantially as set forth.

No. 37,527.—ELIAS SHOPBELL, of Ashland, Ohio.—*Improvement in Pattern for Cutting Shoes and Gaiters.*—Patent dated January 27, 1863.—The patterns are calculated for the vamp and for the quarter. Each of them consists of four pieces so connected together and constrained by slots and pins to certain lines of motion as they are expanded and contracted, that they form a symmetrical shape of larger and smaller dimensions, being clamped at the desired point by a central thumb-screw.

Claim.—The vamp pattern with its articulation *c*, and the several slots governing the simultaneous and proportional extension of the pairs of plates *B B'*, *C C'*, constructed as specified, in combination with the quarter pattern, constructed as described, and having a corresponding and simultaneous proportional extension corresponding to that of the vamp pattern, as herein set forth.

No. 37,528.—M. B. STAFFORD, of New York, N. Y.—*Improvement in Window Sash Fastenings.*—Patent dated January 27, 1863.—By this improvement it is intended to lock two sashes together when closed, so as to prevent them from being opened from the outside. It consists of a pivoted bar attached to a plate on one sash, the said bar having a drop-latch which locks on a curved surface on a plate which is attached to the other sash.

Claim.—The pivoted bar *B*, provided with the notch or recess *c*, and having the bar *C* attached by a joint *d*, in combination with the plate *D*, provided with the ledge *f*, having inclined or curved surface *g g*, and the slot *h*, and also provided with the curved ledge *i*, all arranged as and for the purpose set forth.

No. 37,529.—JOHN STRASZER, of St. Louis, Missouri.—*Improvement in Lanterns.*—Patent dated January 27, 1863.—The novelty of this invention consists in the method of securing the upper part of the lantern to the bottom part which contains the oil and burner. The two are connected by a hinge upon which they open, and, when closed, are secured together by a catch.

Claim.—The combination of the hinge and spring-catch, when applied to lanterns, substantially as and for the purpose set forth.

No. 37,530.—BENJAMIN F. TABER, of Buffalo, N. Y.—*Improvement in Machine for Rossing Bark.*—Patent dated January 27, 1863.—In this machine the bark is fed in from the table to the cylinder, with the inner bark toward the cylinder; it is then carried down, by the projections on the latter, to the knife which removes the ross; and afterwards to the beater

where it is broken up into pieces suitable for grinding. The ross escapes under the yielding plate above the knife, which is adjusted to its work by levers clamped by set screws to the frame.

Claim.—First, the combination of the yielding spring pressure-plate *C* with the feed cylinder *B*, for the purpose substantially as described.

Second, the arrangement and combination of the rossing knife with the adjustable levers *I J K*, for the purpose substantially as described.

Third, the combination of the breaker *Q*, fingers *R*, and plate *O*, with the feed cylinder *B*, for the purposes and substantially as set forth.

Fourth, the combination of the spring flap *L*, with the pressure-plate *C* and feed cylinder *B*, for the purposes and substantially as set forth.

No. 37,531.—DAVID C. TALBOT, of Worcester, Mass.—*Improvement in Callipers.*—Patent dated January 27, 1863.—To one arm of the callipers is a bow or arc graduated in inches and fractions, and to the other an index finger so arranged that the index finger shall be at zero when the callipers are closed, and shall mark upon the vernier the distance between the opened fingers.

Claim.—First, the method of applying a graduated scale or measure attached to callipers or dividers, substantially as described.

Second, the movable hand or indicator *B*, attached to or moved by the arms of callipers or dividers, substantially as specified.

No. 37,532.—JOHN A. THROP and JOHN COX, of Three Rivers, St. Joseph county, Michigan.—*Improvement in Cultivators.*—Patent dated January 27, 1863.—This cultivator consists of a wheeled frame which is made adjustable as to width, carrying a central frame pivoted to a cross-bar; the cultivator share standards are suspended from the frame by pivots, and drawn by swivelled stay rods. The detail of the construction of the parts will be understood from the claim and illustrations.

Claim.—First, the arrangement of the shovel legs on pivots, in combination with a laterally adjustable frame, or its equivalent, swivelling connecting or stay rods and yielding conical or wooden pins, substantially in the manner and for the purposes described.

Second, the flexible or jointed frame *H*, or its equivalent, in combination with the swivelling stay rods *h*, legs *I I*, cross-bars *A' A'' A'''*, and the cultivator *A*; all constructed substantially in the manner and for the purpose described.

Third, adapting the cultivator to the double use of "seaming" and "hilling" by the combination of a stiff frame, a jointed, pivoted frame *H*, and adjustable steps or pins *a a*, substantially as set forth.

Fourth, the jointed frame *H*, in combination with a rigid frame, when the frame *H* is pivoted at its front ends and supported by a guide at its rear end, substantially as described.

Fifth, the arrangement of the stay rods *h* and the legs *I I*, in combination with a frame *H*, which turns on a different fulcrum from those on which the stay rods turn, substantially as set forth.

No. 37,533.—D. H. TUXWORTH, sr., of Baltimore, Md.—*Improvement in Kettles for Culinary Purposes.*—Patent dated January 27, 1863.—This is an arrangement for heating a stove for culinary purposes, by the use of a lamp whose chimney is conducted up through the kettle, thus forming a tube around it for the circulation of water; this circulation being kept up between the parts more remote from the heat, and the tubular portion around the chimney, by a bent tube *F*.

Claim.—First, the kettle *A*, provided with the tube *D*, in combination with the lamp chimney *E*, the latter being arranged with the tube *D*, to operate as and for the purpose set forth.

Second, the tube *F*, when used in connexion with the tube *D*, and lamp chimney *E*, and applied to the kettle *A* and tube *D*, as and for the purpose herein set forth.

No. 37,534.—E. W. VANDUZEN, of Hamilton Township, Warren county, Ohio.—*Improvement in Water Gauges for Steam Boilers.*—Patent dated January 27, 1863.—The invention consists in the arrangement of the parts of the chamber which encloses the index mechanism, so that the interior may be readily reached for examination or repairs. The index spindle which runs through the chamber is supported at its rear end by a screw which rotates in a removable cap.

Claim.—The combination of the valve *d* and cap *D* with the dial index spindle *a*, screw *c*, and rod *f*, all in the manner and for the purpose shown and described.

No. 37,535.—W. B. WADSWORTH, of Cleveland, Ohio.—*Improvement in Water Elevators.*—Patent dated January 27, 1863.—The improvements consist in the shape of the wheel, whose teeth enter the openings in the looped links; also in the tilted bar, governed in its motions by the staple-stop on the inside of the curb, which grasps the front edge of the bucket, draws it forward, and tilts the contents into the discharging spout.

Claim.—First, the toothed wheel, as shown and described.

Second, the wheel in combination with the chain *c b b f f d d*, substantially as shown and described.

Third, the tilter *g y*, in combination with the flat chain *c b b f f d d*, substantially as shown and described.

Fourth, the construction and arrangement of the curved tilter *g y* and stops *h h*, substantially as shown and described.

No. 37,536.—D. R. WARFIELD, of Muscatine, Iowa.—*Improvement in Gates*.—Patent dated January 27, 1863.—This gate is pivoted to an angular rail suspended from rollers which traverse a track, and is opened and closed by means of projecting arms or levers on each side, two of which are adapted to raise and open the gate, and the other two to depress and shut it.

Claim.—The employment of the centrally-pivoted double-angle rail *B*, in combination with the gate *A*, wheels *a a*, and levers *E F*, in the manner shown and described.

No. 37,537.—GEORGE WEEDON, now residing in New York, N. Y.—*Improvement in Knife-cleaning Machines*.—Patent dated January 27, 1863. Patented in England November 9, 1857.—This invention consists of a row of sockets into which the ends of the handles are placed; a hold-fast or bar clamping them down by pressure near the shoulder of the blade upon a board where the blades rest to be cleaned by a hand brush. The knives are reversed by raising the hold-fast, lifting a bar, moving it lengthwise, and depressing it again, which rotates the sockets containing the knife handles simultaneously.

Claim.—The combination of reversible holders, scouring board, and hold-fast, substantially as described and substantially for the purpose set forth.

No. 37,538.—SILAS WILSON, of Auburn, N. Y.—*Improvement in Condensing Tubes*.—Patent dated January 27, 1863.—These tubes are made with a curved passage lined with glass.

Claim.—First, constructing the tube with a curved passage substantially as and for the purpose specified.

Second, lining the tube *B*, with a curved piece of glass tubing *A*, substantially as described.

No. 37,539.—ALBERT WINTON, of Frederick county, Md.—*Improvement in Water-Wheels*.—Patent dated January 27, 1863.—The improvements relate particularly to the form and arrangement of the buckets of a turbine water-wheel and the surrounding gate, and chutes or inlets; all of which are fully described in the claims.

Claim.—First, the construction of a turbine water-wheel *b b b e e e e* formed with a close, horizontal diaphragm or partition *c c* and hub *d d*, the buckets or floats *g g g g*, whose outer, vertical edge, longitudinally, is slightly curved, as at *h h h*, said buckets or floats arranged or standing relative to the centre or axis of the wheel at an angle of 14° , and whose lower part is the arc of a quarter-circle, as at *i i i*, and continuing sloping downwardly at an angle of 22° , as at *j j j j*, and likewise inclining outwardly at an angle of about 34° , as at *K K K K*, figures 1 and 4, so that the inflow of water may be received from and in the direction substantially in the manner as set forth and described.

Second, the cap covering *t t t t t* formed with a circular rabbet or shoulder *u u u u*, and the suspending sleeve or hollow column *x x x x x* with the adjustable step or casing collar *x y z a'' a'' a''*, combined and arranged substantially as shown in figures 1 and 5, and as set forth.

Third, the mode of suspending the wheel through means of the adjustable collar *b'' b'' b'' b'' c''*, as shown in figures 1 and 5, and as set forth and described.

Fourth, the construction of the peculiar surrounding adjustable gate *f' f' f' f' f'*, *g'' g'' g'' g''*, formed with the chute guides *h'' h'' h'' h''*, figures 1 and 4, substantially as set forth and described, and in combination with the wheel, as shown in figures 1 and 4.

Fifth, the special arrangement of the vertical chute guides *K'' K'' K'' K''* at the angle of 13° , and when so arranged around the circumference of the wheel and buckets thereof as to divide the inflow of the main volume of surrounding water into numerous small columns, one-third greater in number than the number of buckets, and whereby the said columns strike the surface of the buckets nearly or quite at right angles thereto, substantially as in the manner set forth and described.

No. 37,540.—HOMER WRIGHT, of Pittsburg, Pa.—*Improvement in Lamp Burners*.—Patent dated January 27, 1863.—This invention is a contrivance for getting at the wick of a lamp without removing chimney or burner; and consists in bringing the wick-tube so that it may be inclined to an opening or doorway in the side of the burner chamber while it is examined and trimmed. The door is retained shut by catches, and these being retracted are made the handle by which the burner is canted over; the catches being connected to the burner by rods. The shaft of the wick-raiser has a suitable slot for it to travel in as it follows the motion of the wick-tube, to which it is attached, and the burner is held in the open or closed position by a lip.

Claim.—First, arranging the wick-tube *B* in such a manner that it may be canted or inclined and its upper end brought in or made to project through an opening *h* in the burner, substantially as and for the purpose set forth.

Second, the hinged socket *C*, in combination with the plate *D*, door *E*, and slotted plates *e e*, arranged as shown, and used in connexion with and applied to the wick-tube *B* to operate or adjust the latter, as and for the purpose specified.

Third, the lip *j* at the lower end of the opening *h* in the burner, in connexion with the slots *k l* in the plate *D*, for the purpose of retaining the wick-tube *B* in the two positions described.

No. 37,541.—AMOS H. BOYD, of Medway, Mass., assignor to Himself and JOHN ORVIS, of West Roxbury, Mass., JAMES J. COBB, of Boston, Mass., and JOHN M. STERLING, of Cleveland, Ohio.—*Improved Manufacture of Braid*.—Patent dated January 27, 1863.—The claim in this case is to the new manufacture; the devices by which it is produced are the subject of letters-patent, April 2, 1861, No. 860. The mode of construction is by employing a sewing machine having the usual mechanism for forming a seam, and in connexion therewith certain devices by means of which one or more cords or braids are interwoven with the threads of the sewing.

Claim.—The new manufacture called "Amosine braid," constructed substantially as described.

No. 37,542.—NATHAN COPE, of Cincinnati, Ohio, assignor to EZRA COPE, of the same place.—*Improvement in Giffard's Injector*.—Patent dated January 27, 1863.—In this apparatus the pipe which in the Giffard injector is only used as a waste-pipe is put to another use, except when starting the injector, namely, to carry a secondary supply of water to the point known as the "break" of the injector, where the injection current leaves the aperture and passes to the receiving nozzle. The water coming from the injection nozzle surrounds a jet of steam from which it receives its momentum, and, causing a partial vacuum around it as it issues, takes up a portion of the secondary supply mentioned and carries it to the boiler. The secondary supply-pipe has a three-way cock by which it is made to act as a waste when desired.

Claim.—First, the described arrangement of the secondary water supply to the Giffard injector, as set forth.

Second, the supplying of a portion of the water of a boiler-feeder by a jet of water that has momentum imparted to it by a jet of steam, said water jet acting upon the water of the secondary supply, as described.

Third, the waste-pipe *K*, in combination with secondary water supply *G*, which may be opened or closed at pleasure, for the purpose of regulating the action of the injector, substantially as and for the purpose set forth.

No. 37,543.—JEDEDIAH LEAVENS, of Norwich, New London county, Conn., administrator of the estate of WILLIAM R. CROCKER, late of the same place, now deceased.—*Improvement in Machinery for Cutting Corks and Bungs*.—Patent dated January 27, 1863.—In this machine the cork is placed in a rotating wheel in recesses adapted for the rough piece to be operated upon; from this it is carried by a pair of gripping spindles which grasp it by its parallel surfaces and carry it endways to a position where it is rotated, and at the same time has its bevelled surface cut by a revolving wheel. The mandril upon which it moves is adjustable longitudinally and the rotating head carrying the cork blanks is revolved or held in position by ratchets and dogs, or pawls.

Claim.—In combination with a rotating knife, the gripping and rotating apparatus which feeds the corks to the knife, substantially as described.

Also, the feeding wheel *L* for the purpose of feeding the corks to the gripping spindles, substantially as described.

Also, in combination with the feeding wheel *L*, the mechanism described, or its equivalent, for turning and holding the feeding wheel.

No. 37,544.—JARVIS DAVIS, of Buffalo, N. Y., assignor to PATRICK SMITH, of the same place.—*Improvement in Breech-loading Fire-arm*.—Patent dated January 27, 1863.—The improvement consists in a spring hook hinged to the under side of the hammer, which in firing enters a recess under the breech, and hooks behind the flange of the cartridge, so as to retract it in the act of cocking the gun. A sliding abutment closes the breech, and is operated by being pivoted to the vibrating guard lever.

Claim.—First, the combination of the spring hook *G F* with the hammer *E*, the said spring hook being connected to and operating with the hammer, for the purposes and substantially as described.

Second, the sliding abutment *J* having a slot *j'* therein, when arranged and used as described.

Third, the recess or chamber *i* made in the breech, for the purpose and substantially as set forth.

No. 37,545.—GEORGE S. FAULKNER, of Stafford, Tolland county, Conn., assignor to O. T. EARLE, of Springfield, Mass.—*Improvement in Steam Valves*.—Patent dated January 27, 1863.—This valve is capable of being moved longitudinally by the direct action of the steam upon it, and depends upon intermediate mechanical devices for the necessary circular motion by which the steam is supplied and exhausted. It consists of a cylindrical chamber or steam-

chest having suitable ports, with a hollow cylindrical valve fitted therein and provided with ports, the said valve being all cast in one piece. The form and construction will be best understood by reference to the drawings.

Claim.—First, the hollow cylindrical valve I, having the several ports arranged and combined and operating substantially in the manner and for the purpose described.

Second, a steam chest constructed with the ports D E P^{'''} and G H, and with a straight cylindric bore, in combination with a hollow cylindric valve with the ports described, and fitted into said chest so that a steam joint, practically, is formed, substantially as set forth.

No. 37,546.—B. J. GOULLIQUOUD, of Paris, France, assignor to SOLOMON and ADOLPH OTTENHEIMER, of New York, N. Y.—*Improvement in Weaving Corsets.*—Patent dated January 27, 1863.—Patented in France July 4, 1863.—This invention is designed to provide for weaving fabrics with gores or gussets, so as to make them fit the person. By the use of the jacquard loom the warps can be so raised and depressed as only to weave at one side, thus forming a gore which, with the ordinary shuttle, would leave a loose thread. This shuttle pays out its thread near one end, and hence when thrown in one direction it unrolls but little, and leaves no loose thread in the warp.

Claim.—A lay and shuttle boxes formed substantially as specified, in combination with a shuttle that delivers its thread at or near one end, and is in length about one-third of the breadth of the lay, whereby the shuttle when thrown in one direction shall cause little or no thread to unroll from the bobbin, for the purposes and as specified.

No. 37,547.—B. J. GOULLIQUOUD, of Paris, France, assignor to SOLOMON and ADOLPH OTTENHEIMER, of New York, N. Y.—*Improvement in Machine for Weaving Corsets.*—Patent dated January 27, 1863.—Patented in France October 6, 1860.—The invention consists in the peculiar construction of a sectional take-up roller, in which the respective sections are connected by sleeves to gearing or pulleys, by which said sections are moved so as to take up the portions of the cloth as woven and keep the edge of the fabric straight with the lay as the gores or gussets are woven.

Claim.—A series of sleeves *a'* surrounding the shaft *a*, and receiving the sections of the take-up rollers and the gears or pulleys for attaching them at the respective ends of said sleeves, as and for the purposes specified.

No. 37,548.—GUSTAVUS A. JASPER, of Charlestown, Mass., assignor to THE UNION SUGAR REFINERY, of the same place.—*Improvement in Purifying and Cleansing Sugar.*—Patent dated January 27, 1863.—The invention consists in introducing into the mass of sugar in revolution fine jets or streams of sirup under pressure, in order to avoid melting of the crystals, and to expedite the passage of the cleansing liquid through the mass.

Claim.—Combining with process of cleansing sugar by centrifugal action in the centrifugal machine, a means or process of forcing the cleansing liquid or sirup in one or more fine jets or streams under high pressure or velocity against the mass of sugar in revolution, the whole being substantially as described.

No. 37,549.—ALEXANDER MAJOR, of Lebanon, Penn., assignor to Himself and WM. M. MAJOR, of the same place.—*Improvement in Grain and Straw Separator.*—Patent dated January 27, 1863.—The shaking shoe upon which the grain and straw are separated is made in two pieces with a longitudinal partition, and by means of a two-throw crank these are alternately raised and depressed, which, in connexion with the notched bars projecting from the floor of the shoe, gives an undulatory movement to the straw, causing the grain to be dislodged.

Claim.—Subjecting the straw to a longitudinal and a lateral undulating motion, along and across a stationary partition, by means of a vibrating apron made in two or more sections, and operated substantially as set forth.

No. 37,550.—JOHN A. PIPO, of New York, N. Y., assignor to Himself and SAMUEL S. SHERWOOD, of Acquackanonk, N. J.—*Improvement in Machine for Making Ruffles.*—Patent dated January 27, 1863.—The object of this invention is to sew a ruffle between two pieces or folds of cloth by a simple seam; it is accomplished by three guides, one for the ruffle and one for each piece of cloth between which the ruffle is sewn, a pawl which forms the ruffling as the work is fed through and sewn by the sewing machine. When the ruffling is secured between the folds of the same cloth a single guide may feed the cloth to the machine.

Claim.—The combination with a sewing machine of the guide 6, the guides 4 and 5, or a double guide in their place, intended to form two folds of a single piece of cloth, and the pawl 7, substantially as described.

No. 37,551.—FRANK P. SLOCUM, of Brooklyn, N. Y., assignor to SAMUEL W. SLOCUM, of same place.—*Improvement in Revolving Fire-arms.*—Patent dated January 27, 1863.—This improvement consists in a method of loading the cylinder in a revolving fire-arm without having the bore extend through to the rear, a portion of the side of each chamber being made movable like a lid, to admit the cartridge sideways and to allow of the retraction of

the case. These lids are held closed by an encircling ring which slips on the cylinder between stops on the case, which limit its motion, and by the retraction of the ring the lids are freed so as to be removed for loading the chamber.

Claim.—First, the cylinder constructed with lids *b b* to its several chambers, opening in such manner as to permit the cartridges to be introduced, and the discharged cartridge cases to be taken out sideways, and with a closed or solid breech, substantially as specified.

Second, the ring C applied in combination with the cylinder and the lids *a a* of the chambers, substantially as and for the purpose specified.

Third, the combination with the ring C' of one or more stops *j k* in the frame, substantially as and for the purpose specified.

No. 37,552.—ALPHEUS SOUTHWICK, of Ballardvale, Mass., assignor to the WHIPPLE FILE MANUFACTURING COMPANY, of same place.—*Improvement in Machines for Cutting Files.*—Patent dated January 27, 1863.—Upon a bench is a pivoted platform and standard supporting a sliding frame, which is raised vertically by a feed-screw; upon this frame is pivoted a vibrating block on which the file blank is keyed. A cutter-head is vibrated so as to strike the blank which is held firmly between a back and a face plate. The obliquity of the cut is determined by the rotation of the block in the frame and the force of the blow of the cutter by a wedge-shaped rod which raises with the blank.

Claim.—First, the pivoted or vibrating block L, in combination with the sliding frame or box K, operating substantially as described.

Second, the swinging frame F, with the weighted rod G, or its equivalent, for holding the blank up to the face-plate E, substantially as set forth.

Third, the standard C and platform D pivoting on the centre *c*, and made adjustable in the manner substantially as specified.

Fourth, the device for regulating the blow of the cutter *r* as the feed proceeds, viz.: the wedge-shaped rod P, which is raised with the blank *b*, and the tapering block or wedge *w* for lowering the top *r*, substantially as set forth.

Fifth, the piece *a''* inserted in the face-plate E for the purpose stated, and in the manner substantially as described.

No. 37,553.—SAMUEL B. VANCE, of New York, N. Y., assignor to MITCHELL, VANCE & Co., of same place.—*Improvement in Coal Oil Lantern for Railroad Cars, &c.*—Patent dated January 27, 1863.—This lamp is constructed with a perforated conical roof above the burner, and the cone enclosed within a chamber having a draught tube at its upper end, and also an annular opening around its lower edge, for the admission or escape of air; so that whether the draught be upward or downward, the exit may be free and the protected flame be undisturbed.

Claim.—The perforated cone E, in combination with the chamber F and draught chimney F', applied to the lantern A, as and for the purpose set forth.

No. 37,554.—MILTON D. WHIPPLE, of Cambridgeport, Mass., assignor to the WHIPPLE FILE MANUFACTURING COMPANY, of Ballardvale, Mass.—*Improvement in Machines for Cutting Files.*—Patent dated January 27, 1863.—In this machine the file blank is fed upwards by a screw through a central rest-block and jaws or nippers, and all of its faces cut by separate cutters simultaneously. The cutter-heads are mounted on vibrating arms, which are operated by cam-faced wheels simultaneously rotated.

Claim.—The central rest or block B, with its jaws or nippers D D' for holding the file blank, in combination with the feed mechanism for feeding the blank, and the several cutters X, each of which cuts one face of the file during a single feed, substantially as specified.

No. 37,555.—WILLIAM R. BARNARD, of Waterbury, New Haven county, Conn., assignor to Himself and H. G. BLACKMAN, of same place.—*Improvement in the Mode of Uniting Metal Surfaces.*—Patent dated January 27, 1863.—The object of this invention is to unite metallic surfaces by a rivet passing through the outer or thinner body and into a dovetailed recess or hole in the larger or inner body of metal; so that in the act of riveting, the inner end of the rivet will batter up and spread, filling the hole, and consequently resisting removal. In the case of marine architecture it contemplates an intervening course of wood.

Claim.—The new and improved method of uniting metallic sheets or plates, by means of metallic rivets combined with simple apertures in the outer facing sheets, and interiorly enlarged cavities in the underlying plates of metal, all substantially in the manner and for the purpose herein set forth.

When my invention is used for the purpose of protecting the hulls of iron-plated vessels, I also claim the introduction of wooden strips *y y*, Fig. 4, in combination with the iron strips *z z*, the iron surface D, and the riveted metallic facing B, in order to obtain a uniform exterior surface, substantially in the manner herein set forth.

No. 37,556.—WILLIAM BREITENSTEIN, of New York, N. Y., assignor to FISCHER & Co., of same place.—*Improvement in Looms for Weaving Corsets.*—Patent dated January 27, 1863.—This improvement consists in appliances and arrangements for weaving corsets or

other irregularly shaped articles or fabrics without interruption, by a Jacquard power-loom with a peculiar divided filling-tightener or thread-catcher, by means of which the adjustments on the cloth cylinder and the formation of the waves in the fabrics are performed regularly and gradually as required.

Claim.—First, the employment in looms of a take-up mechanism which takes up portions of the breadth of the cloth, independently of the other portions of the breadth, in the manner substantially as herein specified.

Second, regulating or determining the action of the several parts of such irregular take-up by the differing force of the impact of the lay on the different parts of the breadth of the cloth, in the manner substantially as herein set forth.

Third, the employment in a loom of a multiple roller substantially as herein described and represented by K K L, for the purpose set forth.

Fourth, imparting a yielding force to the several sections of such roller so as to maintain a constant, or nearly constant, tension on all parts of the breadth of the cloth during the weaving of corsets and the like irregular articles, substantially as specified.

Fifth, the combination of suitable pawls K' with the ratchet wheels K and shaft L, and frictional connexions n, or their respective equivalents, for the purpose herein set forth.

Sixth, the employment in looms for weaving corsets and other irregular cloth of the filling stretcher, operating substantially in the manner and for the purpose herein set forth.

Seventh, controlling the operation of the filling stretchers B R, by the movement of the stop W, or its equivalent, substantially as and for the purpose herein set forth.

No. 37,557.—CHARLES W. STAFFORD, of Burlington, Iowa.—*Improvement in Projectiles for Ordnance.*—Patent dated January 27, 1863.—This projectile is formed of a central cylindrical bolt A, with a forward cutting face. Around this is a casing of wood secured by a metallic cap G on its forward end, and a metallic disk C on its rear end, having a projection screwed into the rear end of the central bolt, which is charged and exploded by a cap through a vent hole at the forward end of the charge by the percussive force of the rearward action of the cap C as the bolt pierces the body penetrated. The packing at the rear of the projectile is attached to a boss at the rear of the disk C.

Claim.—First, a sub-calibre shot or shell formed with a cutting face of iron or steel, and surrounded with a cylindrical casing of wood or other light material adapted to the bore of the gun, and formed, applied, and secured in any manner substantially as herein set forth.

Second, the cap C, employed in the manner described, to secure the rear end of the casing B, support, and guide, the rear end of the projectile within the bore, and afford means for the attachment of the packing ring D.

Third, the cap G, employed in the manner described, to secure the forward end of the casing B, support and guide the front of the projectile within the bore, and effect the explosion of the charge by resistance against the surface of a body penetrated by the bolt A.

No. 37,558.—WILLIAM FIELD, of Providence, R. I.—*Improved Ice Creeper.*—Patent dated January 27, 1863.—This improvement consists of a heel plate and a downwardly projecting caulk from the forward part of the boot heel; the whole being held in position by a strap across the instep.

Claim.—In combination with the bar A, ears a a, and strap E, or any substantially equivalent means of attachment to the heel of the boot or shoe, the claw C, constructed in the manner described, with a double row of teeth b b, to prevent forward, backward, and lateral slipping, and a spur D projecting upward through or above the bar A, and adapted to penetrate the heel, as hereinbefore explained.

No. 37,559.—STEPHEN M. ALLEN, of Boston, Mass.—*Improved Manufacture of Felt.*—Patent dated February 3, 1863.—Under this invention long, vegetable fibres are broken into short lengths by straining them between rollers or other suitable means, which will leave their ends in a stranded or brush-like condition, adapting the fibres to interlace and cohere under the felting process, and also to receive and retain dyes or any other solution it may be desired to apply thereto.

Claim.—Combining ordinary felting materials like fur, wool, &c., with a short fibre made or reduced in such a manner from long staple fibrous materials like flax, hemp, jute, silk, china grass, and similar substances, as to have the peculiarities hereinabove described, whereby, when so combined, they can be felted together by any suitable felting process.

No. 37,560.—DWIGHT BARCOCK, of Seneca Falls, Seneca county, N. Y.—*Improved Bedstead Fastener.*—Patent dated February 3, 1863.—This invention consists in a double pointed coupling hook for securing the rails to the posts, adapted to be used indifferently at either of the four corners of the bedstead.

Claim.—As a new article of manufacture, the coupling hook C, provided with the double points d d', for use on the opposite sides of the bedstead, substantially as described.

No. 37,561.—JOHN M. BATCHELDER, of Cambridge, Middlesex county, Mass.—*Improvement in Bank Notes.*—Patent dated February 3, 1863.—The object of this improvement is to

No. 37,556.—WILLIAM BREITENSTEIN, of New York, N. Y., assignor to FISCHER & Co., of same place.—*Improvement in Looms for Weaving Corsets.*—Patent dated January 27, 1863.—This improvement consists in appliances and arrangements for weaving corsets or

prevent the successful alteration of the denomination of a bank note by making a series of numbers to extend across the bill, or an embossed space with a series of lines or rays converging on the number, which indicates the value; also by making the number in the series and the denominational figure of the bill of the same color.

Claim.—The fixed scale or column of figures, as 1 2 3 5 10, occupying the whole breadth of the bill, or extending from side to side of a border or embossed space, in combination with a series of lines, marks, or rays radiating from that figure of the scale that represents the denomination or value of the bill.

Also, the combination of a single colored figure of the scale, with the denomination figure of the bill made of the same color, substantially as herein described.

No. 37,562.—ANSON and EBENEZER B. BEECHER, of New Haven, Conn.—*Improved Machine for Making Lucifer Match Splints for Dipping.*—Patent dated February 3, 1863.—The invention consist in the construction and arrangement of a series of devices, by which the match splints are taken one at a time from the hopper by a grooved cylinder, and fed between the folds of a revolving binding tape or band, forming a spiral frame of match splints for dipping.

Claim.—First, the employment of a flexible binding tape or band in combination with a drum adapted to be rotated by a mandrel and removed therefrom, substantially as described, as a means of forming a spiral frame of match splints for dipping, substantially as hereinbefore set forth.

Second, in combination with a frame-drum moved by friction, the endless band and pressure roller, or equivalent feeding mechanism, for the purpose of holding and paying out the flexible binding tape to the frame, substantially as described.

Third, in combination with the frame-drum, binder, setting, and feeding mechanism, the friction drag, or its equivalent, for the purpose of stopping the frame when the feeding and setting mechanism is disconnected from its motive power.

Fourth, the receiving cylinder grooved across its periphery with grooves suitable to take in and hold only a single match splint, each substantially as described.

Fifth, the wire brush, or its equivalent, in combination with the receiving cylinder, substantially as described.

Sixth, in combination with the setting wheels and receiving cylinder, the count wheel, substantially as described.

Seventh, the setting wheels, in combination with the frame-drum and binding tape, substantially as described and substantially for the purpose of setting the splints in the coils of the binding tape, as set forth.

Eighth, in combination with the feeding and setting mechanism, the clutch and system of levers, or their equivalents, whereby the frame is stopped when splints are not supplied at the proper time, and set in action again by the splint itself, substantially as described.

No. 37,563.—GIOVANNI CASELLI, of Florence, Italy.—*Improvement in Telegraphic Apparatus.*—Patent dated February 3, 1863.—This telegraphic apparatus is designed to produce colored letters or characters upon white paper direct by the line current without any local battery or relay, and from original writing in ordinary ink; to transmit despatches of the same size as the originals or reduced, retaining the characters of the original writing; to transmit different messages simultaneously through a single line wire; to reproduce arbitrary characters by electro-chemical action. The machinery for producing these effects, and the manipulations involved, do not admit of a brief description.

Claim.—The combination of the spring u and the micrometric screw V', with the pendulum of the regulator P'', substantially in the manner herein shown and described.

Also, the employment of the marking device, consisting of the oscillating lever y, screws b b', slides d' d', styles v v', and tablets t t, or their equivalent parts, combined and operating together, substantially as herein shown and described, with the pendulum A B, as set forth.

Also, the employment of the copying device, consisting of the segment rack s, bar h i, levers k' k', styles v v' and intermittent drum A B, or their equivalent parts, combined and operating together substantially as herein shown and described, and the pendulum A B, as set forth.

No. 37,564.—H. CASSIDY, of Putnam, Muskingum county, Ohio.—*Improvement in Corn Planters.*—Patent dated February 3, 1863.—A central beam with handles and a pair of side beams, supported by wheels, and each carrying a furrower and a covering share; before the covering share is a hopper with a reciprocating slide, worked by the wheels, on which the machine runs. This hopper in its spout is divided by longitudinal partitions, so as to drop the grains of corn a little distance apart in the hill.

Claim.—The combination of the chambered hoppers I, spring slides J, wheels E, shares G H, and side beams A, with each other and with the central beam C, all in the manner and for the purpose herein shown and described.

No. 37,565.—J. M. CONNELL, of Newark, Licking county, Ohio.—*Improvement in Explosive Projectiles.*—Patent dated February 3, 1863.—The invention consists in the exterior ar-

rangements for securing the expansion of the packing at the time of explosion. Starting from the centre of the hemispherical rear end of the ball are grooves or flutes, which become shallower as they advance towards the centre of the length of the ball; at about this point there are inclined beads or ribs on the projections between the flutes, cast solid with the shell; an annular packing of lead is placed around this portion of the ball, and the effect of the explosion is to lead the gases underneath the lead packing and drive the lead into the rifling of the piece; the effect of the inclined rib before and the explosion behind being to jam the packing closely and expand it.

Claim.—First, expanding the packing *l* by a combination of the force of the expanding gas and of the resisting action of separated incline planes, substantially as and for the purposes set forth.

Second, the inclined beads or ribs having flutes between them, in combination with a loosely-fitted expansible seat, substantially as and for the purpose set forth.

No. 37,566.—J. M. CONNELL, of Newark, Licking county, Ohio.—*Improvement in Percussion Exploders for Shells.*—Patent dated February 3, 1863.—The invention consists in hanging the plunger upon a rod or stem in the rear of the screw plug, so that the lateral concussion shall produce a leverage impact of one of the percussion caps against the rear of the screw plug.

Claim.—First, suspending a plunger upon a projecting stem *b* of the screw plug *A*, in the manner and for the purpose set forth.

Second, so applying a shell-exploder to a shell that when the latter strikes obliquely, or sidewise, the said "exploder" shall be ignited by a leverage impact against the rear of the screw-plug, in the manner substantially as described.

No. 37,567.—JOHN H. COOPER, of Philadelphia, Pa.—*Improvement in Door Latches.*—Patent dated February 3, 1863.—The latch consists of a vibrating tumbler, whose axis is vertical, and which has its motion inside of a casing; it is operated by a button or projection on the sliding shank of the door knob to open, and by a spring to close; in the former case it is withdrawn from contact with the catch on the door jamb, and in the latter interlocks therewith.

Claim.—The latch *L*, in combination with the knobs *k'* and *k''* and shank *A*, when the latch turns on an axis parallel to that of the door, and when the latch is opened by pushing or pulling the knobs in the manner described.

No. 37,568.—DAVID S. CROSS, of Cincinnati, Ohio.—*Improvement in Car Brakes.*—Patent dated February 3, 1863.—The improvement relates to that class of brakes in which those of a whole train are all operated by the engine and are under the control of the engineer.

A sleeve carrying a clutch and windlass runs freely on the axle of the locomotive, and is slipped along the axle by means of a brake lever and an arm which engages a collar on the sleeve. The meshing of these clutches causes the windlass to revolve and winds up a chain which drags the rubber against the wheels, being fastened to the rubber bar. The chain is prolonged to the next car passing under a roller at the knuckle joint of a descending toggle which, as the cars push forward upon the checking of the locomotive, brings an additional strain upon the brake chain and equalizes the pressure among the adjacent brake rubbers. On the release of the brake lever the sliding clutch is withdrawn and the windlass is released by the raising of the pawl.

Claim.—First, the arrangement of driving axle *G*, sliding and revolving windlass *F*, ratchet and pawl *H K*, clutch *I J*, armed shaft *L M M'*, and self-releasing attachment *N n'*, in the described combination with the brake chain *E*, the whole being combined and operating as and for the purposes set forth.

Second, in the described combination with the above the cam-headed lever *O* connected to the pawl, and operating substantially as set forth.

Third, the provision of toggle *P Q* and rollers *T T' T''*, or their equivalents, in the described combination with the consecutive cars, and with the main brake chain *E*, for the equalization of tension of the said chain, in the manner set forth.

No. 37,569.—AUGUSTUS B. DAVIS, of Philadelphia, Pa.—*Improved Weighing Apparatus.*—Patent dated February 3, 1863.—The object of this invention is to take a series of weights of various amounts, if necessary, without removing each from the platform as it is weighed; as, for instance, in proportioning amounts of material to be used in combination, as ore, coal, and stone, each in a determinate quantity. The supplementary graduated beams are hung below the primary one and are brought into action as needed by their appropriate small levers, the stirrup suspended from the primary graduated beam being provided with knife-edges for their reception.

The required beams having been brought into service, and the weights adjusted to the proper notch, the doors are closed and the proof of the weight of the loads, wheeled on to the platform, can be read by traversing studs which work vertically in slots in the casing of the machine.

Claim.—Firstly, a graduated beam *E* connected to the platform of a scale, in combination with any desired number of supplementary graduated beams, so arranged that, by the appliances herein described, or any equivalent to the same, any one or all of the said supplementary beams can be connected to or disconnected from the main graduated beam, for the purpose specified.

Secondly, arranging the graduated beam *E* and its supplementary graduated beams within a box or casing, furnished with doors and locks, substantially as described, and having such openings that, while the attendant can observe the movements of any of the supplementary beams from the outside of the casing, he cannot gain access to the beams themselves or gain a knowledge of the weights determined by the beams.

Thirdly, the stirrup *J'* suspended from the graduated beam *E*, and provided with knife-edged bearings *k*, for the reception of the supplementary beams, substantially as and for the purpose herein set forth.

Fourthly, the levers *M*, arranged in respect to the supplementary graduated beams and stirrups *J'*, substantially as and for the purpose herein specified.

No. 37,570.—JOHN DERMOND, of Louisville, Ky.—*Improvement in Military Drums.*—Patent dated February 3, 1863.—In this drum a middle hoop is added to the other two and is braced by cords to each. The holes passing through these hoops are parallel to the axis of the cylindrical drum.

Claim.—The hoop *B* attached centrally to the cylinder *A*, in combination with the two bracing cords *F E* and the two bracing hoops *E E*, all arranged substantially as shown, to form an improved military or side drum.

Further, making or boring the cord holes *c* in the bracing hoops *E E* in a direction parallel or nearly so with the axis of the cylinder *A* and about at the centres of the bracing hoops, as and for the purpose set forth.

No. 37,571.—DANIEL FITZGERALD, of New York, N. Y.—*Improved Sails of Vessels.*—Patent dated February 3, 1863.—These sails are rigged from bowsprits and from other sprits, and are intended to be self-adjustable, so as to expose themselves to the wind blowing in a favorable direction. They favor the parachute, umbrella, and fan, in their form, and in their ability to collapse.

Claim.—First, the self-adjusting sails *A*, constructed and arranged substantially as above described.

Second, the collapsing jib *B*, constructed and arranged substantially as above described.

Third, the collapsing circular sail *C* and *D* made to fold like a fan, constructed and arranged substantially as above described.

Fourth, the mid-jib, between the two bowsprits, as constructed and described.

Fifth, suspending a circular sail *D* between the mast and bowsprit or on a jib-hook, constructed and arranged substantially as above described.

No. 37,572.—WILLIAM C. FORD, of Brooklyn, N. Y.—*Improved Paddle-Wheel.*—Patent dated February 3, 1863.—This invention consists in an arrangement of triangular or prismatic buckets in three tiers, so alternating with each other that the water passing two of the tiers is taken by one of the buckets in the intermediate tier, and the water passing on each side of this intermediate bucket is taken by the succeeding two tiers of buckets. The buckets are so placed that their sides stand at an equal angle with the radial line.

An arm-hole with a water-tight valve is provided for each bucket, and flanges or ears by which they may be fastened to the arms or spokes of the wheel.

Claim.—First, the arrangement of the prismatic buckets *e f* and *g*, in the manner and for the purposes specified.

Second, the construction of the prismatic sheet metal buckets, with the flanges *3 3* and arm-hole *4*, for the purposes and as specified.

No. 37,573.—JOHN JAMES GREENOUGH, of New York, N. Y.—*Paper Bag Machine.*—Patent dated February 3, 1863.—The paper to form the bags is wound upon a roller and fed from that to the cutting cylinder where its sides are cut to the proper shape to form the sides of the bag. Next it is operated upon by the side-creasing roller, while the side-strips or refuse are conveyed out of the machine.

The flap is then folded inward and pressed flat by guides and rollers and conveyed to the gumming disks. At the proper point of its passage a folder strikes the paper and folds it between two rollers, bringing the two gummed surfaces together, and after this the bag is separated from the continuous sheet by a separator plate.

Claim.—First, forming a paper bag or other envelope by cutting the form or blank therefor from a strip or roll by circular knives, as herein described, and then folding the same between a series of rollers without stopping the paper to perform either of the functions, the whole being combined and arranged substantially as and for the purposes set forth.

Second, also cutting the edges of the paper in an irregular line to shape the form or blank by the cylindrical cutters, in combination with folding machinery for making bags, &c., by a continuous operation, as above specified.

Third, also the combination of the "waste" rollers W, or their equivalent, for insuring the separation of the parts, and removing the waste from the machine, with the cutters, substantially as described.

Fourth, also printing or embossing the paper while it is stretched and held tight on both sides of the printing apparatus, while being printed, as herein described, when the same is connected with machinery for making bags and envelopes for the purposes specified.

Fifth, also conveying the form or blank for a bag or envelope through the preliminary operations of forming the envelope, and before severing the same from the strip of paper from which it is cut, substantially as and for the purposes set forth, when the bag is formed by passing the material through a series of rollers, substantially such as is herein set forth.

Sixth, also embossing the line of the seams of bags, or other envelopes, where they are joined by adhesive material, for the purpose of cementing the seams more perfectly, and concealing the joints, as set forth.

Seventh, also turning the side fold of the blank, cut as herein described, before the bottom fold, so as to bring the side fold on the inside of the bag or envelope, and securing the same to the cut lap or side, by which a neater joint is made.

No. 37,574.—JOSEPH FREY, of Battle Creek, Calhoun county, Michigan.—*Improvement in Grubbing Machines*.—Patent dated February 3, 1863.—This invention consists of a powerful lever mounted on an axle and wheels with a cast-iron head, having suitable protuberances for the engagement of the hooks of a clevis, which is fastened round the grub or stump of a sapling.

The cast-iron head is held in its position on the lever by a band and link, and the clevis is provided with a hook on the end for raising grubs by attachment to the roots.

Claim.—The adjustable and movable cast-iron shackle for pulling trees with the roots, in combination with the reversible wrought-iron clevis, or its equivalent, the clevis being guttered; and also the adjustable and movable cast-iron shackle for pulling stool or cap grubs, in combination with the hook on the reversible wrought-iron clevis.

No. 37,575.—BRADLEY W. FRANKLIN, of New York, N. Y.—*Improved Vulcanizing Lamp*.—Patent dated February 3, 1863.—Two or more seamless vessels are fitted to a cover with a steam-tight joint, further secured by bolts which press an angular flanged plate against the rims of the cups and the packed edge of the cover.

Claim.—The construction of a lamp with two or more adjustable compartments, connected with gauze-wire wicks, that shall, when graduated, evolve the proper degree of heat to vulcanize India-rubber and other vulcanizable gums, without the use of thermometers, steam gauges, or other tests, constructed substantially as above described and for the purposes set forth.

No. 37,576.—HENRY A. HANNUM, of Cazenovia, Madison county, N. Y.—*Improvement in Beehives*.—Patent dated February 3, 1863.—This invention consists in an arrangement of a board which forms a ceiling of the main chamber of a hive, and is intended to act as a comb guide and to be removable when necessary. To the two lower opposite edges of the board are dovetailed cleats which support three sided strips or bars from which to suspend the combs.

Claim.—The board or cover B, with the parallel bars *m*, and strips or cleats *n*, arranged and combined as shown, so that the board or cover may be detached from the bars *m*, when necessary, and also used in connexion with them when desired, as herein specified.

No. 37,577.—G. W. HATHAWAY, of Hinsdale, Berkshire county, Mass.—*Improved Shipper Lever for Looms*.—Patent dated February 3, 1863.—The invention consists in the attachment of the foot of the lever which ships the belt to an adjustable fulcrum and applying to it an independent helical spring.

Claim.—The combination with each other and with a loom, of the rigid lever B, the spiral or volute spring D, and the adjustable fulcrum *a*, substantially as and for the purpose herein specified.

No. 37,578.—THOMAS HAWKS, of Rochester, N. Y.—*Improved Extract of Malt, &c., for making Beer, Ale, and Porter*.—Patent dated February 3, 1863.—The decoction of malt and hops is reduced to the consistency of sirup, to which sirup of cane sugar is added, not exceeding one-fourth the quantity of the extract. It is then further reddened, and gelatine added, one part gelatine to twenty parts of the other.

Claim.—A concentrated portable preparation of wort, mixed with and shielded by the sirup of cane sugar, either with or without the addition of gelatine, for increasing its security against the influence of atmospheric changes, substantially as and for the purposes above specified.

No. 37,579.—C. B. HUTCHINSON, of Auburn, N. Y.—*Improvement for Grinding and Pressing Grapes, Apples, &c.*—Patent dated February 3, 1863.—This machine consists of an arched frame on which the operating mechanism is mounted, spanning the curb in which the pomace is pressed. The curb is made of staves with openings between for the issue of cider or wine, as the case may be, and it has a concave follower guided by a rod, and depressed by a screw

passing vertically through the crown of the arched frame. The fruit is ground in a mill attached to a frame. The hopper into which the fruit is thrown, is of a spiral wedge-form, gradually approaching the disk grinding wheel, and also commencing to assume the circular motion of the fruit under treatment. The disk wheel has concentric teeth arranged in spiral groups, and occupying nearly half its face. The toothed cheek in the interstices between which these teeth slide, occupies about a quadrant, and a central part of that is taken up by a depression which communicates with the discharge aperture.

Claim.—The construction and arrangement of a grinding mill and press together, combined and operating substantially as herein specified.

Also, the open discharge depression F, across the face of the case, opposite to the grinding wheel, in combination with said grinding wheel, arranged and operated substantially as and for the purpose herein specified.

Also, in combination with said depression F, the peculiar construction and arrangement of the teeth *h* and *h'*, and spiral wedge-shaped hopper, as herein set forth.

Also, the guide stem N, projecting vertically from the removable follower K, and sliding in a lock *p*, or its equivalent, for the purposes specified.

Also, the combination of the curb I, having openings or slots in the lower portion only, with the concave follower K, and guide stem N, substantially as specified.

No. 37,580.—N. JONES, of La Porte, Ind.—*Improvement in Sewing Machines*.—Patent dated February 3, 1863.—This invention consists in the application to machines having a reversible feed mechanism of a device to meet the difficulty that arises from the fact that when the feed is in one direction the threads are simply interlaced; but when the motion is reversed, the lower thread forms a coil around the needle thread, and the friction between them is consequently so much greater that the tension requires to be increased.

In this machine the same movement that reverses the feed acts upon the tension, and, in sewing back and forth, the tension is adjusted to suit the requirements of the case.

Claim.—So combining the device which produces the tension with the device by the means of which the direction of the feed movement is changed, that by the act of changing the direction of the feed movement the tension is varied in such a manner as is rendered necessary by such change of direction, substantially as herein specified.

No. 37,581.—SAMUEL J. KELLY, of Pemberton, Burlington county, N. J.—*Improvement in Lamps*.—Patent dated February 3, 1863.—The burner has a flat top and is pierced by two flat parallel wick tubes, whose wicks are operated simultaneously by a simple thumb-screw, their shafts being connected by gearing, which revolves out of contact with the tubes.

Claim.—The combination of the doubly-perforated and flat-topped cone or deflector F, the two parallel flat-wick tubes E E', shafts G G', milled head H, disconnected elevating wheels *g g'*, and connected cog wheels *h h'*, the latter having no contact with the wicks, when the said parts are constructed and arranged as herein shown and described and operate in the manner and for the purposes specified.

No. 37,582.—FREDERICK KETTLER, of Milwaukee, Wis.—*Improvement in Motive Power*.—Patent dated February 3, 1863.—The improvement consists in causing a wind wheel to gradually wind up weights by the intervention of gearing, the gravity of which shall be used to drive machinery.

Claim.—The arrangement and combination of a wind wheel with hammers 15, weights 12, and levers and toothed wheels, arranged and constructed as herein described, for the purpose of driving various kinds of machinery.

No. 37,583.—A. H. LANGHOLZ, of Chicago, Ill.—*Improvement in Bridles*.—Patent dated February 3, 1863.—The nose and jaw band of this bridle are made in one piece, and hooked to the upper part of the stiff bit; from thence it passes behind and around in front, through the loop of the cheek strap, and behind, hooking to the other side of the bit.

Claim.—The combination of the nose and jaw band E with the hook G at each end, when arranged with the head-stall and fastened by the hooks to the top of the bit, as herein described, for the purposes set forth.

No. 37,584.—ALPHONSE LOISEAU, of Berney, France.—*Improvement in Machinery for Coating Thread of one Fibre with another Fibre*.—Patent dated February 3, 1863.—The cotton core to be covered with woollen waste is wound upon mounted bobbins; from these it passes to pressure rollers, which keep it in a state of tension while the woollen or silk fibre, which has been previously carded and formed into a sliver, is wrapped around it by being carried through a flyer, which revolves around the core thread.

Claim.—The arrangement of machinery for coating or covering a core with a thread of wool, or for surrounding a core of any material with a thread of any desired material, hereinbefore described and illustrated in the accompanying drawings.

No. 37,585.—JOHN MADDEN, of Youngstown, Mahoning county, Ohio.—*Improvement in Sewing-machine Needles*.—Patent dated February 3, 1863.—This needle has a groove or channel commencing near the point and running up as far as it enters the work when in use,

with the exception of one spot near the point end of the channel, where the full roundness of the needle is left, and through this the channel is connected by a drilled hole.

Claim.—As a new article of manufacture, the sewing-machine needle, constructed as herein set forth.

No. 37,586.—WILLIAM T. MORROW, of Chicago, Ill.—*Improvement in Journal Boxes.*—Patent dated February 3, 1863.—This adjustable wedge is to be slipped between guides on the face or over flanges on the edges of the driving box of a locomotive, or of the journal box of an axle, so that by its means any wear occurring on the face of the box can be compensated without removing the box.

Claim.—The arrangement of the adjustable liner wedge B, in combination with a journal box A, constructed and applied substantially as and for the purposes set forth.

No. 37,587.—JAMES O'KANE, of Philadelphia, Penn.—*Improvement in Apparatus for Threading Needles.*—Patent dated February 3, 1863.—The apparatus consists of a plate which has a projecting funnel-shaped flange to guide the thread to the hole in the plate, behind which the eye of the needle is placed. The needle is passed through a hole in the recurved end and retained by the lip until its head comes in contact with the notch in a sliding plate, which is adjusted to the size of the needle, in respect to the relative distance of the eye from the end in the different sizes, by means of a graduated cam.

Claim.—First, the cam C so formed, graduated, and arranged in respect to the hole c in a plate a, to which the cam is hung, that the eyes of the needles of different sizes may, by the aid of the cam and its graduations, be brought to coincide with the said hole in the plate, for the purpose specified.

Second, in combination with the graduated cam, or its equivalent, the slide D with its notch i, the whole being arranged and operating substantially as and for the purpose described.

Third, the flexible lip B arranged on the plate a, in respect to the hole c in the said plate, and the notch i in the slide D, substantially as and for the twofold purpose described.

No. 37,588.—JOHN PERCY, of Albany, N. Y.—*Improvement in Water-Meters.*—Patent dated February 3, 1863.—The valves are balanced by being attached to rods on the opposite extremities of a walking beam; they fit into seats on the pistons, which traverse their respective cylinders. The stroke of the piston multiplied into the sectional area of the cylinder is the measure of the amount discharged, and the movement is vibratory, and the action of the valves alternate. The details of construction will be best understood by reference to the claim and illustrations.

Claim.—A balance valve, as constructed, for the purpose described.

Also, the arrangement and combination, substantially in the manner and for the purpose set forth in the above specifications, of the following apparatus, viz: the valve chamber P, with its valves v and v' and stem T; the chamber D and E, the cylinders F and G, with their pistons H and J connected with the beam L; the valve I and K connected with the beam M; the valve N and O also connected with the beam M; operating valves I and K; the lever U attached to the valve shaft T; the detents 1 and 2, with their pins 6 and 7; lever 3 attached to the shaft of the beam M, with the tripping levers 4 and 5; spring W operated by the beam M, in order to operate the lever v; the lever X, as connected with apparatus, measuring the water, forming together a complete water-meter.

No. 37,589.—DAVID U. PRATT, of Cleveland, Ohio.—*Improved Bedstead.*—Patent dated February 3, 1863.—This invention consists in making the side supports for the slats four inches or thereabouts higher at the head than at the foot of the bedstead.

Claim.—Making bedsteads with the side rail and support for the slats four inches, more or less, higher at the head than at the foot, as and for the purpose herein set forth, the same being a new article of manufacture.

No. 37,590.—JULIUS H. PRATT, of New York, N. Y.—*News Distributor.*—Patent dated February 3, 1863.—The inventor is not confined to definite mechanical appliances, but the invention consists in delivering sheets of paper from a balloon into the air by mechanical means.

Claim.—Combining with a balloon mechanism which is capable of throwing off or delivering news sheets into the air during the flight of the balloon, for the purpose set forth.

No. 37,591.—HORATIO REED, of Jersey City, N. J.—*Improvement in the Process of Manufacturing Enamelled Fruit Jars and other Vessels.*—Patent dated February 3, 1863.—This invention consists in applying a coating of melted glass to a red-hot metallic vessel.

Claim.—The lining of a metallic can while in a red-hot state with glass, which is blown in a hot state into a metallic can.

No. 37,592.—FERDINAND SAUTERMEISTER, of Newark, N. J.—*Improved Machine for Spreading Japan, &c., over Fabrics.*—Patent dated February 3, 1863.—The machine consists of a large central drum and surrounding rollers all mounted on a frame. The cloth to be operated upon is fed from the shaft on which it has been rolled, and passing over a roller is

exposed to the "doctor" or distributing bar and three distributing knives; from thence it passes to the central drum, which is driven by gearing and has a roughened surface to give it a hold upon the cloth, and thence passing over suitable guide rollers is conveyed from the machine.

For heavy cloth the face of the central drum is armed with spring bars having sharp projecting points, so as to insure the motion.

Claim.—The use of a drum or cylinder with its surface roughened by sand, gravel, pounded glass, or any like substance, for carrying forward cloths in the process of japanning or painting.

Also, the spring bars G and the roughened rollers L and M, when used in combination with the cylinder.

No. 37,593.—SAMUEL J. SEELY, of Brooklyn, N. Y.—*Improvement in Machines for Corrugating Metals.*—Patent dated February 3, 1863.—This machine corrugates the sheet metal by dies of the form required which press it into troughs or recesses of a corresponding shape.

These dies are so arranged in pairs, that one remains in the corrugation just made, while the other makes another corrugation, which in turn is placed under the retaining die, and so on. The lower die plate or corrugated anvil is fixed to a suitable frame with a table, and the dies are pressed by toggles attached to an adjustable crosshead regulated by screws.

Claim.—First, so operating, retaining and corrugating dies together in a machine for corrugating sheet metal, that the retaining die forms the first corrugation and takes into the corrugations formed successively by the corrugating die, substantially as and for the purpose set forth.

Second, the organization of means, substantially as herein described, for the purpose of corrugating sheet metal, the said organization consisting of the frame A, bed B C, with dogs, the female dies, the male dies with sash beams, the toggle levers, or equivalents, adjustable crosshead, and the gearing or its equivalent, constructed and arranged as set forth.

Third, in a machine for corrugating metal, operating substantially as described, the adjustable crosshead with its hand screws and guide screws, for the purposes set forth.

No. 37,594.—DAVID J. STAGG, of New York, N. Y.—*Improvement in Step Ladder.*—Patent dated February 3, 1863.—This invention consists of a central standard frame with ladders on each side, and so arranged as to serve for a support at all times and admit of their being adjusted in an inclined position for use by an extension on a slotted arm at the upper end, or folded compactly away.

Claim.—The standing or supporting frame A, in combination with the step ladder, either or both of them, connected to the frame A, substantially as shown, to admit of the adjustments herein set forth.

No. 37,595.—ISRAEL STRATTON, of Philadelphia, Penn.—*Improved Cover for Preserving Vessels.*—Patent dated February 3, 1863.—Over the mouth of the jar is laid a circular plate having a flange fitting on the inside of the neck; a ring of rubber intervenes between the plate and the top of the jar, and a screw rod rises from the centre of the plate. A yoke which grips the projecting lip of the bottle is screwed on to the rod and depresses the plate on its elastic bearing and makes a tight joint.

Claim.—The plate B, its annular flange b, screwed stem C and ring e, of gum-elastic or other suitable material, in combination with the yoke D, and its projections d, when the said yoke serves the purpose of a nut, and when the whole is constructed and applied to the mouth A of the vessel, and its flange a, as and for the purpose herein set forth.

No. 37,596.—DANIEL TEETER, of Hagerstown, Wayne county, Ind.—*Improvement in Valves for Steam Engines.*—Patent dated February 3, 1863.—In this engine the rotary disk valve is mounted upon a valve seat with four openings in connexion with a double cylinder, whose pistons operate the fly wheel shaft by a two-throw crank. The valve is rotated by a bevel gear connected by a rod and bevel pinion to a bevel wheel on the crank shaft, and the motion is reversed by means of a device, detailed in the third claim, for changing by hand the position of the valve on its seat.

Claim.—First, the rotary valve G, constructed as herein represented and described in combination with the steam ports 1 2 3 4 in the valve seat of the double cylinder D, when said ports are arranged and the rotary valve adapted to operate in connexion with them, in the manner and for the purpose set forth.

Second, the T-headed spindle H, bevelled cog-wheels e g, and shaft I, in combination with the loosely-fitted bevelled gear-wheel j', feather n, and gear-wheel O, when arranged in the manner and for the purpose specified.

Third, the bevel pinion j, fitted loosely on the end of the shaft I, and attached to it by means of a feather or pin n, fitting a radial mortise in the hub of the pinion j, in the manner described, in combination with the fixed cog-wheel m, and toothed segment lever J, adapted for reversing the motion of the engine by changing the relative position of the valve on its seat, substantially as described.

No. 37,597.—WENZEL TOEPFER and HERMAN RUGER, of Milwaukee, Wisconsin.—*Improvement in Blind Fastenings, &c.*—Patent dated February 3, 1863.—This is an arrange-

ment for opening and closing outside window blinds and adjusting the slats from the inside without raising the sash, and consists of a sliding bar with a handle protruding from the window casing, which, by means of a link, is connected with the lower hinge of the shutter. When in position notches on the lower side of the bar catch upon the face plate. The slats are adjusted by a rotating bar passing through the window casing, and by means of a bent arm operating a lever which lifts or depresses the slat rod.

Claim.—First, the sliding bar D, connected with the lower but B of the blind through the medium of the link C.

Second, securing said bar D, or preventing the casual movement of the same, and at the same time locking the blind by means of the notch or recess *j*, pressure rod *k*, and the opening in the face plate F, as herein shown and described.

Third, the rod or shaft G, provided at one end with the arm H, and at the opposite end with the lever I, connected with the slide T, in combination with the pin *q* on the arbor *r* of the knob L, the lip *o* on the slide T, and the lever P and rod O attached to the blind B, all arranged to operate as and for the purpose herein set forth.

No. 37,598.—J. F. TOZER, of Binghamton, Broome county, N. Y.—*Improvement in Fastenings for Door Latches.*—Patent dated February 3, 1863.—This improvement consists of a fastening to be applied to the knob arbors of locks and latches, to prevent the turning of the knob arbor from the outside. A circular plate, having a segment removed or cut off from it, is attached to the inner side of the collar which is placed on the knob arbor at the inner side of the door. Between the straight edge left by the removal of the segment and a stud or bearing, a wedge is slipped, which prevents the rotation of the spindle when the wedge is in position.

Claim.—The plate H, attached to the inside of the collar E, and having a segment removed or cut off from it, so as to leave a straight edge or surface *b*, in combination with the bearing J, and key or wedge K, all arranged and applied to the door, and in such relation with the knob arbor A, to operate as and for the purpose herein set forth.

No. 37,599.—JAMES WOLSTENHOLME, of Providence, R. I.—*Improvement in Lamp Burner.*—Patent dated February 3, 1863.—The object of this invention is to insure perfect combustion of the heavier kinds of coal oil without the aid of a chimney. It consists of a cap by which the vapor of the oil from the wick-tube is sufficiently confined to keep it at a temperature necessary for complete combustion, and at the same time allow a sufficient amount of air to mingle with it to support the combustion of the hydro-carbon.

Claim.—Surrounding the under side of such flanch with a space of confined air for the purpose of preventing the cooling effect upon the flanch of ascending air currents, substantially as described.

No. 37,600.—H. J. HUNT, of Ottumwa, Wapello county, Iowa, assignor to Self and G. W. DEVIN, of same place.—*Improvement in Lamp Burners.*—Patent dated February 3, 1863.—The cylindrical chamber, which is set upon the lower part, and which in turn supports the chimney, is formed of metal so cut in ornamental fashion as to be elastic, and enabled to grasp the chimney, the cone plate, and the rotating disk or diaphragm of the burner.

The wick-raising pinion is operated by the rotating disk, which has holes engaging with a spoked wheel on the same shaft as the wick raiser, which is supported on ears made by punching a hole through the wick-tube, and through which the raising pinions operate.

Claim.—First, the elastic drum J, constructed substantially as shown, so as to grasp and retain properly in position the chimney L and cone or deflector K, and also admit of being fitted snugly on the disk C and readily detached therefrom, as herein shown and described.

Second, the rotating disk C fitted on the top of the lower part B of the burner, in combination with the stationary rack *c* on the flange *b* of B, and the pinion H on the serrated wheel shaft G, all arranged to operate as and for the purpose herein set forth.

Third, the spring *d*, formed by slitting or cutting the wick tube D as described, and having such a relative position with the serrated wheels F E, to operate for the purpose set forth.

No. 37,601.—JOHN B. MIGNAULT, A. B. SOUTHWICK, and CHARLES SPOFFORD, of Ballardvale, and ALBERT MARSHALL, of Lawrence, Mass., assignors to WILLIAM P. PIERCE, president of the Whipple File Manufacturing Company, and WILLIAM P. PIERCE, assignor to said Company, of Ballardvale, Essex county, Mass.—*Improvement in Machine for Rolling Metals.*—Patent dated February 3, 1863.—The object of this machine is to produce articles of irregular form, such as blanks for files, by rolling, the relative position of the rolls while the articles are passing between them being controlled by patterns. The rolls are attached to shafts in a traversing carriage, which is driven by a pitman and crank. The rolls are rotated by pinions on the upper ends of their shafts, which mesh into permanent racks on the side of their track.

Claim.—The above-described machine for rolling metals, consisting essentially of the rolls *a* and gears H upon the traversing carriage, in combination with the stationary patterns and rack-bars, operating in the manner substantially as set forth for the purpose described.

No. 37,602.—ANTHONY M. SMITH, Jamaica, Queen's county, N. Y., assignor to GILBERT SAYRES, of same place.—*Improvement in Window Sash Fastenings.*—Patent dated February 3, 1863.—The invention consists of a rotating and pivoted hasp, which is attached to one sash and placed over a hook or button on the other sash. The hook is eccentrically pivoted, and in its rotation clamps the sashes firmly together, and retains the hasp by its shoulder, which, by its rotation, has been made to overlap the ring of the hasp.

Claim.—The jointed swivel hasp A, in combination with the swivel hook D and eccentric *j*, arranged and applied to the sashes to operate as herein set forth.

No. 37,603.—ALPHEUS B. SOUTHWICK, of Ballardvale, Essex county, Mass., assignor to WILLIAM P. PIERCE, president of the Whipple File Manufacturing Company, of Boston, Mass., and WILLIAM P. PIERCE, assignor to said Company.—*Improvement in Grinding File Blanks.*—Patent dated February 3, 1863.—In this machine the file-blank is fastened to a holder and raised vertically, with its face exposed to the grinding wheel; a roller on the back of the holder gives the desired pressure, under the control of the operator by a hand wheel suitably connected with a feed screw and spring. The elevation of the file-blank holder is by means of a chain winding on the periphery of a wheel, which accomplishes a partial rotation and then recedes, being impelled by a pitman from a prime motor connected to a crank on the wheel shaft, which crank moves the wheel by contact with a pin on its disk.

Claim.—The method of connecting the crank I with the wheel G by means of the pin *h*, whereby the blank may be inserted in the holder without stopping the machine.

Also, the combination of the spring *t* and screw *i* with the hand-wheel T and roller R, for the purpose of graduating the force with which the article is pressed up to the stone, as set forth.

No. 37,604.—JOSHUA MELVIN, of Lowell, Mass.—*Improvement in Adhesive Plaster.*—Patent dated February 3, 1863.—The invention consists in placing a layer of caoutchouc between the gelatine and the cloth, or spreading gelatine on caoutchouc, as is fully expressed in the claim.

Claim.—First, in combination with a gelatinous preparation and a backing of cotton or other fabric, the use of a film of caoutchouc or analogous elastic and impervious material interposed between the gelatine and the backing to prevent the former from penetrating the latter, and adapt the plaster to be rolled without injury.

Second, spreading a gelatinous preparation upon a foundation of caoutchouc or analogous elastic and impervious material in the manufacture of adhesive plasters, substantially as set forth.

No. 37,605.—E. BRISSON, of Orleans, France.—*Improvement in Grinding Mills.*—Patent dated February 10, 1863.—This improvement consists in a method of bushing and securing the spindle in its passage through the eye of the lower stone, which is accomplished by surrounding it with a hub and recesses, which hold wooden keys; also, in hanging the stones on universal joints—the upper one on the top of the spindle, and the lower one on the bed plate.

Claim.—First, the mode of bushing or securing the spindle D in the eye K of the lower stone I, to wit, by means of the cylindrical hub C, provided with recesses *c* in its upper end, and having wooden blocks *d* and wedges or keys fitted therein, the latter being adjusted by the screws *g*, so as to press the blocks *d* against the spindle which passes through the hub C, as set forth.

Second, the hanging or suspending of both stones I M on universal joints, one stone (the runner) being connected with the spindle D by means of the pin *l* passing through the latter, and having the turning bar P fitted upon it, into or through which bar the spindle passes, and the other stone fitted on the pins *a* of the hub C or equivalent bearings, through the medium of the thimble J and swinging socket L, these latter-named parts, with the hub C, being applied, if desired, to the outer surface or exterior of stone I and the parts in the eye K of the stone I, fitted in the eye O of the stone M, substantially as and for the purpose set forth.

No. 37,606.—HARVEY BROWN, of New York, N. Y.—*Improvement in Lamp Burners.*—Patent dated February 10, 1863.—The device for raising the wick consists of an outside thumb-screw on a shaft, with two spur wheels impinging on the wick, and with a spur wheel meshing into a similar one on another shaft, which carries a wheel impinging on the other side of the wick, in a position midway between the two former. The appliances for regulating the draught consist of a perforated band and an interior perforated burner with corresponding openings, by which the air is admitted or excluded by the partial rotation of the inner tube or burner. The device for holding the chimney consists of a pair of springs, between which the foot flange of the chimney is insinuated, and held by the retraction of the pin.

Claim.—First, the arrangement and construction of the spur wheel A', in combination and connexion, by means of the cog wheels D D, or their equivalent, with the spur wheel A, for the purpose of moving the wick, substantially as described.

Second, the band B, in combination with the perforated burner B', substantially in the manner and for the purpose set forth.

Third, the spring C C, constructed, arranged, and operated substantially in the manner and for the purposes set forth.

No. 37,607.—FRANCIS BUSH, of Boston, Mass.—*Improvement in Cartridge-boxes*.—Patent dated February 10, 1863.—This is intended as supplementary to Bush's patent, September 22, 1862, and the improvement consists in making partitions in the outer casing of the cartridge-box which shall not interfere with the motion of the contained sliding boxes which hold the cartridges.

Claim.—Providing the outer metallic box or case with one or more partitions in such a manner that they shall not interfere with the free working of the inner sliding box, for the purpose specified.

No. 37,608.—HORATIO CLARK, of Dedham, Norfolk county, Mass.—*Improvement in Steam-boiler Furnaces*.—Patent dated February 10, 1863.—The grate surface and bridge are made to conform with the shape of the cylindrical boiler, so as to preserve the fire at equal distance from all parts of the exposed surface of the boiler, and this in combination with inclined jambs.

Claim.—The grate constructed in a curved form and arranged concentrically, or about so, with the curved fire surface of the boiler, substantially as described.

A curved grate, in combination with a curved bridge, their upper surface being arranged, substantially as described, with the fire surface of the boiler.

Also, the curved grate and the curved bridge, arranged with their upper surfaces concentric with the fire surface of the boiler, in combination with jambs arranged in the inclined manner with respect to them, substantially as described.

No. 37,609.—JOHN C. CLIME, of Philadelphia, Pa.—*Improvement in Centrifugal Governors*.—Patent dated February 10, 1863.—In this device the upper or suspension rods of the balls are made telescopic, and the lower rods, which are pivoted at their outer ends to the upper rods near the balls, are attached at their lower ends to a sleeve which traverses vertically on the central shaft. As the balls under centrifugal impulse recede from the perpendicular to the point of connexion of two pairs of rods near the governor balls, a spring is attached which spans the intervening space and is attached at its central point to the axes of revolution.

Claim.—The combination of the ball arms, composed of tubes C C and bars D D, or their equivalents, fitted together, as described, the spring G, the rods E E, and slide F, the whole arranged to operate substantially as and for the purpose herein specified.

No. 37,610.—ALANSON CRANE, of Fortress Monroe, Elizabeth City county, Va.—*Improvement in Fire-Extinguishers*.—Patent dated February 10, 1863.—The house having been provided with a series of distributing pipes, with orifices therein, passing through the rooms, and in such a position as to reach all parts, the water is to be let on by means of a key inserted through a hole in the wall, a lock plate having been previously removed.

Claim.—The arrangement of the plug E, to extend through the exterior wall of the building, in combination with the locking cover or plate G, and with the arrangement to diffuse water through the building, as herein shown and described.

No. 37,611.—JOHN CRITCHERSON, of Boston, Mass.—*Improvement in Street-Sweeping Machines*.—Patent dated February 10, 1863.—This machine consists of a frame on wheels, and underneath it is a revolving head set obliquely with the track of the sweeper. The broom stuff is set in oblique depressions on the axis and secured in position by screws.

Claim.—Attaching the fagots or broom material obliquely to the axis, when the same is accomplished by means of and in combination with the depressions running obliquely across the arms R and the concave caps b, secured by screws, which confine the said fagots or broom material, as and for the purpose herein described.

No. 37,612.—GEORGE COLLYER, of Philadelphia, Pa.—*Improvement in Car Couplings*.—Patent dated February 10, 1863.—The coupling rod consists of a flat bar with raised projections on the ends, presenting a triangular face to the detent or coupling pin, which traverses vertically in a chamber in the upper side of the bunter bar. The face of the detent exposed to the projection on the coupling bar is square and slightly bevelled from top to bottom to admit of its easy withdrawal by a direct vertical motion or blow when the cars are jammed together. Its other face is inclined so as to allow the end of the coupling bar to raise it when they come in contact. The flat part of the bar upon which the detent rests, if made wide enough, will, in case of the upsetting of one of the cars connecting, withdraw the coupling bar.

Claim.—First, the combination of the tumbler C, springs D, and grooves a, substantially as described, whereby operators are enabled to uncouple the cars without moving the train backward or forward, no matter how closely the tumbler and the detent of the coupling bar may be pressed together.

Second, the employment of coupling-bars such as shown in Fig. 9, having expansions b

near the ends of the bars, which expansions, of themselves, uncouple the cars, in case the latter get off the track.

Third, the employment of coupling bars such as shown in Fig. 10, having expansions b near the ends of the bars, with less lateral breadth than the detent, so that although one or more cars of the train may get off the track, the cars shall not be thereby uncoupled.

No. 37,613.—AARON B. COOLEY, of Philadelphia, Pa.—*Improvement in Mode of Obstructing Rivers*.—Patent dated February 10, 1863.—This consists in an anchoring together, and to the shore of rivers or other water-courses, of a number of submerged pyramidal or other angularly-shaped blocks or structures adapted to pierce the sides and bottoms of vessels which may come in contact therewith.

Claim.—Obstructing rivers, harbors, inlets, &c., by a series of angular frames or blocks constructed, chained to each other and anchored, substantially as set forth.

No. 37,614.—E. T. and E. O. DE GEMINI, of Paris, France.—*Improvement in Clarifying Saccharine Juices*.—Patent dated February 10, 1863.—The sirup is treated with animal charcoal and fuller's earth in a vat with a vertical rotating shaft armed with dashers, with arms projecting inwardly from the sides of the vat, or with jets of steam introduced deep into the body of the sirup to agitate it by effervescence, or by both these processes together.

Claim.—The method of clarifying saccharine juices herein shown and described, which consists in subjecting them to the simultaneous action of molecular agitation, under steam, animal charcoal, and fuller's earth, substantially in the manner set forth.

Also, the employment of the apparatus herein shown and described, for the purpose set forth.

No. 37,615.—OREN C. DODGE, of New York, N. Y.—*Improvement in Grain Conveyors*.—Patent dated February 10, 1863.—The belt is made with upturned edges so as to hold grain, and the edges are sustained in their vertical position by strips of metal. When it is desired to discharge the grain at any point short of the end, the belt is carried down and around a lower roller, set a little back so that the grain may be collected by a spout set to catch at the point where it falls from the descending belt.

Claim.—First, delivering the grain at any desired point along the line of a travelling belt, by bending said belt substantially as specified, for the introduction of a hopper or chute.

Second, a travelling belt for conveying grain, provided with vertical, or nearly vertical, edges, forming a trough, substantially as set forth.

Third, the elastic edges 3 3, of the belt f, sustained by the metallic stripes 4 4, substantially as specified.

No. 37,616.—G. C. EATON, of Lockport, N. Y.—*Improvement in Grinding Edge Tools*.—Patent dated February 10, 1863.—This is a machine for holding tools while being ground, and bringing them in contact with the grindstone by the depression of a pad operating through a series of levers.

Claim.—The adjusting slot B B', in the part A, the hinged arm E, levers G and I, connecting rod J, stay L, seat K, and slide N, arranged and operated as and for the purpose set forth.

No. 37,617.—GEORGE L. DULANEY, of Mount Jackson, Shenandoah county, Va.—*Improvement in Sewing Machines*.—Patent dated February 10, 1863.—The improvement relates to the construction and operation of the needle-bar, the manner of causing the feed motion, the manner of actuating the shuttle, of causing the tension, of taking up the slack thread, and of constructing the shuttle, which is made with a groove or slot on its under side, receiving the bowed adjuster, which confines the shuttle to its place. The machine has two threads operated respectively by a vertical needle and a shuttle moving horizontally in an arc, being propelled by a vibrating arm. The various points of construction and adjustment are fully set forth in the claim.

Claim.—First, the vertically-acting needle arm, composed of one piece of metal, as indicated at *x z y z*, and Figs. 1 and 2, which performs the several different offices and mechanical functions as herein set forth and described.

Second, the special construction of the intermittent acting shuttle carrier device *i2 k2 p2 r2*, Fig. 4, together with the gravitating self-acting shuttle adjusting device *s2 t2 u2*, Fig. 4, as shown and described.

Third, the gravitating self-adjusting feed device *c3 o3 p3 q4*, Fig. 3, constructed and operated in the manner described.

Fourth, the self-acting gravitating pad *e2 e3 u2 u3*, as constructed and combined with the self-acting gravitating feed device *c3 o3 p3 q4*, the lever device *x2 x2*, and the curved bar or tension device *y2 y2*, with the small dependent flexible, fork-like device *z2*, Figs. 1, 2, 3, substantially as set forth, shown, and described.

Fifth, constructing the shuttle *o2 o2* with the bottom slot or depression *o4*, Fig. 4, and the combination therewith of the gravitating, self-acting, shuttle-adjusting device *s2 t2 u2*, Fig. 4, substantially as set forth, shown, and described.

Sixth, the vibrating lever, or slack-thread adjuster *f2 f2 g2*, Fig. 1, as constructed, ope-

rated, and combined with the needle bar or arm $u x y z$, and Figs. 1 and 2, substantially as set forth and described.

Seventh, the curved bar or tension device $y^2 y^2 z^2$, Figs. 1, 2, and 3, singly or in combination with the vibrating lever or slack take-up device $f^2 f^2 g^2 h^2$, so as to produce the desired effect, in the manner as set forth, shown, and described.

Eighth, the flexible, rotating, radial division device $a^3 b^3 c^3 d^3$, Figs. 1 and 2, as constructed, set forth, and described.

No. 37,618.—JOHN FREW, of Meadville, Crawford county, Pa.—*Improvement in Moth Traps*.—Patent dated February 10, 1863.—This trap consists of a box made like a hive and provided with a frame containing old comb to be set among hives, so as to allure the bee-moth to deposit her eggs in it rather than in the hives which are occupied by working bees. It does not differ particularly from an ordinary style of hive, having an alighting board, perch, contracted entrance, and comb frame, in an inner box, with an outer case and lid.

Claim.—A bee-moth trap, consisting of an external case A, cover B, porch C, inner removable close box D, provided with comb frame H, the whole being constructed, combined, and arranged in the manner and for the purpose herein specified.

No. 37,619.—JOHN GERMAN, of Oriskany Falls, Oneida county, N. Y.—*Improved Dowelling Machine for the use of Coopers*.—Patent dated February 10, 1863.—The two arbors in which the bits are secured are attached to sliding heads, and have upon them grooved pulleys; a band passing from a driving pulley rotates all three pulleys. The arbors are adjustable to different distances from each other, and as they are approached the driving pulley is raised in its slotted standard.

A feed table which works on guides carries the wood up to the dowelling bits.

Claim.—First, the three grooved pulleys C F F, having the belt G passing around them, in combination with the slides D D, having horizontal tubes or bearings n at their upper ends in which the arbors E of the bits are secured, the whole being arranged and applied to the frame B, as and for the purpose herein set forth.

Second, the feed table H provided with the cleats $t t t'$ and bars $u u$, having inclined upper surfaces, when said feed table is used in combination with the pulleys C F F, belt G, slides D D, and bit arbors E, as and for the purpose specified.

No. 37,620.—JAMES S. GIBBONS, of New York, N. Y.—*Improved Construction of Ships, of-war and other Batteries for Defence against Projectiles*.—Patent dated February 10, 1863.—This consists in a plating covering of alternate iron and wood, the plates of iron being laid on edge, or having their edges exposed to the projectiles, and the intervening space being filled with timber. The successive layers of this plating are laid across each other at suitable angles.

Claim.—The use of wedge-shaped timbers in connexion with iron plates for the purpose of resisting projectiles, substantially as specified; and, in combination therewith, so arranging the plates in one series that they cross those of another, substantially in the manner and for the purposes set forth.

No. 37,621.—JOSEPH GOODRICH, of Muscoda, Grant county, Wis.—*Improved Fishing Lantern*.—Patent dated February 10, 1863.—This lantern has a reflector mounted upon a horizontal shaft so as to be moved by a crank on the outside and brought to bear in a given direction; the crank is elastic, and retained in its place by the pin on its back which engages in holes on the end of the lantern.

Claim.—The arrangement of the adjustable reflector A and the shaft K, when used in connexion with the box or frame of a lantern, and constructed and operating substantially as and for the purpose specified and delineated.

Also, the index spring T T, when used for the purpose of adjusting the reflector A, substantially as set forth.

No. 37,622.—JOHN H. GRAVES, of Rochester, N. Y.—*Improvement in Beehives*.—Patent dated February 10, 1863.—This hive is made double, with openings communicating, which may be closed at will by slides. The floor of this double hive is composed of a perforated plate which extends sufficiently in front to form an alighting board, and lying on cleats, may be drawn in or out at pleasure. Underneath it is an additional board or bottom, also removable, and upon which gathers the refuse of the hive and the progeny of the bee-moth which seeks the shelter of the chamber formed between the perforated plate and the wooden bottom.

The chambers of the hive are open at bottom and set upon a frame with a centre piece under the contacting sides of the two chambers; in this centre piece is a communicating passage, with a dividing plate to close the passage.

Claim.—The combination of the removable perforated bottom B, covering the entire space of the hive, with the auxiliary bottom D, separately removable and adjustable to or from said bottom B, arranged and operating substantially as and for the purpose herein set forth.

Also, the combination of the cut-off slide H, skeleton frame G, provided with the centre

piece r , having the passages $h h$ and open-bottomed sections L L, arranged substantially as herein set forth.

Also, the perforated alighting platform C, in combination with the perforated bottom B, substantially in the manner and for the purpose set forth.

No. 37,623.—JACOB HILBORN, of San Francisco, Cal., assignor to HARRISON HAIGHT, of the same place.—*Improvement in Washing Machine*.—Patent dated February 10, 1863.—At one end of the square suds-box is an adjustable concave which is made to contract the washing space, or otherwise, according to the requirements. To this are attached side boards with vertical ribs so as to expose the clothes to a rubbing action as they are driven to and fro by the pendulous dashers.

Claim.—Making the stationary corrugated concave or washboard of a washing machine adjustable, substantially in the manner herein described, so as to adapt the machine to operate on a large or small quantity of clothes.

Also, the combination of the stationary washboard B, the vertical reciprocating side washboards E, and pendulum dashers D, substantially in the manner and for the purposes herein described.

No. 37,624.—J. G. HOLLOWELL, of Canandaigua, N. Y.—*Improvement in Sewing Machines*.—Patent dated February 10, 1863.—The object of the invention is to construct a machine that shall work equally well both ways—that is, with its wheel and pulley rotating in either direction to admit of the sewing being reversed by changing the motion of the driving wheel. This is accomplished by the construction of the cams which respectively actuate the needle, the shuttle, and the feed. The detail of construction and their relation to each other, as to the sequence of their movements, will be best understood from the drawings.

Claim.—First, so constructing the needle cam I' and shuttle cam L', and so combining them with each other and with the rock-shaft for operating the needle and shuttle, that they will operate in proper relation to each other to produce the sewing, in whichever direction the cam shaft B or driving wheel or pulley rotates, substantially as herein specified.

Second, the feed cam J and presser cam K, combined with each other and the presser H, to operate upon the latter and produce the feed movement in one direction or the other, according to the direction of the revolution of the main shaft, driving wheel or driving pulley, substantially as herein specified.

No. 37,625.—AMBROSE HYDE, of Lima, Livingston county, N. Y.—*Improvement in Shutter Fastenings*.—Patent dated February 10, 1863.—This invention consists of a hook which projects through and is pivoted to the window casing engaging a plate fastened to the blind or shutter; from the inner end of the bolt depends a hook which rests on a plate, when the catch-bolt is locked to the shutter, and is hooked under the plate, when the catch-bolt is raised, so as to withdraw it from connexion with the shutter.

Claim.—The double-acting detent n , in combination with the catch E and bar z I, when so arranged as to either lock the said catch in a rigid position to hold the shutter in place, or to retain it disengaged while the shutter is removed, and operating substantially as herein specified.

No. 37,626.—ROBERT JONES, of Waynesburg, Stark county, Ohio.—*Improvement in Ploughs*.—Patent dated February 10, 1863.—The invention consists in the method of attachment of the beam to the standard, and in the flange at the foot of the standard which affords means of attachment for the mould-board, share, and landside. The rear end of the metallic beam is curved down behind the top end of the standard or sheth which has a corresponding arc-shaped curve. Slot holes in the beam give passage to the bolts by which it is fastened, and secure it at a greater or less elevation, as may be desired, to regulate the depth of cut. A transverse slot in the standard gives means of adjustment from or to the land.

The detail of construction of the flange at the foot of the standard may be gathered from the claim and illustration.

Claim.—The particular combination of the curved inner end c of the beam A, the curved shoulder b of the shank B, the bolts $d d'$, the longitudinal slots $e e$, and the transverse slot f , when the said parts are constructed and arranged in the manner and for the purposes herein specified.

Also, the particular construction of the flange g , with the arm h and ears i and i' permanently attached to a standard B, having a curved shoulder b , when used in the described combination with the landside C, mould-board D, and share E; all arranged and connected in the manner and for the purposes set forth.

No. 37,627.—ARTHUR J. JUDGE, of Baltimore, Md.—*Improvement in Lubricators*.—Patent dated February 10, 1863.—Above the journal is a chamber or reservoir of oil with a tube and narrow orifice opening upon the journal. The oil exuding upon the journal keeps it lubricated, and the more rapidly as the oil expands by the heat of the journal bearings.

Claim.—First, the construction of a chamber or reservoir to hold the oil with an opening

in the lower part, so small that atmospheric pressure prevents its escape, until expanded by the increased temperature of the journal.

Second, the combination of the three parts, viz: the reservoir or cup, the tube, and the socket, in the manner and for the purposes herein specified.

No. 37,628.—LYMAN KINSLEY, of Cambridgeport, Mass.—*Improvement in Trip Hammers*.—Patent dated February 10, 1863.—The anvil block has a concave base and sets upon a convex plate, upon which it is adjustable, to bring the faces of the anvil and the hammer to a definite angular relation to each other, to suit the taper of the work required, or to adjust in case of wear.

Claim.—The anvil block Q, arranged substantially as shown on a plate R, to admit of the adjustment of the anvil P, as described.

No. 37,629.—EMMONS MANLEY, of Marion, Wayne county, N. Y.—*Improvement in Forming Locks in Tin Plates*.—Patent dated February 10, 1863.—This machine is for bending a plate on a straight line. The plate is introduced vertically against a straight edge which is mounted on one of a pair of jaws. By pressure on a lever the jaws are closed, which bends the metallic plate and pushes it into an interstice between the jaw and a rocking bar, which, under the impulse of the same lever, is made to fold the plate over upon the straight edge.

Claim.—First, providing the folding bar F with a semicircular hub d, grooved to receive a semicircular bearing f, and all arranged substantially as shown to admit of an open space at one end of the bar F, to allow the plate to be adjusted laterally between it and the jaw D, as herein set forth.

Second, the movable or adjustable jaws C D, arranged in connexion with the lever E, as shown, to operate as and for the purpose specified.

Third, the combination of the folding bar F, jaws C D, and lever E, all arranged for joint operation as and for the purpose herein set forth.

No. 37,630.—JAMES S. MARSH, of Lewisburg, Union county, Penn.—*Improvement in Harvesters*.—Patent dated February 10, 1863.—In this harvester the revolving reel bars and rake are rotated by attachment to a horizontally moving disk or head, and are elevated and depressed by contact with a curved surface against which they slide in their revolution and by their being linked together. The disk wheel, upon which the reel and rake shafts are mounted, revolves upon a shaft attached to the inner bearing of the driving wheel, and the latter is brought into and out of gear with the raking mechanism by a sliding pin which engages the loose bevel pinion operating the disk wheel. The grain gatherer which projects from the inner front corner of the platform is made adjustable towards or from the grain, according to the height and strength of the straw which determines the ability to draw in grain from the side.

Claim.—First, the linking devices described, or their equivalents, applied to the arms of the raking apparatus, substantially as described.

Second, the adaptation of a raking and reeling apparatus combined, which revolves entirely around a vertical centre, for application to the inner side of the draught frame of a harvester at a point below the top of the drive wheel, substantially as and for the purpose set forth.

Third, the use of the inner bearing of the drive wheel as the support of the centre on which the combined rake and reel revolves, substantially as described.

Fourth, the construction of the shaft or centre P of the rake and reel, and the inner segment of the drive wheel in one piece, in the manner described.

Fifth, the combination of the cam R, hinged rake and reel bars and adjustable links, so as to keep the rake and reel bars firmly in control with the grain in the field and on the platform, substantially as set forth.

Sixth, the arrangement of the sliding and turning spring pin p, incline p², loose bevel pinion Q, and the raking and reeling apparatus, substantially as described.

Seventh, the adjustable grain guard K, constructed substantially as described, and applied to the inner front corner of the draught frame, for the purpose set forth.

No. 37,631.—JAMES S. MARSH, E. and C. C. SHARKLEY and PETER BEAVER, of Lewisburg, Union county, Penn.—*Improvement in Harvesters*.—Patent dated February 10, 1863.—The invention consists in the proportion and adaptation of the parts to produce a more perfect effect; but it presents no salient feature for description, and can be understood by comparison of the claim and drawings.

Claim.—First, the joint of the pitman and sickle constructed as described, in combination with the guide 10, or its equivalent, for the purpose set forth.

Second, the combination of the grain guide or guard K, and the standards of the reel and the reel, substantially in the manner and for the purpose described.

Third, the combination of the seat base C², arranged over the drive wheel, with the inner grain guard or guide K, whereby the raker can conveniently reach and rake off the grain at the front inner corner of the platform, as set forth.

Fourth, the arrangement and combination of the hollow bevel wheel s, internally toothed

ratchet z, and spring w, with the pinion shaft V, and lever F; the whole constructed as described and for the purpose set forth.

Fifth, the combination of the adjustable platform L M, bolt t, adjusting aperture t', and guide slot s, and the adjustable back beam Q, arranged on springs, substantially as and for the purpose set forth.

Sixth, the springs P P, or their equivalents, applied substantially as described and for the purposes herein set forth.

No. 37,632.—SYLVESTER MARSH, of Chicago, Ill.—*Improvement in Apparatus for Drying Grain*.—Patent dated February 10, 1863.—This apparatus consists of a furnace heated with a non-bituminous coal, with an artificial blast or draught over the incandescent fuel passing back through flues, and distributed into apartments in which are upright drying chambers with perforated sides in which the grain is admitted by hoppers at the top, and falling through the upward blast of heated air, is discharged at the bottom.

Claim.—The method herein described of drying grain, malt, hops, and other similar substances, by the employment in combination with an artificial blast of air over an anthracite coal or coke fire, as set forth, or upright drying chambers composed of perforated plate or its equivalent, and when arranged for operation substantially in the manner and for the purposes hereinbefore specified.

No. 37,633.—RICHARD MONTGOMERY, of New York, N. Y.—*Improved Defensive Armor for Ships and other Batteries*.—Patent dated February 10, 1863.—This armor is built upon an interior siding which has next succeeding it a number of cylinders or columns of rubber and a casing; outside of this is a layer of deeply corrugated plates which are enclosed by the exterior coating of imbricated plates which are notched and dovetailed into each other for mutual support. The imbricated and corrugated plates are held together by rods which pass through the corrugations and the inner projecting portions of the exterior plates, and the two casings, with their intervening columns of rubber, are bolted together in the ordinary manner.

Claim.—First, the imbricated plates E, and corrugated iron D, in combination with the columns or cylinders of vulcanized rubber B, substantially as described.

Second, fastening together the imbricated plate E, and corrugated iron D, by means of the rod F, as set forth, passing through the corrugations of each plate.

Third, the combination of the imbricated plates E with the corrugated iron D, constructed and fastened substantially as set forth.

No. 37,634.—F. A. MORLEY, of Sodus Point, Wayne county, N. Y.—*Improvement in Cog Wheels*.—Patent dated February 10, 1863.—The periphery of the wheel containing the cogs is insulated from the central portion by a stratum or band of a non-conductor of sounds so as not to impart the vibration of the rim.

Claim.—The insulating of the periphery or parts containing the cogs by means of a stratum of a non-conductor of sounds placed between said periphery and the central parts of the cog wheel, substantially in the manner and for the purpose set forth.

No. 37,635.—PETER M. NEEFUS, of New York, N. Y.—*Improvement in Ships' Water Closets*.—Patent dated February 10, 1863.—The object of the invention is to make the joints of water closets more completely air-tight; and this is accomplished by passing the shafts, etc., through stuffing boxes, and facing the valves so as to set more perfectly against their seats.

Claim.—Combining with the shafts, journals, and valves of ships' water closets, substantially as described, stuffing boxes and faced valves, so as to make them air and water tight as herein set forth.

No. 37,636.—JAMES NORTHROP, ZACHARIAH LOOMIS and GILES W. CLARK, all of Homer, Cortland county, N. Y.—*Improvement in Attaching Shafts or Poles to Carriages*.—Patent dated February 10, 1863.—At the rear end of the tongue, pole or shafts, is a cross-head of a cylindrical form, and this sets on a metallic plate with sockets or depressions corresponding to the shape of the head. Single pieces, each adapted to cover one of the arms of the cross and leaving corresponding impressions on their under sides, are then bolted down and the T-shaped head retained, but the shafts, etc., are not restrained from sufficient vertical vibratory movement.

Claim.—The arrangement and combination of the double and single slip bars c and d d, with the corresponding depressions in each, and when the single bar is made whole and connected with the double clip and with the T-headed thill or pole-iron fitting and working in said depressions as and for the purpose above described.

No. 37,637.—DUBOIS D. PARMELEE, of New York, N. Y.—*Improvement in Artificial Limbs*.—Patent dated February 10, 1863.—This improvement consists in attaching the hard rubber socket to the stump by atmospheric pressure; in forming the knee-joint, with an imitation of the natural articulation, by a pair of cylinders rolling on each other and restrained by a locking piece to a double sector-patella, the required elasticity being given by a band connecting the femur and rod which occupies the place of the tibia and fibula; in making

the toe-piece in sections pivoted on a rod and connected above to the instep by a band and clasp, and having beneath an extension which forms the ball of the foot, having elastic bands which are fastened to the hollow of the foot and at the indentation between the toes and the ball of the foot. The prolongation of the instep sets into a recess in the toe-pieces for the latter to rock upon.

Claim.—First, fastening the bucket A of an artificial limb to the stump by means of atmospheric pressure, substantially in the manner specified.

Second, the knee-joint C, constructed of two cylinders *d e*, clasps *f*, double concave sector *g*, and elastic band *h*, all arranged and operating substantially in the manner and for the purpose herein shown and described.

Third, dividing the toe-piece G in two or more distinct parts, substantially as and for the purpose set forth.

Fourth, the arrangement of the stems or tails *m**, projecting from the under side of the toe-pieces *m' m''*, in combinations with the bands *n*, of leather or other suitable material, and with the elastic bands *o*, adjustable by a metal clasp *p*, or its equivalent, all constructed and operating substantially in the manner and for the purpose described.

No. 37,638.—A. N. PARKHURST, of Peoria, Illinois.—*Improvement in Pumps.*—Patent dated February 10, 1863.—This pump may be said to be in three sections, the upper part of wood, having the handle, delivery spout, and a circular metallic flange partly inserted into the body of the pump which supports the pump by resting upon the platform. The next section is the cylinder, which is of baked clay glazed, and contains the plunger whose rod is extended upwards the length of the upper section; this second or earthenware section is fastened to the upper and to the lower section, which consists of piping by bolts which pass through holes in the flange of the middle section, and are there secured by nuts, barbs, and screws to the wooden sections above and below. The lengths of piping are fastened together by clamps of a horseshoe shape with toe-pieces through which bolts are passed and secured.

Claim.—A pump constructed of wood and baked clay, having a cast-metal flange D attached to it as shown, and the part E, which is formed of the baked clay, attached to the wooden part A, and to the upper section I, of the piping, by the bolts *i n*, and the different sections of the piping secured together by means of the clamps G, as herein set forth.

No. 37,639.—ISAAC NEWTON PIERCE, of Darby, Delaware county, Penn.—*Improved Composition for Slate Surface, Blackboards, etc.*—Patent dated February 10, 1863.—Composition: benzine, thirty (30) parts; lampblack, three (3) parts; emery, sixty (60) parts; benzine varnish, forty (40) parts; apply as ordinary paint with a brush.

Claim.—The combination of the ingredients and proportions, substantially as set forth, constituting the composition and its application in the manner and for the purpose specified.

No. 37,640.—BENJAMIN M. PIERCE, New Bedford, Mass.—*Improvement in Making Horse-shoe and other Nails.*—Patent dated February 10, 1863.—This invention consists of a rotary cam on a sliding shaft which, under the influence of a treadle, is so advanced as to make the cam engage a series of hammers or dies which are thereby advanced two at a time from opposite sides upon the nail rod, which is introduced into the central space, being held there by gripping jaws which also withdraw the nail. The nail rod is pushed into the centre between the dies until the end reaches the shoulder of the gauge, the treadle is then depressed, which sinks the gauge, makes the grippers clasp the rod, and the cam to engage the dies upon the nail rod.

Claim.—The combination of the rotary cam D, its sliding shaft B, and treadle-lever C, with a series of hammers or dies G G' H H', a nail-discharging mechanism, and a mechanism for severing or cutting the nail from its rod, the whole being substantially as hereinbefore described.

And in combination therewith the gauge L, arranged and operating substantially as specified.

Also, the combination of each pair of the dies with the other pair thereof, by means of the levers K K, constructed and arranged as described, and the spring I, applied to the dies in the manner and so as to cause the dies of either pair of them to recede from one another while those of the other pair may be in the act of approaching one another.

No. 37,641.—GEORGE M. RHOADES, East Hamilton, Madison county, N. Y.—*Improved Device for Closing Mail-bags.*—Patent dated February 10, 1863.—The mouth of the sack or mail-bag has metallic strips riveted to it forming a flange, underneath which U-shaped metallic fastenings may slip so as to hold the mouth shut. These fastenings are made in sections and linked together so as to give elasticity, and a casing of leather fitted over all as a protection against wet and injury.

Claim.—The mode, substantially as described, of constructing a flexible fastening to a mail-bag and for the purposes set forth.

No. 37,642.—ISAIAH ROGERS, of Washington, D. C.—*Improvement in Bridges.*—Patent dated February 10, 1863.—The span of the bridge is supported by arches of tubes which are made in sections longitudinally and bolted together so as to make a wide projecting flange for strength and stiffness. These flanged tubes are connected by metal plates, and the whole

system forms a compound tubular arch with connecting plates. The abutments are supported by inverted arches to resist the upward thrust of the arch.

Claim.—First, the combination of the hollow flanged tubes A a and connecting plates B, attached together by screw-bolts C, or other suitable means for the formation of arches, in manner substantially as herein shown and described.

Second, in combination with a bridge constructed substantially as above described, the inverted arch L employed in the manner explained to form an abutment between two adjacent arches.

No. 37,643.—LORENZO D. RÜNDELL, of South Westerlo, Albany county, N. Y.—*Improved Pawl for Hay Presses.*—Patent dated February 10, 1863.—This pawl is so made as to be disengaged from the teeth of the ratchet wheel, when desired, by means of making it jointed, the lever being pivoted to the body part and the pawl, bending like a toggle to release it from contact with the tooth of the ratchet.

Claim.—The compound pawl, formed by the lever *g* and body part *d* jointed together at *h*, and acting in the manner and for the purposes specified.

No. 37,644.—PETER SHEARER, of Reading, Penn.—*Improvement in Slide Valves for Steam Engines.*—Patent dated February 10, 1863.—The object of this improvement is to diminish to any desired degree the pressure on the valve in the steam chest, by making it open at top and bringing a cover upon it which shall hold it on its seat with a pressure determinable by the area of the flange of said cover proportionably with the area of the valve opening. The steam is admitted from the cylinder to the steam chest by small valves in the slide valve, when the action of the piston in the cylinder presses the steam upward, but prevent steam from returning from the steam chest to the cylinder as they only open one way.

Claim.—The slide valve E, open at the top with the valves *n n'*, or their equivalent, in combination with the cover F applied to each other, and operating substantially as herein set forth.

No. 37,645.—R. G. SHURTLEFF, of Springfield, Mass.—*Improvement in Tompions for Fire-arms.*—Patent dated February 10, 1863.—The object is to construct a tompion which may be blown from the muzzle of a gun without bursting or straining the piece, when it may become necessary to remove it in that way, owing to its having become fixed in the muzzle. This tompion has a cylindrical axial slot counterbored so as to make a valve seat for a valve which is retained by a spring backed by a plug. When the powder commences to ignite in the gun the valve is raised from its seat and communication established with the outside by means of a cross bore which intersects the main one.

Claim.—The tompion A, with its slits D and cylindrical interior E, having lateral openings *e*, in combination with the valve I and spring K.

No. 37,646.—H. S. SMITH, of Brooklyn, N. Y.—*Improvement in Door Bolts.*—Patent dated February 10, 1863.—This invention consists of a notch in the bolt, which, under the influence of a spring, is made to catch in the plate and retain the bolt in its projected position. The bolt is withdrawn by lifting the notch from the plate, and then slipping it.

Claim.—The notch in the bolt B, in combination with the spring E, fitted on the nob spindle or rod C, the above parts being used in connexion with the plate *a' a'' A*, and all arranged to operate as and for the purpose set forth.

No. 37,647.—CHARLES F. SPENCER, of Rochester, N. Y.—*Improved Preserve Jars.*—Patent dated February 10, 1863.—A seat is formed in the neck of the jar, and upon this a lid rests which is formed of a size nearly to fill the narrow aperture below the seat, and with a recess or hollow all round the edge of the lid into which an annular packing ring is inserted which bears firmly upon the seat.

Claim.—The combined arrangement and construction of the double-flanged cover B, packing ring *b*, and jar-neck seat *a*, one flange *f* of the cover compressing and tightening the packing ring, and the other flange *g* nearly filling and closing the circle within the seat, substantially as and for the purposes herein specified.

No. 37,648.—SAMUEL C. SUMNER, of Boston, Mass.—*Improvement in Stencil Plates.*—Patent dated February 10, 1863.—A stencil plate is prepared with square holes at the points where letters will be required, that is, with a series of square holes the length of the plate, with narrow intervening strips of plate. The letters are all prepared on separate slips, and the required selection being made, the appropriate letters are introduced through slots in the plate, and up again, so as to expose the letter at the opening through the plate where it and its fellows are securely held while in use, and from which they are readily removed when a new combination is required.

Claim.—The holder A, with its holes C, slits *d*, and bars *e*, in combination with the letter plates *g*, for the purpose described.

No. 37,649.—NATHANIEL A. TUCKER, of Burlington, Vt.—*Improvement in Car Coupling.*—Patent dated February 10, 1863.—The projecting end of the draught beam of the railroad car has an incline, up which the connecting link slides, and passing down a curve at the rear of the incline, drops into a hole prepared to receive it. A pivoted lever with a curved

face matching the one traversed by the end of the link is now rotated, and filling the concave or curved surface, confines the link. If the lever be dropped when the link approaches, it is lifted by the pressure, and the link finds its attachment; when dropping into the recess it cannot be removed by draught upon it, but only by the rotation of the lever by hand.

Claim.—Confining a coupling link in a recess located below two matching curved surfaces, one of which is stationary, and the other movable, substantially as and for the purposes described.

No. 37,650.—C. VAN HORN, of Springfield, Mass.—*Improvement in Apparatus for Obtaining Profiles of Submarine Beds.*—Patent dated February 10, 1863.—From a frame extends down a tracing rod, and as it is passed over the track its rising and falling is registered or traced so as to delineate an outline or profile of the bottom.

Claim.—The employment or use of a tracing rod G, fitted within a tube E, or an equivalent guide, and arranged with a sliding frame B, slide D, tracing board C, and a framing A, substantially as shown, so that a series of profiles may be obtained of the surface of the bed F of a river or stream for the purpose of constructing a platform of a configuration corresponding to the bed to rest on the same and receive or support the caissons or foundations of piers, bridges, &c.

No. 37,651.—JACOB C. WALTER, of Leonardville, Madison county, N. Y.—*Improvement in Connecting Shafts or Thills to Sleighs.*—Patent dated February 10, 1863.—The thills are attached to a bar which is made adjustable so as to vary their position relatively as to the track, and also place the animal nearer to or more distant from the sleigh. The transverse lower bar slides forward and backward in slots on the fenders or on the bar connecting the runner with the nearest bench or knee, and an upper bar carrying the clips is made adjustable longitudinally on the lower one, and secured by clamps so as to vary the track of the sleigh relatively to the horse.

Claim.—In combination with the mechanism or its equivalent for changing the relative position of the shafts or thills, laterally, the devices or their equivalents for changing or setting the thills forward or back, substantially as described.

No. 37,652.—J. B. WAYNE and WILLIAM EVERED, of Detroit, Michigan.—*Improvement in Rock Drill.*—Patent dated February 10, 1863.—The stem is raised by the cam, which, in rotating, elevates the roller on the sleeve and causes a sleeve to pinch the drill stem; as the cam revolves, the roller reaches the notch into which it falls, and releasing its cross lift on the drill stem, the latter falls, while the sleeve descends in contact with the face of the cam ready for another stroke.

Claim.—The manner of tripping the stem by means of the notched or double cams C, thereby allowing the lever or pincher to drop, while the fulcrum-sleeve is supported, and gradually to descend on the cam, substantially as set forth.

No. 37,653.—WILLIAM WHARTON, Birmingham, England.—*Improvement in Springs for Carriages.*—Patent dated February 10, 1863.—These springs are formed with long depressions on their upper and lower sides into which supplementary springs are placed, being enclosed by the leaves above and below them, and in turn preserving the leaves from lateral displacement.

Claim.—A combination of spring plates secured together or imbedded with each other by the peculiar form or forms of the edges thereof, such plates not being dependent on slots and pins or studs to secure them in position laterally, essentially as hereinbefore described.

No. 37,654.—WILLIAM WHARTON, jr., of Philadelphia, Penn.—*Improvement in Tracks and Switches for Street Railways.*—Patent dated February 10, 1863.—The object of this arrangement is to provide means at the terminus or station of a street railway, whereby the incoming of a car shall set the switch right for the departing car which is on a parallel track, and starts with the incoming of the former, again leaving the switches set for the next incoming car, and dispensing with the use of assistants. The precise detail of the frogs and switches will be readily understood from the illustration.

Claim.—The combination and arrangement, substantially as described, of the tracks A A', B B', switch z, tracks E E' and F F', for the purpose specified.

No. 37,655.—JOHN W. WHEELER and HENRY S. BISHOP, of Cleveland, Ohio.—*Improved Clothes Wringing Machine.*—Patent dated February 10, 1863.—The improvement is in the construction and arrangement of the rollers, which consist of a metallic central shaft with a fluted casing of wood covered by alternate layers of ply and rubber to the size or thickness required. The lower roller has a disk or flange at the end, which serves as a guide to the upper roller.

Claim.—First, covering the body of the roller shaft with fluted wooden cylinders, in combination with the circular flange M, as specified.

Second, the curved levers Q centrally pivoted to the one side of the slot O, the faces of the slot and of the levers being at right angles to a radial line from the centre of the tub, and operating as and for the purpose herein set forth.

Third, extending the flanges M beyond the surface of the rubber, for the purpose of supporting the ends of the rollers, in the manner herein described.

Fourth, the combination of the elastic rollers, consisting of alternate layers of "ply" and rubber, the fluted cylinders and central shaft, when arranged and operating conjointly as and for the purpose herein set forth.

No. 37,656.—JOHN D. WILBER, of Poughkeepsie, N. Y.—*Improvement in Mowing Machines.*—Patent dated February 10, 1863.—In this machine the tongue is located centrally and connected by semicircular hounds with the axle; upon the axle is pivoted the frame to whose front edge the cutter bar is attached; this is likewise supported by chains from the tongue hounds. The points of draught of the single-trees are removed apart beyond the cutting width of the machine. The driving wheels are both geared to the lever which operates the cutter.

Claim.—First, the main frame C, constructed and fitted on the axle A, as shown, in combination with the semicircular bar G, also fitted on the axle A, and having the suspension chains e e attached to it at some distance on each side of the draught pole F, so as to bring the said chains as nearly vertical as possible, all as herein set forth.

Second, the combination of the draught pole F attached centrally to the main frame; the cutting apparatus D E, placed centrally in front of and driven by both the wheels B B and a double-tree R, of such length and so placed as to separate the single-trees S S to a distance greater than the length of the cutting apparatus, all as herein shown and described, and for the purpose set forth.

No. 37,657.—GEORGE B. WIGGIN and J. W. HOARD, of Providence, R. I.—*Improvement in Grinding Dies for Nail Machines.*—Patent dated February 10, 1863.—The dies are fixed in the rest at a suitable angle so as to allow for the taper character of the nail, and are then advanced towards two grinding wheels consecutively, one of which has a flat surface and prepares the face of the die, and the other has a narrow rounded face to make the head or hollow on the face of the die, wherein the nail rests as it is gripped while being headed.

Claim.—The combination and arrangement of the two grinding wheels A and B with the movable carriage E, substantially as described, for the purposes specified.

No. 37,658.—HENRY BURT, of Newark, N. J., assignor to Himself, CALEB S. TITSWORTH, and THOS. W. LOWE, of the same place.—*Improvement in Water Meters.*—Patent dated February 10, 1863.—This invention consists of a cylindrical chamber, in which a piston traverses, coming in contact with an arm or a vertical rod, and by the impact of one V-shaped edge upon another moving a valve which is long and narrow and traverses sideways, exposing a large opening by very limited motion.

Claim.—First, effecting the movement of the valve by means of two pieces with V-shaped ends and a spring, combined with the piston, to operate substantially as herein described.

Second, combining the valve with the lever G, or its equivalent, on which one of the V-shaped ends is formed, or to which it is attached, and which is subject to the direct action of the piston, by means of a lever E, between which and the said lever G, or its equivalent, lost motion is provided in order to effect the whole movement of the valve very quickly, substantially as herein described.

No. 37,659.—F. B. De KRAVENAN, of France, but residing in New York, N. Y., assignor to JOSEPH H. BAILEY and GEORGE A. JONES, of the same place.—*Improved Mechanical Movement for Lamps.*—Patent dated February 10, 1863.—The object of the invention is, by a mechanical movement, to increase the draught of air to a burner, and avoid the use of a chimney. This is accomplished by the use of a spring and gearing, similar to clock-work, which drives a shaft armed with inclined wings or arms, and located in the roof or flue of the lamp, drawing with some violence a current of air through the lamp.

Claim.—The general arrangement and combination of the mechanism, herein described, and its use and application for the purposes set forth.

No. 37,660.—Suspended.

No. 37,661.—LOUIS D. GERARDIN, of Jersey City, N. J., assignor to Himself and WILLIAM HOWETH, of the same place.—*Improvement in Explosive Projectiles for Ordnance.*—Patent dated February 10, 1863.—The forward conical head and the base plate are fastened together by an axial bolt which clamps firmly together the sets of concentric rings forming the walls of the chamber containing the charge.

Claim.—Having the outer wall of the shell composed of a series of rings placed one upon the other, and clamped together between the head and base plates, substantially as herein shown and described.

No. 37,662.—GEORGE GOEWEY, of Philadelphia, Pa., assignor to Self and WILLIAM BAILEY, of same place.—*Improvement in Corn-shellers.*—Patent dated February 10, 1863.—The corn is passed in at the upper end of the inclined chamber and exposed to a pair of parallel revolving rollers armed with spiral rows of teeth, and to a spring concave, armed in like manner, between which the corn is shelled off, dropping between the rollers; the cob passes on and is discharged at the lower end of the machine.

Claim.—The employment of two rollers B B, both revolving in one direction and having

two or more rows of teeth arranged spirally for the purpose of revolving the ears of corn, said rollers being used in combination with a concave E, having teeth thereon arranged spirally, the teeth on the concave and the teeth on the rollers operating conjointly to shell the corn from the cob and pass the latter out at the tail of the machine.

No. 37,663.—JOHN JOHNSON, of Roxbury, Mass., assignor to Self and HERBERT D. WARD, of Cambridge, Mass.—*Improvement in Packing for Piston and other Rods*.—Patent dated February 10, 1863.—The arc-shaped plates, which, fitted together, form concentric packing rings around the piston rod, are made to occupy a recess in the stuffing-box cover, so that the steam may be admitted behind to make them grasp the piston rod.

Claim.—The arrangement of the packing rings within the gland or stuffing-box cover, substantially as herein described, whereby the gland or cover is made to constitute a box or case to contain the said rings, and in which they can be applied and removed, and provision is made for the admission of the steam or other fluid that is to be confined to act upon the outer peripheries of the rings, substantially as and for the purpose herein specified.

No. 37,664.—MARVIN SWEET, of Sidney, Delaware county, N. Y.—*Improvement in Butter Workers*.—Patent dated February 10, 1863.—This machine consists of a trough to contain the butter and a revolving ladle of an oval section on a shaft transversely above it. The trough is slowly fed along under the ladle by means of a spiral cam on the ladle shaft, which engages the pins on the face of the pinion, operating the rack on the side of the trough.

Claim.—The combination of the slowly-moving trough A with the revolving "ladle" N, formed of a smooth piece of wood or other suitable material, without protuberances, when the said parts are constructed and arranged to operate together in the manner and for the purposes herein specified.

Also, the combination of the screw wheel S, double cog-wheel 8, and rack 7, employed to communicate motion from the revolving "ladle" N to the sliding trough a of a butter-working machine, as set forth.

No. 37,665.—AMOS WESTCOTT, of Syracuse, N. Y.—*Improvement in Device for Preventing Door Keys from being Turned*.—Patent dated February 10, 1863.—The shank of the key is squared, so that a squared recess in a sliding plate attached to the scutcheon of the lock may be slipped down upon it to prevent its being revolved.

Claim.—The combination with the curved, elastic, slotted, sliding plate of the handle k, pin h, and hole h', employed in the manner described, to secure the said sliding plate in the position for locking the key, but admit of its ready movement from within.

No. 37,666.—GEORGE L. WITSELL, of Philadelphia, Pa., assignor to Himself and CLEMENT CRESSON, of same place.—*Improved Washing and Wringing Machine*.—Patent dated February 10, 1863.—The suds-box has two sloping sides and vertical ends having slats; a wedge-shaped dasher, which vibrates upon its edge, is secured in the angular bottom of the box: the sides of the dasher are perforated, and it is manipulated by a handle, being rocked back and forth, bringing a pressure on the clothes between itself and the sides of the box.

A discharge roller is rigged out on a lever from the machine; this carries the clothes as they pass from the wringer and elevates the lower roller against its fellow.

Claim.—First, the vibrating dasher D, composed of the perforated boards d' and angular piece or partition e, or its equivalent, when constructed, combined with, and operating within a reservoir, substantially as and for the purpose described.

Second, the arms H H, connected together by the cross-bar I, arranged on and hung to the reservoir and connected to the sliding boxes i i of the roller G, substantially as and for the purpose herein set forth.

No. 37,667.—THOMAS L. SHAW, of Omaha city, Nebraska Territory.—*Improvement in Balloons*.—Patent dated February 10, 1863.—This balloon has flattened sides to prevent rotary motion, and the car is suspended by netting. It has an apparatus for revolving the balloon independently of the car, and operated by a shaft projecting down within reach of the aeronaut. A gas chamber is carried in the car for charging the balloon, and a steering wheel at the stern of the boat-shaped car. To descend, the gas is pumped out of the balloon and condensed into the gas chamber.

Claim.—A balloon constructed, arranged, and operated substantially in the manner described.

No. 37,668.—JOHN ARMITAGE, of Troy, Rensselaer county, N. Y.—*Improvement in Railroad Chairs*.—Patent dated February 17, 1863.—This invention consists in appliances for securing the rail in its position in such a way that it may be removed when necessary without detaching the chair from the sleeper.

Claim.—The combination of the fixed and hinged jaws B E and screw bolts I I with a base-plate A, arranged substantially as and for the purpose set forth.

No. 37,669.—GEORGE BEDSON, of Manchester, England.—*Improvement in Galvanizing Wire*.—Patent dated February 17, 1863.—The heated wire is drawn directly into the cleaning bath, and thence to the bath of molten metal.

Claim.—Drawing the material in a heated state from the annealing oven directly into the cleaning bath, and thence, when galvanizing is to be done, directly into the bath of molten metal, substantially as herein shown and described.

No. 37,670.—BENJAMIN S. BENSON, of Baltimore, Md.—*Improvement in Moulding and Casting Pipes*.—Patent dated February 17, 1863.—This invention consists in devices for supporting the lower end of the core, preventing the deflection of the central portion of the small cores, and preventing the entrance of sand, metallic oxide, or other foreign matter in the act of pouring.

Claim.—First, the annular flanged base-plate D d employed in the described combination with the annular plate C, and constituting a seat to guide and hold the lower end of the core, as explained.

Second, the detachable anchor F f, constructed and applied substantially as described to prevent the deflection of the intermediate portion of the core.

Third, the shield G, employed in the manner explained, to exclude sand, metallic oxide, or other foreign matter, and permit the entrance of the molten metal.

No. 37,671.—SAMUEL W. BIDWELL, of Hartford, Conn.—*Improvement in Sash Fasteners*.—Patent dated February 17, 1863.—The invention consists in a swinging catchpiece, so pivoted as to gravitate towards the sash, and provided with two projections, one in the range of each sash, locking them both in one motion by projecting through perforations in a plate attached to the edge of the sash.

Claim.—The double-pronged, swinging catchpiece e in combination with the perforated suspension plate a, the whole constructed substantially in the manner hereinbefore described, and operating to lock both sashes of a window, as set forth.

No. 37,672.—S. C. BRINSER, of Middleton, Pa.—*Improvement in Horse Rakes*.—Patent dated February 17, 1863.—In this invention the forward draught of the team is used to elevate and clear the teeth at the proper instant, the weight of the driver holding them down at other times. A slight motion of the lever brings either of these forces into controlling action.

Claim.—The combination of the treadle K, levers J H, and connecting rod I, constructed and arranged as specified, with a horse rake in which the draught is applied to the thills or bed, and the latter hinged to the rear and upper part of the axle, all as herein shown and described and for the purposes set forth.

No. 37,673.—THEODORE W. BURGER, of Jersey City, N. J.—*Improvement in Boiler Feeders*.—Patent dated February 17, 1863.—This feeder consists in an arrangement of three chambers, one always full, communicating with another which is termed the measuring chamber, and a third communicating with the second, which has communication with the boiler; the first and second are united by a hollow slide-valve which, as it descends, opens communication between the measuring chamber and boiler, and by ascending severs that connexion, but again fills the measuring chamber. The valve rod is connected with the engine in any suitable way.

Claim.—The arrangement of the chambers d c e, valve B, and ports h i, substantially as and for the purpose herein specified.

No. 37,674.—BENJAMIN CLOUGH, of Natick, Middlesex county, Mass.—*Improvement in Machines for Shelling and Winnowing Corn*.—Patent dated February 17, 1863.—The corn is fed in between the revolving toothed cylinder and the elastic toothed concave, where the corn is shelled and passed down through a riddle into the inclined floor, whence it passes out of the machine, a blast from a fan driving away light impurities. The cobs are carried up to the cob eduction passage and are removed. Stray grains, which may have been carried up with them, are allowed to fall through the second riddle in the floor of the cob-eduction passage.

Claim.—Improved arrangement of the two grids D E, and the cob and kernel eduction passages F I, with the chute H, the elastic concave C, the stripper B, and fan blower K, the whole being arranged as shown in the drawings and as above described.

No. 37,675.—JOHN WEBSTER COCHRAN, of New York, N. Y.—*Improvement in Percussion Fuse for Explosive Shells*.—Patent dated February 17, 1863.—At the forward part of the shell is the ordinary cylindrical cavity communicating with the interior; this is occupied by a hollow piston whose forward end is shaped so as to form a nipple for a percussion cap; from the rear of this piston extends a contractile chamber in shape like a frustum of a cone, and behind this again is a heavier conical mass, which is deeply imbedded in the powder with which the shell is charged. In the act of firing this cone is torn off, the concussion brings the cap on the end of the piston against the plug, and the fire communicates through the hollow piston with the explosive material with which the shell is charged.

Claim.—First, the hollow, tapering, and contractile material G, arranged to operate in connexion with the striker of a percussion shell, substantially in the manner and so as to secure the advantages herein set forth.

Second, the loaded cap or mass G, arranged to operate in connexion with the striker D, and tapering, contractile material F, in the manner set forth.

No. 37,676.—L. O. COLVIN, of Philadelphia, Pa.—*Improvement in Cone Milker.*—Patent dated February 17, 1863.—The pan is extended at the end of a rod which is fastened by a ring and strap to the body of the operator; inside of the pan is a cup or piston with a flexible margin attached to the upper edge of the pan, and this piston is elevated or depressed by a lever attached to the aforesaid rod; communicating with the space between the piston and the pan are elastic tubes, strengthened by a coil of spring wire, into which are inserted the teats of the cow, and the lever depressed; the teat tubes are attached to the pan by hooks which slip over a flange on legs projecting from the pan.

Claim.—First, the pan or receptacle A provided with the arm F having the straps G H attached to it, in combination with the India-rubber or other suitable flexible cover or piston C, lever E, and teat tubes I, all arranged to operate substantially as and for the purpose herein set forth.

Second, providing the teat tubes I each with a spiral wire I', as and for the purpose herein specified.

Third, the attaching of the teat tubes I to the horizontal tubes H' of the pan or receptacle A by means of hooks i i attached to rings J on the lower ends of the teat tubes, and which hooks are fitted over the edges of plate g, secured to the part f of the tubes H', as herein set forth.

No. 37,677.—L. O. COLVIN, of Philadelphia, Pa.—*Improvement in Breast Pumps.*—Patent dated February 17, 1863.—The improvement consists in the attachment to the ends of hinged rods, like shears of a pan and a piston, attached by a flexible margin to the edge of the pan; the space between them communicates with the interior of the nipple tube, and the action of the pump draws upon the contents of the breast, which, by the next motion, is discharged into the receptacle below by the opening of the valve in the bottom of the pan.

Claim.—The cup A provided with the valve B in its bottom, in combination with the piston I, constructed of India-rubber or other flexible material, nipple tube E, and milk receptacle C, with the handle F, and lever G, or their equivalents, all arranged substantially as and for the purpose specified.

No. 37,678.—L. D. COWLES, of Armada, Macomb county, Mich.—*Improved Clasps for Harness Tugs.*—Patent dated February 17, 1863.—In this clasp, which is intended as a substitute for the tug buckle, the two ends of the tug are clamped between plates, the movable one being fastened to the other by means of lever plates having eccentric slots, and working in journals attached to the latter; these lever plates fold inwards and over each other.

Claim.—The two plates A F, in combination with the lever plates E E, provided with the eccentrics c c, and connected to the plate F through the medium of the screws C and rods D, all arranged substantially as and for the purpose herein set forth.

No. 37,679.—RUEL DEAN, of Boston, Mass.—*Improvement in Railroad Track-Clearers.*—Patent dated February 17, 1863.—Beneath the frame of the car is suspended by chains a plough and a pair of scrapers, one for each track. A spring gives the required pressure and a lever is so arranged as to lift the contrivance clear of obstructions when necessary.

Claim.—The suspended plough A, with its scrapers d, in combination with the spring H and lever F, or its equivalent, constructed and operating in the manner substantially as set forth.

No. 37,680.—JOHN M. DE BOLLE, of Philadelphia, Pa.—*Improvement in Valves for Hose Nozzles.*—Patent dated February 17, 1863.—This is an interior valve which is raised on a vibrating arm by a lever on the outside which communicates through the valve-box with the interior. The valve is of a conical or bevelled form, with a flange shod with rubber to fit the valve-seat, and is kept closed by a spring which actuates the exterior operating lever.

Claim.—The application to hose pipes of the valve disk A, the same consisting of the conical or bevelled edge C, the flange F, and the thin gum-elastic ring E, constructed and arranged in relation to each other as set forth, and operated together by means of the carrier G on the lever D, as and for the purpose specified.

No. 37,681.—DANIEL DE GARMO, of Rochester, N. Y.—*Improved Self-locking Safety Hook for Tow-Lines.*—Patent dated February 17, 1863.—The swing hook to which the tow-line is attached is retained, when down, by a bolt which is projected by a spring till it catches on the hook. The spring bolt is retracted by a lever when the swing hook may be raised and the tow-line withdrawn.

Claim.—The combination of the spring bolt D with the lever C and the swing hook B, substantially as and for the purpose specified.

No. 37,682.—WILLIAM E. DOUBLEDAY, of Brooklyn, N. Y.—*Improvement in Forming Bell-crown Hats.*—Patent dated February 17, 1863.—This invention consists in a method of forming bell-crowned hats, bloomers, &c., by a contractile band employed to give the bell shape after the hat has been pressed by dies with a straight-sided crown.

Claim.—The method herein specified of forming bell-crowned hats, bloomers, &c., by an

elastic band applied around the crown to draw the same to the die or block, after the general shape has been given to the hat or bloomer between dies, as specified.

No. 37,683.—GEORGE ELBRIG, of Cincinnati, Ohio.—*Improvement in Chimney Top.*—Patent dated February 17, 1863.—The sides of the chimney top are provided with lateral openings and doors acting under the impulse of wind from the inside, and the interior of the chimney top has plates or projections, which serve to deflect a downward current of air towards the lateral openings provided for its egress.

Claim.—The combination of the self-acting doors A' with the openings b and plates a, in the manner and for the purpose herein shown and described.

No. 37,684.—JAMES M. EVELETH and GEORGE C. MOORE, of Oroville, Butte county, Cal.—*Improvement in Sliding Hinges.*—Patent dated February 17, 1863.—The plate of this hinge which is attached to the post has raised flanges, within which is a sliding plate carrying the pintle to which the other member of the hinge and the gate are attached. This sliding plate is moved back and forth by a thumb-screw, which adjusts it to any shrinkage or sagging that may have occurred.

Claim.—A sliding hinge, the use and purpose of which is to overcome the disadvantage arising from the shrinking and swelling of gates and doors, as herein described.

No. 37,685.—R. B. FITTS, of Philadelphia, Pa.—*Improvement in Preparing Night-Soil for Manure.*—Patent dated February 17, 1863.—The process consists in deodorizing and arresting fermentation, in suitable vats, for the more ready separation of the aqueous parts. The nitrogenous particles of the aqueous solution are then precipitated and absorbed by chemicals, evaporated and returned to the more solid portions, and the whole rendered pulverulent by sifting and mixing with anhydrous sulphate of lime, charcoal, ashes, or other absorbent.

Claim.—The improved method or process described, for producing desiccated night-soil for agricultural purposes.

No. 37,686.—CHARLES GOLDTHWAIT, of South Weymouth, Mass.—*Improved Clothes-Drying Apparatus.*—Patent dated February 17, 1863.—This consists of a supplemental frame of any shape suspended from a clothes-line by hooks or hangers.

Claim.—The employment or use of the hangers or supplemental clothes-frames C, provided with hooks d, and constructed in such a manner that the clothes may be secured upon them, and the hangers or frames suspended on the line A, as herein set forth.

No. 37,687.—ALEXANDER GORDON, of Rochester, N. Y.—*Improvement in Straw Cutters.*—Patent dated February 17, 1863.—The straw is fed to the revolving cutter by an endless belt whose links are armed with teeth and whose driving drum is rotated by a pinion pivoted to the end of a toggle formed of two links, at whose intersection is a spring which keeps the drum elevated against the upper pressure roller; the feeding drum being thus hung upon the toggle, its elevation and depression are in an arc of a circle, and its pinion is constantly in gear with the wheel from whence it derives its motion.

Claim.—First, the employment in cutting boxes of the feeder belt B, when constructed, arranged, and operating in the manner specified.

Second, the yoke F and straps g, as specified, for the purpose of keeping the pinions p and p' in the same relative position as the latter moves up or down.

No. 37,688.—ELANDER HEATH, of San Francisco, Cal.—*Improved Amalgamating Machine.*—Patent dated February 17, 1863.—This machine consists of a cylinder which rotates upon an axis diagonal with the true cylindrical axis, and is formed with a corrugated interior surface, the corrugations running parallel with the true axis and across the end; it is also provided with annular ribs, which project from the inside of the cylinder in a plane parallel to the heads and at right angles to the axis of the cylinder. The effect of the obliquity of the axis of rotation is to make the contents slide and roll as the machine is rotated. A lid admits to the interior, and the latter is also entered by a pipe.

Claim.—The employment of a cylinder constructed internally with corrugations and ribs arranged and described, and rotating upon its diagonal axis.

No. 37,689.—R. HEINISCH, of Newark, N. J.—*Improvement in Shears.*—Patent dated February 17, 1863.—The invention consists in the shape of the blades, so as to bring the cutting edge to the desired and specified line and relation to the axis of vibration, as is specifically detailed in the claim.

Claim.—First, the shears, the upper blade of which is formed out of line with the shank, as described, being so bent that the cutting edge shall fall nearly or quite in line with the rivet or clamp-screw and cross the shank in a diagonal line in its direction; and so that when the shears are closed the back of the upper blade shall present a lip-like elevation coincident with such recession of the blade, all as shown and described.

Second, in combination therewith, the extension wedges as shown and described.

No. 37,690.—ALBERT N. HENDERSON, of Buffalo, N. Y.—*Improvement in Lamp*.—Patent dated February 17, 1863.—Around the wick tube is a larger tube, leaving an intervening space which is open at the top and connects with the interior of the body of the lamp by small holes.

Claim.—The combination of the said larger tube around the said wick tube so as to afford the said space, without air holes, between them, in connexion with the said small holes connecting said space with the interior of the body of the lamp, in the manner and for the purposes set forth.

No. 37,691.—SAMUEL SHERMAN HICKOK, of Marlborough, Monmouth county, N. J.—*Improvement in Potato Diggers*.—Patent dated February 17, 1863.—This potato plough consists of a wide share and point, which, running under the hill, raises it and allows it to pass back to a shaking grate, which is kept in motion by connecting links and levers engaging with the cam teeth on the shaft of a grooved roller which precedes the share. An arched bar from the standard to the share raises the vines or weeds so as not to clog the operation of the grating which is separating the potatoes from the soil.

Claim.—First, the vibrating prongs *l l*, fitted as specified, in combination with the mould-boards *h* and nose *i*, for the purposes and as set forth.

Second, the bar *k*, curved forward and downward as shown, and extending in front of the mould-boards to insure the raising of the weeds and vines sufficiently to prevent their clogging, as set forth.

Third, the arrangement of the compound levers *o* and *r* and links *m* and *q*, in combination with the wheel *e* and cams *t t*, for giving motion to the vibrating prongs, as set forth.

No. 37,692.—BENNET HOTCHKISS, of New Haven, Conn.—*Improvement in Drop Presses*.—Patent dated February 17, 1863.—The drop is raised by its strap, which is pinched between two rotating pulleys, one of which is eccentric and is held firmly against the strap by pressure upon a lever and retained there by a latch, the release of the lever allowing the drop to fall. The drop may be caused to fall at any prescribed height by stops which rise with the weight and lift the bar to which the inner end of the lever is pivoted, and trip the catch which retained the lever down and held the eccentric pulley fast against the lifting strap.

Claim.—First, the eccentric pulley *F*, in combination with the pulley *E*, when the same operate in the manner and for the purpose substantially as herein set forth.

Second, the eccentric pulley *F* and drop *A*, when the same are combined substantially for the purpose as herein specified.

Third, the lever *L* and latch *f*, when the same are combined in the manner described with the eccentric pulley *F*, for the purpose specified.

Fourth, the combination of the lever *L* and latch *f* with a drop, substantially as herein described.

Fifth, the rod *M*, with its adjustable stops *h* and *i*, in combination with the lever *L* and latch *f*, substantially in the manner and for the purpose herein set forth.

Sixth, the adjustable trip in combination with a drop, substantially as and for the purpose specified.

No. 37,693.—JOHN C. HOWE, of Worcester, Mass.—*Improvement in Revolving Fire-arm*.—Patent dated February 17, 1863.—From the rear of the barrel projects a spring latch, which serves to retain the chamber on the central pin when the barrel is disconnected from the upper part, and to lock upon the upper part of the frame when the barrel is returned to its normal position, being assisted in maintaining its place by the hammer. The axis pin is firmly attached to that part of the stock which vibrates with the barrel, and when the latter is disconnected it may be used to draw charge or remove obstructions from the chambers. A detachable recoil plate, with a spring in its rear, is situated behind the chamber, and through a slot in this plate the pawl works, rotating the chambers under the impulse of the hammer.

Claim.—First, the spring latch *E*, constructed and applied to serve the two purposes of connecting and locking the barrel to the upper part of the frame and of securing the cylinder on the axis pin when the barrel is disconnected from the upper part of the frame, substantially as herein described.

Second, so constructing the rear end of the spring latch and the head or nose of the hammer that when the hammer is down it aids in securing the spring latch in connexion with the frame, substantially as herein specified.

Third, so constructing an axis pin and applying the same, in combination with the barrel or frame, that while remaining attached to the barrel or frame it may be used to expel from the chambers of the cylinder the cartridge cases or shells or any other matter which may remain therein after firing, substantially as herein described.

Fourth, though I do not claim a movable recoil plate, I claim the combination of the detachable recoil plate *D* and the spring *t*, inserted in the front of the frame and secured by a screw *u*, covered by the said recoil plate, substantially as and for the purpose herein described.

No. 37,694.—SETH C. HOWES, of South Chatham, Barnstable county, Mass.—*Improvement in Bench Planes*.—Patent dated February 17, 1863.—The construction of this plane

will be readily perceived from the illustration. It consists of a method of setting up the plane-bit by means of a screw, it being retained in the desired position by the rotation of another screw which, by the impingement of its end on the top of the plane-bit, presses the cap against the upper plate of the box in which the bit works.

Claim.—The rod *F*, having the screw *d* cut upon it, and provided with the nut *E*, with spurs *b* on its outer surface to fit in holes in the plane-iron *C*, in combination with the cap *D*, provided with the screw *K*, and trunnions *e e*, the latter being fitted in adjustable bearings *f f*, which are placed in slotted plates *J J*, and retained therein at the desired point by the serrated edges of the bearings, and the slots or any equivalent means, all arranged substantially as set forth.

No. 37,695.—R. H. JEWETT, of Mount Sterling, Brown county, Ill.—*Improved Defensive Armor for Ships and other Batteries*.—Patent dated February 17, 1863.—Over the wooden sides of the vessel, and confined thereto by bolts, are an outer and inner plate of iron, and the space between these is occupied by a network of iron cells, or corrugated plates, with their edges exposed to and in contact with the outer and inner plating, each space thus formed being independent.

Claim.—Having the filling plates *C* made in corrugated form, united at the angles *a*, and placed endwise and clamped between the plates *A B*, as herein shown and described, so that independent air-chambers *h* will be formed by said plates, while the plates *C* will resist all exterior pressure on their ends, like pillars, thus securing great strength and buoyancy, all as set forth.

No. 37,696.—FREDERICK C. KRAUSE, of New York, N. Y.—*Improved Composition for Porous Stone, for Filtering and other Purposes*.—Patent dated February 17, 1863.—Composed of sand, 4 to 6 pounds; marble dust, 3 to 6 ounces; silicate of soda, or potash, 1 pound. Made plastic with water, and baked in a kiln.

Claim.—The employment or use of a composition for porous stone made of the ingredients herein specified, and mixed together in about the proportion and substantially in the manner described.

No. 37,697.—CAROLINE LEARNED, of Columbus, Ohio.—*Improved Nitrated Mercurial Ointment*.—Patent dated February 17, 1863.—One ounce quicksilver; nitric acid, two ounces; when dissolved add one pound of lard, two drachms of pulverized alkamet root, one drachm of beeswax, previously mixed. When these ingredients are compounded, add one ounce of oil of sassafras.

Claim.—The herein-described vermin ointment, composed of the ingredients named, and compounded in the manner specified.

No. 37,698.—JACOB LUTHER, of Walnut Fork, Jones county, Iowa.—*Improvement in Water Wheels*.—Patent dated February 17, 1863.—This improvement consists in the form of the buckets which are intended to receive the percussive force of the water and then to allow it, deflected by its impingement, to escape in a contrary direction, bearing with some continued pressure upon the recurved surface of the tail ends of the buckets, the water being introduced in a gradually narrowing space.

Claim.—The buckets *G*, constructed as described, so as to have at the face sides three different surfaces *h i j*, and attached to the verge or periphery of the head or body *e* of the wheel, in combination with the case *C*, formed of two parts *a a*, arranged or disposed relatively with the wheel, as shown, so as to form two water induction passages *b b*, and two curved taper water passages *c c*, substantially as and for the purpose herein set forth.

No. 37,699.—DAVID LYMAN, of Middlefield, Conn.—*Improved Clothes Wringing Machine*.—Patent dated February 17, 1863.—The improvement consists in the construction of the springs which are imposed upon the journal boxes of the upper roller to give the requisite pressure for wringing the clothes. Two tapering pieces are used, bringing their bulging surfaces together so that they may rock on each other, the ends of the lower piece resting upon the said journal boxes and those of the upper one being depressed by thumb-screws in the upper bar of the frame.

Claim.—The within-described arrangement of the tapering and freely-rocking springs *M N*, relatively to the bearing boxes *C C*, and screws *D D*, or their equivalents, for the purpose herein set forth.

No. 37,700.—JOHN TRACY MYGATT, of Binghamton, Broome county, N. Y.—*Improvement in Locks*.—Patent dated February 17, 1863.—The invention consists in placing a collar with an oblique face on the arbor, by the rotation of which the stud which engages with the bolt of the lock shall be withdrawn so that the rotation of the handle shall not affect the bolt.

Claim.—The collar *H*, placed loosely on the arbor *E*, and provided with an oblique end *d*, in combination with the oblique end *e* of the shank *b* of the knob *F*, pin or catch *e*, the spring *J*, and cap *I*, all arranged with the arbor *E*, to operate as and for the purpose set forth.

No. 37,701.—AMOS NUDD, of Waupun, Fond du Lac county, Wis.—*Improvement in Lateral Waste Valves for Pumps*.—Patent dated February 17, 1863.—An orifice is made in the stock, and a gate or valve sliding in a socket opens or closes the aperture by motion from a rod, which rises to a height above ground to be conveniently grasped.

Claim.—The combination and arrangement of the rod, sliding gate and socket with the stock of the pump, when operating in the manner and for the purposes substantially as set forth.

No. 37,702.—OLIVER PEARL, of Lawrence, Mass.—*Improvement in Flyers of Spinning Machines*.—Patent dated February 17, 1863.—The invention consists in making the sides or arms of the flyer of flattened wire so as to present the edge to the air and attaching them to the nose or upper bearing by brazing or otherwise.

Claim.—The combination of the nose or upper bearing of the flyer, with the sides or arms made of flattened wire and brazed or attached to the nose, so as to be nearly in a tangent to the bobbin, and present the thin edge of the arm to the air when revolving.

No. 37,703.—CHARLES E. PHILLIPS, of Abington, Plymouth county, Mass.—*Improvement in Heading Tool for Screws*.—Patent dated February 17, 1863.—This tool consists of two jaws, between which is a plate projecting into a circular or disk-shaped recess the size of the head of the screw desired. This being driven upon the head gives it the shape and the slot.

Claim.—The arrangement of the adjustable and removable blade D, in combination with the jaws B C, constructed and operating substantially as herein described and for the purpose specified.

No. 37,704.—HENRY E. PLUMB, of Monroe, Fairfield county, Conn.—*Improved Elevator and Carrier*.—Patent dated February 17, 1863.—The rope by which the bucket is elevated passes over a carriage which runs on ways, and as the bucket reaches a certain height, a button on the well rope strikes a flap-board, disengaging the hook which retains the carriage. The latter, under the continued tension of the rope, is then drawn along on the ways until a frame comes in contact with the bucket and upsets it. This frame is placed in such a place and position as to discharge the contents where required, and on the loosening of the rope the counterpoise weight draws the carriage back again to the point above the well, and the bucket is again lowered.

Claim.—First, the combination of the carriage C, ways B B, counterpoise weights F F, and rope M, all arranged substantially as shown for the purpose specified.

Second, the hook K and the flap J, in connexion with the button or knob N on the rope M, arranged substantially as shown, for liberating the carriage C at any desired elevation of the bucket, as set forth.

Third, the brake G, when used in combination with the counterpoise weights F F, drum E, and carriage C, as and for the purpose specified.

Fourth, the adjustable frame O, when used in combination with the carriage C, ways B B, and bucket L, or other receptacle or load holder, for the purpose of discharging the elevated load at the desired spot, as described.

No. 37,705.—JOHN G. PUSEY, of New York, N. Y.—*Improvement in Machinery for Carving and Drilling Gun Stocks*.—Patent dated February 17, 1863.—The machine consists of a reversible holder, which carries the pattern and the gun stock so that its upper and lower sides can be presented at the various angles necessary for all the required slots and holes in accordance with the pattern in the same holder. The various patterns of cutters required in the operations of carving and drilling are all arranged radially on a head, having their stocks with the respective driving pulleys converging near the centre of the disk, and a central pulley and band shifter, by which the band is shifted to act on the stock immediately required, and when required. Each of these drills is accompanied by a tracer, which is intended to be the same length as the drill or reamer, and the required tool having been brought to bear by the rotation of the head on which the drills, &c., are arranged, the tool under the guidance of the reamer by the manipulation of the rest makes the required orifice or slot in the gun stock.

Claim.—First, arranging a series of tool stocks to radiate from a common centre in combination with a series of tracers, substantially as specified, whereby all the tools and tracers may move together in mortising, boring, or carving, but the tools not in use will, by their divergence, be out of the way, as set forth.

Second, the arrangement of the pulley *m* in the middle of the circular head *k*, and of the fork *p'*, or its equivalent, for receiving and changing the belt *d'*, in the manner set forth.

Third, the parallel bars *c c c'*, fitted and arranged substantially as specified, in combination with the circular head *k*, for the purposes and as specified.

Fourth, the frame *a* on centres 10 at right angles, or nearly so, to its length, and receiving the pattern and gun stock, or other article, substantially as specified, whereby the pattern and article to be acted upon can be reversed to present either side to the tool and tracer, as set forth.

Fifth, a holder fitted on centres and carrying the pattern and gun stock, and arranged substantially as specified to swing on said centres while the tool is inletting or cutting the curved parts of the stock, in order that the said tool may act at right angles to the surface, for the purposes and as specified.

No. 37,706.—ANDREW RANKIN, of Philadelphia, Pa.—*Improved Annunciator*.—Patent dated February 17, 1863.—This annunciator is so arranged that the lifting of any wire shall not alone expose the number of the apartment, but shall lift a plate, and through the connecting wire cause the hammer to strike upon the bell. The slides, with the numbers upon their faces, have projections on their rear with holes through which the wires pass, and the upward movement of the slides is limited by transverse bars above them, which cross the line of their motion.

Claim.—First, the uses of a plate D, or its equivalent, connected to the alarm bell of an annunciator, and so arranged in respect to the wires connected to the slides B that the movement of each wire, as it operates its slide, will impart such a movement to the plate D as will sound the bell.

Second, the slides, with their projections *b*, when arranged in respect to the plate A, substantially as set forth, for direct connexion to the wires.

Third, the frame H, with its cross-pieces *f f*, in combination with the projections *b* of the slides B, the whole being arranged and operating substantially as and for the purpose set forth.

No. 37,707.—WILLIAMS F. RUNDALL, of East Genoa, N. Y.—*Improvement in Lifting Jacks*.—Patent dated February 17, 1863.—This machine consists of a standard on a foot-piece, the former having notches on its edge in which a pin may rest; a lever vibrates on the pin, and is retained at the requisite depression by a rack bar, into which a feather edge on the lever engages.

Claim.—First, having the fulcrum pin *a* fitted loosely in a hole in the lever *c*, and secured against casual longitudinal movement therein by means of a set screw *n*, when arranged in the manner and for the purpose specified.

Second, the rigidly attached rack bar *e*, standard *d*, and toothed racks *g g*, in combination with the loosely-fitted fulcrum pin *a*, lever *c*, and feathered edge plate *m*, when the whole is arranged to operate in the manner and for the purpose specified.

No. 37,708.—SAMUEL T. SANFORD, of Fall River, Mass.—*Improved Machine for Stringing Dried Apples and other Fruits*.—Patent dated February 17, 1863.—In a box rotates a sectional hopper in which the pieces of apple are dropped. They are in turn brought against the edge of a knife, whose bent end is presented, having a line hanging from its back or lower edge; the knife passes through openings in the divisions of the hopper, and forcing the apple against the knife and on to the twine, leaves it to be pushed down by hand.

Claim.—First, a knife D, constructed or bent in the form substantially as shown, in combination with a string F, the latter being attached to the former, and both arranged to operate as and for the purpose set forth.

Second, in combination with the knife D and string F, the revolving hopper B and box A, all constructed and arranged for joint operation, as and for the purpose specified.

No. 37,709.—JOHN D. SMEDLEY, of Chicago, Ill.—*Improvement in Oil Stills*.—Patent dated February 17, 1863.—From the lower part of the still a small pipe connects with a larger one placed vertically against the wall of the building. The latter pipe descends below the level of the floor of the still for the collection of water, which may be run off by a faucet, and is open at top. A float on the surface of the oil in the vertical pipe rises and falls with the varying height of oil, and by means of a cord, pulleys, and weight, the depth of oil in the still is indicated on an index.

Claim.—The use of the large pipe A, in combination with a small horizontal connecting tube B, in any way substantially as described, by means of which the fluid in the pipe being kept constantly cool and free from agitation from the still, the quantity of liquid in the still is always correctly indicated.

Also, the extension of the pipe A below the bottom of the still, forming a chamber *a*, by means of which the water is separated from the oil, and can be drawn off.

No. 37,710.—ADDISON SMITH, of Perrysburg, Wood county, Ohio.—*Improved Steering Apparatus*.—Patent dated February 17, 1863.—Over the keel of the vessel is a main pipe, which has branches right and left at each end of the vessel, by the violent driving of water through which the vessel may be turned around.

Claim.—The combination of a main pipe with branches *c c c*, branching at right angles with the keel, for the purpose only of turning a vessel on the centre or moving it sidewise, as herein described.

No. 37,711.—DAVID M. SMYTH, of New York, N. Y.—*Improvement in Apparatus for Clasp- ing Hoops to Ladies' Skirts*.—Patent dated February 17, 1863.—The clasps are placed pro-

miscuously in a hopper doubly inclined and provided with a side flange and successive slots, so as by a series of movements to arrest the progress of the clasps that have not assumed the required position, and compel them, before they are delivered, to turn the stems downward, which is the proper presentation. The carrier which feeds the hoop along consists of a forked slide, and is retracted when the clasp is fixed to free it from the hoop, and then under the influence of the rocking lever through a series of devices is caused to vibrate and bring the hoop forward, so that the next place to be clasped may be directly under the point of impingement of the hammer.

Claim.—First, the double inclination of the surface of the feeder, in combination with the side flanch and the three successive longitudinal slots for permitting the escape or discharge of such of the clasps as are not in the required position, and for holding back such as happen to be in the required position, with the stems upward, and for gradually turning them over that they may be delivered one by one with the stems downward, substantially as described.

Second, the carrier, with its up-and-down movements to liberate a hoop which has been clasped, and take the next and move it to the required place to be clasped, substantially as described, in combination with the anvil and the hammer, or their equivalents, as and for the purpose substantially as described.

No. 37,712.—J. H. THOMAS and P. P. MAST, of Springfield, Ohio.—*Improvement in Seeding Machines.*—Patent dated February 17, 1863.—The machine is so arranged that the lifting of the share from the ground also closes the seed-slide by the rotation of the cam moving the slide bar in the guide and operating the cut-off.

Claim.—The arrangement of the guide *m*, in connexion with the drag bars *a a*, the drill-teeth *c c*, the chains *d d*, and the hinged bar *D*, provided with the cam *e*, used with the seed slide *n*, in the manner and for the purpose herein specified.

No. 37,713.—D. VAN HOUTON, of Fuller's Corners, Whitley county, Ind.—*Improvement in Horse-Powers.*—Patent dated February 17, 1863.—The invention consists in the arrangement of the parts which are specifically detailed in the claim, the object being to attain high speed within a frame of moderate dimensions. The power is derived from sweeps or levers attached to the large driving wheel *C*.

Claim.—The arrangement of the four shafts *B D F* and *L*, provided, respectively, with the wheel *C*, pulleys *g I*, pulley *G*, and bevelled wheel *J*, and the bevel pinion *K* and pulley *M*, in connexion with the belts *E H*, to form a new and improved horse-power, as herein set forth.

No. 37,714.—E. R. WAIT and J. WILLARD PHELPS, of Ravenna, Ohio.—*Improvement in Watches.*—Patent dated February 17, 1863.—The main wheel is attached loosely to the barrel, and a ratchet fast to the barrel transmits power to the main wheel by pressure upon click attached to the latter.

Claim.—The main wheel attached loosely to the barrel, and employing a ratchet to transmit the power from the barrel to the said wheel, substantially as herein specified.

No. 37,715.—S. S. WILLIAMS, of Pittsburg, Pa., assignor to HARRY J. BAILEY, of same place.—*Improvement in Water Elevators.*—Patent dated February 17, 1863.—The invention consists of balancing buckets, one on each side of the windlass, each bucket having a valve in its side near the bottom, which, when it has attained the proper height, is withdrawn inwardly by means of a trigger which forms the tail of a pivoted lever on which the valve is fixed, and which, coming in contact with an inclined edge, opens the valve.

Claim.—The combination and arrangement of the parts as herein specified and shown, for the purposes as set forth.

No. 37,716.—GEORGE D. BAYLEY, of Lebanon, Grafton county, N. H., assignor to GILES B. JOHNSON, of Boston, Mass.—*Improved Dredging-Box with Grater and Cake-Cutter attached.*—Patent dated February 17, 1863.—The interior is divided into spaces for grated material, flour, and a nutmeg box, and the lid forms a cake-cutter, a part of one side forming the grater.

Claim.—As a new article of manufacture the above described article, comprising a grater, dredge-box and cake-cutter combined, substantially as set forth.

No. 37,717.—WILLIAM BOURNE, of Boston, Mass., assignor to NATHANIEL CUMMINGS, of same place.—*Improvement in Piano-Fortes.*—Patent dated February 17, 1863.—This invention consists in the modification of the frame of the piano, so as to permit of an extension of the sounding-board over the whole surface inside the boxing of the instrument.

Claim.—Extending the sounding-board in rear of the hammer passage thereof, and underneath the straining pin bar of the iron frame, and from side to side and end to end of the case, and so suspending the said bar over the part of such board, which is in rear of the hammer passage, that there may be a free or uninterrupted vibration space *f* between the two, substantially as hereinbefore described.

No. 37,718.—P. J. CLARK, of West Meriden, Conn., assignor to S. S. CLARK, of same place.—*Improvement in Lanterns.*—Patent dated February 17, 1863.—The improvement consists in a metallic band, rotating upon the cylindrical portion of the lower or base piece of the lantern, with an opening through the band and through the base, which may be closed or opened by the rotation of the band.

Claim.—As an improved article of manufacture a lantern having its base or lower metallic portion *C* provided with an opening *c*, and having a movable band *E*, or a section of a band, fitted upon the base, which band is also provided with an opening *b*, all being arranged in such a manner that, by turning the band, the openings *b c* may be made to register, or be brought in line with each other, or placed out of register or line with each other, for the purposes specified.

No. 37,719.—EDWARD HOLMES, of Buffalo, N. Y., assignor to E. and B. HOLMES, of same place.—*Improvement in Hoop driving and Barrel-crozing Machine.*—Patent dated February 17, 1863.—The barrel is set upon a ring and clamped; the ring is then withdrawn to allow play for the crozing, chamfering, and howelling tools which are arranged upon a revolving head affixed to a sleeve, which rotates upon a central shaft whose vertical motion, by means of a toggle, expands and contracts the radius of the circle cut by the said tools.

The disk which carries the drivers, and upon which they are pivoted and made adjustable by vibration from a radial position to one approaching the tangential, is mounted upon the central shaft, and, the drivers being adjusted to the hoop, are forcibly drawn down by hooked arms which are connected to a head and screw at the base of the machine.

Claim.—First, driving hoops on barrels and other casks by power applied to yielding or flexible drivers, substantially as described.

Second, the ring *K*, or equivalent, on which the barrel stands while the hoops are being driven, and which may be moved out of the way for the operation of the chamfering, crozing, and howelling tools, as set forth.

Third, the arms *D*, in connexion with the disk *D'*, or equivalents, for the purpose of expanding and contracting the drivers, as set forth.

Fourth, the outer revolving hollow shaft *T*, which carries the chamfering, crozing, and howelling tools, in combination with an inner shaft, which has a vertical movement for the purpose of imparting a lateral movement to the said tools, or either of them.

Fifth, regulating the depth of cut of the chamfering, crozing, and howelling tools (or either of them) by means of a vertical movement of a shaft, nut, or head-piece, to which the said tools (or either of them) are in any manner connected.

Sixth, the construction and use of a hoop-driving machine and a barrel-chamfering and crozing machine in one machine, for the purposes and substantially as described.

No. 37,720.—EDWARD HOLMES, of Buffalo, N. Y., assignor to E. and B. HOLMES, of the same place.—*Improvement in Stave-dressing Machine.*—Patent dated February 17, 1863.—The machine consists of a stationary frame in which the gearing is arranged and operated, and which contains the feeding rollers. The cutter frame rests upon bars which are supported midway of their length by the stationary frame, and the weight of the cutter frame is counterbalanced by weights. Circular cutters above and below operate upon the two faces of the stave, and the cutter frame being hung upon two independent oscillating points of support enables it to vibrate freely and assimilate itself to the shape of the stave.

Claim.—First, supporting the cutter frame upon a journal or journals *c* in such a manner that the frame may oscillate in any direction, according as the varying conditions of the stave to be dressed may require.

Second, in a machine for dressing staves which has an oscillating or movable cutter frame, in connexion with the stationary or gear frame, so supporting the cutter frame as to admit of the use of a weight, or equivalent, as a counterbalance to the cutter frame, substantially as set forth.

Third, the projecting bars *D*, or equivalent, for the purpose of supporting and connecting the cutter frame to the gear frame, and to allow the cutter frame to oscillate, as set forth.

No. 37,721.—EDMUND B. JUCKET, of New Haven, Conn., assignor to Himself and JOHN W. DE LAMATER, of New York, N. Y.—*Improvement in Hose Couplings.*—Patent dated February 17, 1863.—The overlapping section of this coupling has a set of pivoted levers in slots, which, by the rotation of an encircling ring with studs on its surface, are made to project into a groove on the periphery of the inner section, and thereby lock the two sections of the hose coupling together. They are uncoupled by rotation of the ring in the reverse direction, which brings studs on the inner side of the ring to bear on the tails of the lever and retract them within the slots and out of the groove in the inner section.

Claim.—First, the lever or levers *a*, when the same are combined with hose couplings, in the manner and for the purpose substantially as herein set forth.

Second, the combination and arrangement described of the lever or levers *a* and ring *C* with the hose couplings, when the same are made to operate substantially as herein specified.

No. 37,722.—JOHN S. LOOMIS and ABEL THOMPSON, of Brooklyn, N. Y., assignors to ABEL THOMPSON, aforesaid.—*Improved Bungs for Coal-Oil Barrels, &c.*—Patent dated February 17, 1863.—A metallic ring is firmly set in the staves having a thread on the inside and a thimble with a flange screwed into this ring from the inside, so that the flange binds down firmly upon the metallic lining of the cask. A bung, with the same thread on its periphery, is then introduced from the outside and screwed down upon the end of the thimble.

Claim.—The ring *a* retained in the staves, substantially as specified, in combination with the screw thimble *b* and bung *f*, for the purposes and as set forth.

No. 37,723.—JOHN KEEN MILLNER, of New York, N. Y., assignor to Himself and SAMUEL T. SUIT.—*Improvement in Breech-loading Fire-arms.*—Patent dated February 17, 1863.—Near the rear end and in the side of the barrel is an orifice through which to introduce a cartridge; this opening is closed and the cartridge pushed into the barrel of the piece by a breech-pin which occupies the bore of the gun from the base of the cartridge to the extreme rear end, terminating in a flange and handle. To withdraw this, it is first rotated by the vibration of the handle to disengage a pin or stud which prevents its recoil and then retracting it longitudinally, the said stud traversing a groove on the side of the breech-pin. When the cartridge is placed in the orifice the breech-pin is returned by the corresponding motions to its place closing the breech.

Claim.—The combining the breech-pin *C* with the open after end of a rifle barrel which has a longitudinal loading aperture *B B* therein, when the said breech-pin is guided in its movements, secured in its positions, and is made to operate in conjunction with said loading aperture, the hammer of the lock and a primed metallic cartridge placed in the chamber of the barrel, all substantially as herein set forth.

No. 37,724.—GEORGE W. NEWELL, of Lawrence, Mass., assignor to S. M. DAVIS, of the same place.—*Improved Clothes-Dryer.*—Patent dated February 17, 1863.—The frame of this dryer consists of four standards or bars pivoted one to each side of a square hub like a double X. From near the top of these bars are shorter bars converging to a central head which has a central bar depending and reaching the hub. Cords are stretched horizontally from bar to bar in the standards, and also the converging set above, for the purpose of hanging the clothes on.

Claim.—The hub *A* with the bars *B* attached by pivots *a*, in combination with the supplemental bars *C* attached to the bars *B* by links or joints *b*, and the pendant bar *E* attached to the bars *C* by the head *D*, the bars *B C* being provided with cords *F G*, and all arranged as and for the purpose set forth.

No. 37,725.—A. B. SOUTHWICK and H. E. GRANDY, of Ballardsvale, Essex county, Mass., assignors to the WHIPPLE FILE MANUFACTURING COMPANY, of the same place.—*Improvement in Machines for Cutting Rasps.*—Patent dated February 17, 1863.—The blank is fed continuously and vertically by means of a screw which is attached to the blank holder. The pointed cutter is thrown by a spring to give the blow, and is moved by a cam across the face of the blank, so as to place the teeth or raised projections in rows. As the rows are designed to be across the face of the blank perpendicular to its length, and the blank is constantly moving, the cutter carriage runs on inclined ways so as to allow for the motion of the blank between each stroke. The cutter head is secured to the extremity of a vibrating arm, and the cutter, which is made by pointing a three-sided piece of steel, is secured in it by passing it through a mortise, and inserting into a second intersecting mortise at right angles with the former a bar of steel with a triangular notch to accommodate the cutter.

Claim.—The inclined ways *II*, in connexion with the cutter carriage, as set forth, for the purpose specified.

Also, the method herein described of securing the cutter to its head by means of the mortise *m*, the notched bar *s*, and the screw *A*, operating as described.

No. 37,726.—CHARLES H. MORGAN, of Philadelphia, Pa.—*Improvement in Paper Bag Machines.*—Patent dated February 17, 1863.—The paper is taken from the roller continuously, and folded around a bar, having in its progress its seam pasted and pressed; as it passes off the bar it is seized by a pair of rollers which hold the end, while a revolving knife severs the bag at the end of the bar, cutting with such a degree of obliquity to the axis of the bar that it leaves an upper overlapping edge. Passing from this point, the tube is projected over the edge of a blade, which, rising from a deposit of paste, pastes and folds the bag by pressing it between a pair of rollers, which seize it, press the lap, and discharge it from the machine.

Claim.—The machine, as a whole, composed of elements combined, arranged, and operating substantially as herein set forth.

Also, the use of constantly moving feed rolls acting in combination with a tube-supporting bar, substantially as set forth.

Also, the use of a revolving blade acting in combination with a tube-supporting bar to sever portions of tube with overlapping ends, substantially as herein set forth.

Also, the use of rolls to hold the tube, while being cut off, and to act in combination with a pasting and folding blade in forming the bottom of the bag, substantially as set forth.

No. 37,727.—GEORGE H. REYNOLDS, of New York, N. Y.—*Lithographic Printing Press.*—Patent dated February 17, 1863.—The points of improvement in this machine are in the method of moving the bed; in the construction of the dampening roller; in devices for raising and lowering it and controlling the admission of water to it; in supplying ink to the inking roller and operating the duct roller; in the adjustment of the extent of contact between the fountain roll and the duct roller; in the application of springs to the doctor of the fountain; in the method of adjusting the impression; in devices for lifting the scraper at any required portion of the stroke; in the devices for stopping the tympan-frame always in one position, and starting it at the return movement of the bed and at the proper time; in devices for regulating the number of movements of the bed corresponding to each impression; in the method of removing the printed sheet from the tympan and in securing an accurate register.

These are the points involved in the patent, but their voluminous character precludes a specific description within moderate limits.

Claim.—First, the employment of the flanges *a* on the interior surface of the dampening roller *N*, in connexion with alternate holes in the water tube *N'*, substantially as and for the purpose specified.

Second, the combination of the cam-shaped pieces *O*, shaft *I2*, arm *i3*, and studs *k2* and *k4*, with the dampening roller *N*, substantially as and for the purpose specified.

Third, controlling the admission of water to the dampening roller *N* of a lithographic press by means of atmospheric pressure, substantially as herein described.

Fourth, the combination and arrangement of the rollers *I'*, shaft *I2*, balance weight *W*, arm *i3*, and studs or stops *k2 k2*, for the purpose of transferring the ink from the cylinder *J* to the inking rollers *I*, substantially as herein described.

Fifth, the combination of the arm *m2*, spring *m3*, forked arm *m4*, and duct roller *M*, substantially as and for the purpose set forth.

Sixth, the combination of the multiple cam *k'*, fountain roller *K*, arm *m2*, and duct roller *M*, arranged substantially as described and for the purpose specified.

Seventh, the employment of the springs *k4*, between the set screws *k3* and the fountain *K'*, for the purpose above set forth.

Eighth, the combination and arrangement of the inclines *P2 P3*, pins *q2*, springs *q'*, and scraper bar *Q*, for the purpose of adjusting the pressure upon the scraper, substantially as herein described.

Ninth, the combination of the wheels *R*, having one flattened side, with the planes *k3*, for stopping the tympan frame in the proper position, as herein described.

Tenth, the employment of the sliding teeth *S*, in combination with the flattened wheels *R*, and rack *H*, substantially as described, for the purpose of causing the wheels *R* to engage the said racks after having been stopped.

Eleventh, in combination with the sliding teeth *S*, the adjustable slotted pieces *S'*, for operating the said teeth, substantially as herein specified.

Twelfth, in combination therewith the disks *T*, wrist pin *t2*, and stops *t3*, for operating and controlling the said pieces *S'*.

Thirteenth, the combination of the slotted arms or disks *u*, shaft *U*, cams *V*, and sliding spring bars *v*, or their respective equivalents, for operating the disks *T*, substantially as herein set forth.

Fourteenth, the combination of the shaft *U*, levers *u2* and *u6*, and the studs *u3* and *u9* attached to the reciprocating bed *F*, for the purpose of operating the shaft *U*, and consequently the sliding teeth *S*, from the reciprocations of the bed *F*, substantially as herein described.

Fifteenth, the ratchet wheel *u5*, and pawls *u7* and *u10*, in combination with the shaft *U*, lever *u6*, and adjustable stop or stud *u9*, for the purpose of regulating the number of movements of the bed to each impression, substantially as set forth.

Sixteenth, the cam *u12* for lifting the pawls *u7* and *u10* out of contact with the teeth of the ratchet wheel *u5*, in combination with the said ratchet wheel, to permit the return motion of *U*, substantially as herein described.

Seventeenth, the cam *u13*, in combination with the pawl *u7*, lever *u6*, ratchet wheel *u5*, and retaining pawl *u10*, for bringing the said pawls into action, substantially as above set forth.

Eighteenth, the arrangement of the pulleys *x*, spring pieces *x'*, fingers *x2*, and roller *Y*, for removing the sheet from the tympan, substantially as specified.

Nineteenth, the employment of the registering points *r3* in the revolving tympan frame *R'*, for the purpose above set forth.

No. 37,728.—STEPHEN M. ALLEN, of Boston, Mass.—*Improved Manufacture of Carpet Lining.*—Patent dated February 24, 1863.—This carpet lining consists of soft felt, made of flax, jute, hair, and wool, with a surface of hard paper pasted to its upper side. The fabric thus formed is laid upon the floor, with the paper surface upward, and the carpet is spread thereon.

Claim.—The improvement in the manufacture of fabrics for underlaying carpets, &c., the same consisting in permanently combining with or forming upon soft sheets of felt of any desired thickness a smooth and compact facing of paper or other similar surface, substantially in the mode hereinabove described.

No. 37,729.—B. F. ALLISON, of West Dayton, Iowa.—*Improvement in Fences.*—Patent dated February 24, 1863.—This invention consists in the use of clamps, with a double-shouldered recess in the middle and a recess at each end, which clamps are slid lengthways into mortises in the end posts of adjoining panels of a fence, and then turned horizontally, the shoulders of the recess catching over the posts. A clamp may be used, also, with only one recess in the centre, and inserted the same way. Keys or wedges are used to hold the clamp in the mortises.

Claim.—First, the arrangement of the double-shouldered recess *d*, and recesses *d'*, in the clamp *D*, in combination with mortises *f* in the end battens *a'*, and with secondary battens *a''*, and keys *h*, all constructed and operating substantially in the manner and for the purpose shown and described.

Second, the employment or use of a clamp *E*, with central recess *e*, in combination with mortises *g* in the end battens, and with secondary battens and keys *i*, all as and for the purpose specified.

No. 37,730.—CHARLES L. BOTTUM, of Dansville, N. Y.—*Improvement in Churns.*—Patent dated February 24, 1863.—The dasher consists of an inverted cone with perforated or slotted sides, and has a reciprocating vertical motion by means of its shaft, which is attached to a lever; the fulcrum and the point of attachment of the dasher shaft being adjustable.

Claim.—First, the use of the angular dasher *B*, as seen in Fig. 1, and its various modifications, as shown in Figs. 2 and 3, with or without the adjustable rod *f*, substantially as set forth and for the purpose described.

Second, the use of the angular dasher *B*, with its modifications, in combination with the rod *f*, the adjustable standard or fulcrum *D*, the lever *C*, and the churn *A*, substantially as described.

No. 37,731.—RICHARD C. BRISTOL, of Chicago, Ill.—*Improvement in Feed-water Heater for Steam Boilers.*—Patent dated February 24, 1863.—The heater consists of a chamber with horizontal divisions, or floor perforated for the percolation of the water, which is introduced in small jets or streams; the exhaust steam circulates in all parts of the chamber, and gives off its heat to the trickling water and the plates; the water is taken off to the boiler from the lower portion of the chamber so as to avoid taking the oil which may be present.

Claim.—First, the combination of plates perforated to a greater or less extent over their surface with shell or case of feed-water heaters of steam generators or boilers, for the purpose set forth.

Second, the combination of the bent tube, or its equivalent, with a feed-water heater of steam generators or boilers, for the purpose set forth.

Third, the combination of the well-bent tube and feed-water heater of a steam generator or steam boiler, substantially as and for the purpose set forth.

No. 37,732.—A. M. BRUCKHART, of Brunnersville, Lancaster county, Pa.—*Improvement in Elevating Millstones.*—Patent dated February 24, 1863.—On the end of a crane projecting over the millstone to be raised is a bevel wheel with a thread through its axis; through its centre is a screw which passes downwards, and is connected by two oppositely projecting hooks and two rods with the millstone; the bevel wheel being rotated by the means of a bevel pinion and winch, the screw is raised with its suspended millstone.

Claim.—The screw *H*, provided at its lower end with two oppositely projecting hooks *c c*, bevel wheel *F*, pinion *G*, and winch *J*, in combination with the metal cap *f*, stud shaft *g*, horizontal arm *A*, and hooks *d d*, when the whole is arranged to operate in the manner and for the purpose specified.

No. 37,733.—N. F. BURNHAM, of York, Pa.—*Improvement in Water-Wheels.*—Patent dated February 24, 1863.—The improvement consists in the application to "centre discharge" water-wheels of a flanged rim set upon the floor of the scroll, and the flange extending into the discharge aperture. This rim fits snugly against the rim of the wheel and prevents the leakage of water.

Claim.—The ring *D*, provided with the flange *i*, and arranged in relation with the opening *h*, the scroll and rim *f* of the wheel, to operate as and for the purpose herein set forth.

No. 37,734.—IRA COGSWELL, jr., Earlville, La Salle county, Ill.—*Improvement in Calash or Folding-top for Carriages.*—Patent dated February 24, 1863.—The object of this improvement is to construct a folding top or calash, which shall have a greater range of adjustment and be capable of being stored compactly away above the seat; this is accomplished by pivoting the bows to an inclined bar of the same length. (viewed in elevation.)

so that as the inclined bar is more and more depressed by the shifting of the hook and the collapse of the toggle or jointed lever, the top is more and more projected forward, or the bows consecutively folded backward, lying in a series around the top of the seat of the carriage.

Claim.—The combination of the inclined arms *E E*, hooks *K*, and folding bars *F F*, with the bars *I J*, bows *G G' G'' G'''*, and seat *B*, all in the manner herein shown and described.

No. 37,735.—D. M. COOK, of Mansfield, Richland county, Ohio.—*Improved Cellular or Tubular Boiler for Evaporating Pans.*—Patent dated February 24, 1863.—In this apparatus a cellular or tubular boiler is placed at one end of a shallow evaporating pan so as to bring the juice to a given heat previous to its being defecated and evaporated in the pan; and, further, in extending the sides of the cellular boiler over the edge of the furnace so as to form a cooling portion for the gathering of the feculent matter.

Claim.—First, a cellular or tubular boiler, substantially as described, adapted for application to a shallow evaporating pan, substantially as described and for the purpose set forth.

Second, the combination of a boiler with deep cells or tubes, a furnace and a shallow evaporating pan, substantially in the manner described.

Third, constructing the cellular or tubular boiler with cooling or extending sides; and also applying it to the throat of a furnace, substantially in the manner and for the purpose set forth.

No. 37,736.—D. M. COOK, of Mansfield, Richland county, Ohio.—*Improved Evaporating Pans with Cellular Boilers.*—Patent dated February 24, 1863.—This invention consists of a shallow evaporating pan with a deeper cellular portion at one end, intended to bring the juice to a certain temperature before it starts on its course along the zigzag passage formed by the scum-arresting partitions of the evaporator.

These cells project down into the throat of the furnace, and the latter is furnished with directors or deflecting plates or walls, which narrow and compel the flame or heat to pass around the fire-exposed surface of the cells at all points except the open top.

Claim.—First, a cellular boiler and a shallow evaporating pan united, substantially in the manner and for the purpose described.

Second, the arrangement of the directors *d d' d'' d'''*, in combination with the cellular boiler and shallow evaporating pan, substantially as and for the purpose described.

No. 37,737.—D. M. COOK, of Mansfield, Richland county, Ohio.—*Improved Evaporating Pan with Tubular Boilers.*—Patent dated February 24, 1863.—In this apparatus there is a deep boiler connected with the shallow evaporating pan, the former being divided up into narrow cells by means of tubes, which form flame flues; there is also an arrangement of flame directors, whereby the flame is turned at right angles, when it arrives at the flues and takes its course through them to the smoke-stack.

Claim.—First, a shallow evaporating pan constructed with a deep boiler, when the boiler is divided into cells by means of tubes which form flame flues, substantially as herein described.

Second, the arrangement of the directors *d e*, with respect to the combined boiler and shallow evaporating pan, substantially as and for the purpose described.

No. 37,738.—PHYLANDER DANIELS, of Le Roy, Genesee county, N. Y.—*Improvement in Supports for Artificial Legs.*—Patent dated February 24, 1863.—A shoulder saddle composed of a pad and rollers pivoted in supports is suitably braced to the body by cross and direct straps. Over this a strap runs upon the rollers, its two ends being connected to the upper part of the limb socket.

Claim.—The shoulder saddle *C*, provided with friction rollers *c c*, over which passes the strap *D*, secured at its ends to the artificial limb, for the purpose of suitably supporting the same and allowing the free and easy motions of the body, arranged, combined and operating substantially as herein set forth.

No. 37,739.—DANIEL M. DEVOE, of New York, N. Y.—*Improved Clothes Dryer.*—Patent dated February 17, 1863.—The semicircular case is provided with slats occupying a vertical position when folded away; but, when drawn down, forming radial horizontal bars to hang clothes upon, being sustained in this position by the end which underlies a flange in the semicircular bottom of the case.

Claim.—The arrangement of the semicircular slotted case *A*, provided with springs *e* on top, and with a continuous stop *h*, or its equivalent, on the bottom, in combination with a series of radial folding bars *b*, all constructed and operating in the manner and for the purpose shown and described.

No. 37,740.—JAMES M. DECK, of Buffalo, New York.—*Improvement in Ploughs.*—Patent dated February 24, 1863.—The iron beam of this plough is secured so as to give attachment for the sole, share, and landside, and from the latter to the mould-board.

Claim.—The combination of the curved iron beam *F* attached to the landside *E*, as shown and described, with the mould-board *D* and the share *A*, or cutting part of the plough, when the whole are constructed and arranged as herein described and set forth.

No. 37,741.—JAMES DONNELL, of Davenport, Iowa.—*Improvement in Bee-hives*.—Patent dated February 24, 1863.—Beneath the main apartment of the hive is a chamber whose floor is of perforated metal or wire gauze. Suspended above this perforated bottom is a box or tray which admits ventilation around it, darkens the hive by interposition between the opening and the combs, and catches the refuse from the comb.

Claim.—The drawer C, made in the manner described and arranged in relation to the hive and comb frame, as set forth, so as to ventilate the comb, and, at the same time, exclude the light therefrom and catch the refuse from the hive.

No. 37,742.—JACOB DUNTON, of Philadelphia, Pa.—*Improved Pack Saddle*.—Patent dated February 24, 1863.—Two rectangular boxes are attached at the diagonal corners by a hinge composed of a metal strap on each, and a pintle and socket on the respective pieces. Beneath each of these is a pocket and a pad adapted to fit the animal's back, and in the rectangular interval formed above the boxes a third is placed, having a strap on each upper side, which enters a staple on the adjacent faces of the boxes on which it lies, being secured against longitudinal displacement by the joint of the hinge.

Claim.—First, a pack saddle consisting of two disconnected bars or pads C C, attached respectively to two cases or panniers A A', connected together by any suitable means, substantially as herein described and for the purposes set forth.

Second, the combination of the two panniers or cases A A, connecting links B B', and upper case A'', when the whole are constructed and arranged in the manner herein shown and described, so that the connecting links of the lower cases shall serve to prevent longitudinal displacement of the upper one, as explained.

Third, the pockets D D', in the described combination with the cases or panniers A A' and bars C C', for the purpose explained.

No. 37,743.—FRANCOIS DURAND, of Paris, France.—*Improvement in Cotton Gins*.—Patent dated February 24, 1863.—Patented in France, July 18, 1862.—The raw cotton is taken from the table by a pair of intermittently feeding rollers made of elastic material, and is then grasped by a pair of hard metal rollers which drag the cotton into the interior of the drum, where it is exposed to the continued action of beaters, which separate the seed and allow it to fall out at the bottom of the drum. The drum, with its pair of rollers, is then rotated part of a revolution until the roller comes opposite to a helicoidal brush. The rollers, while taking in the cotton from the table, are revolved one way, but their presentation to the brush changes their motion, and they now feed out the cotton from the interior of the drum, where it is exposed to the operation of the helicoidal brush and discharged on to another table.

Claim.—First, in combination with the feeding rolls and brush, the carrying and crushing rolls i i', for taking the cotton from the feed rolls to the brush, and at the same time crushing the seed therein, substantially as described.

Second, in combination with the traversing and rotating carrying rolls i i', the intermittently feeding rolls f f, so that while the rolls i i' are not receiving cotton, the feed rolls shall be in a state of rest substantially as described.

Third, in combination with the traversing and rotating rolls i i, the drum k and revolving beaters or blades t, made and operating together substantially as described and for the purpose set forth.

No. 37,744.—WARREN A. DURRIN, of Milledgeville, Carroll county, Ill.—*Improvement in Stock Pumps*.—Patent dated February 24, 1863.—The animal, in coming to drink at this trough, stands upon an inclined movable platform like an endless chain horse-power, which, moving under him, operates a pump to fill the trough.

Claim.—The combination of the inclined endless apron A A and frame B B, in connexion with the governor D D and brakes R and S, and the pitman F, when applied to operate a pump, as and in the manner delineated and specified.

No. 37,745.—WARREN L. FISII, of Newark, N. J.—*Improvement in Apparatus for Cooking with Gas*.—Patent dated February 24, 1863.—This consists of a vessel with a central chimney passing through it, and beneath is a chamber with a perforated bottom and windows in the sides, in which a jet or jets of gas are burnt to impart heat to the contents of the vessel above the chamber and around the chimney.

Claim.—First, the herein-described gas-heating and cooking apparatus, the same consisting essentially in the combination of a cylinder, or its equivalent, closed at the bottom by a perforated plate, and surrounding one or more jets of gas, as shown, with a chimney arranged to operate substantially in the manner and for the purposes set forth.

Second, in combination with the cylinder surrounding the flame or flames, perforated bottom and chimney, the making of the said cylinder of a transparent material, or providing it with one or more windows, substantially in the manner and for the purposes set forth.

Third, in combination with the cylinder surrounding one or more flames, and closed at the bottom by a perforated plate, as described, of a heating vessel with a central flue, so shaped as to constitute the chimney to operate substantially as and for the purposes set forth.

No. 37,746.—JAMES P. GAY, of Cincinnati, Ohio.—*Improved Composition for Lubricating Wagon Axles, &c.*—Patent dated February 24, 1863.—Take of the pitchy residuum of fatty acids three parts; petroleum or lard-oil one part; warm, mix, and incorporate. In summer less oil.

Claim.—The improved wagon tar herein described, consisting of the ingredients specified, combined substantially in the manner and in the proportions herein stated.

No. 37,747.—STEPHEN J. GEOHEGAN and WILLIAM ULMER, of New York, N. Y.—*Improvement in Bung Socket and Plugs for Barrels*.—Patent dated February 24, 1863.—A metallic socket with a thread inside is sunk into the stave, and a plug to match it, with a square for a turn-wrench is inserted into the socket, with an annular packing on the contracting faces, and screwed down even with the outer surface.

Claim.—The socket A and plug D d', adapted to apply to the stave C, and to sink even with the exterior surface thereof, substantially as and with the effect herein set forth.

No. 37,748.—Suspended.

No. 37,749.—JAMES B. GRAY, of Hudson, St. Croix county, Wisconsin.—*Improvement in Mode of Operating Weather Strips*.—Patent dated February 24, 1863.—In this invention there are two strips, one permanent and attached in the usual way to the door, and the other hinged to the sill. An eccentric on the jamb, to which the door is hinged, is rotated by the closing of the door, and the sill-strip is lifted by a rod so as to come up under the door-strip and close the opening against the weather.

Claim.—The combination of the eccentric g (whether used on one or the other, or both jambs of the doorway) with the strips c and a, by means of the rod or wire k, substantially as and for the purposes hereinbefore set forth.

Also, the washer m, in combination with the eccentric g, made, constructed, and used as and for the purposes herein set forth.

No. 37,750.—JACOB HAEGE, of Shiloh, St. Clair county, Illinois.—*Improvement in Gang Ploughs*.—Patent dated February 24, 1863.—The beam to which the gang of ploughs is attached is fastened to the axle at its point, and in other places, by pins and chains, so as to give it some play and allow it to become detached when it meets with an obstruction. The ploughs are preceded by rotary cutters on a dependant arm, and the last plough in the gang, constructed as a subsoil plough, has the share and cutter suspended from the beam by a rod.

Claim.—First, the attaching of the plough beam to the axle A by means of the stirrup or loop Q, pin S, and chains d' d', and bar T, and wooden pin e', in combination with the lever or treadle J, all arranged as shown, whereby the plough or ploughs may be readily raised above the surface of the ground when necessary, and the beam allowed to become detached from the axle or carriage when the former comes in contact with any obstruction which may lie in their path.

Second, the rotary cutters I, when placed on a screw-rod or shaft H, and secured thereon by jamb nuts i, and said shaft hung in the arms G G, substantially as and for the purpose specified.

Third, the combination of the bar Z, cutter B', when applied to the subsoil plough X, and used in connexion with a gang plough for the purpose set forth.

No. 37,751.—ROBERT HAMILTON, of Franklin, Johnson county, Ind.—*Improved Sugar Evaporator*.—Patent dated February 24, 1863.—The apparatus consists of a pan which has two transverse partitions formed of wire gauze, and a final boiling pan further towards the rear of the furnace which is hinged at one edge, so as to be discharged by tipping. A chimney rises from the rear of each pan, and a damper in the furnace directs the heat up either chimney.

Claim.—First, the arrangement of first and final boiling pans B C C D and F, chimneys G and H, and damper I, substantially as and for the purposes set forth.

Second, the described arrangement of hinged and removable final boiling pan F and supporting rack M.

No. 37,752.—EZRA HASKELL, of Canton, Norfolk county, Mass.—*Improved Portable Bookcase*.—Patent dated February 24, 1863.—The sides of the bookcase are made folding, and when erected the shelves are slipped into dovetailed grooves in the sides, so as to lock them together. The shelf and its back board are fastened permanently together, and for transportation two shelves with their backs make a box to carry books.

Claim.—The series of removable shelves C D, &c., composed of pieces b c d, which, when two shelves are placed together, form a box, as represented in Fig. 6, in combination with the folding sides A B, substantially as described.

No. 37,753.—GEORGE D. HAWORTH, of Decatur, Macon county, Ill.—*Improvement in Seeding Machines*.—Patent dated February 24, 1863.—Attached to a bar back of the wheels on which the frame rests are scrapers, which, by the reciprocating motion of the bar, are made to scrape the wheels and remove accumulations of soil.

Claim.—The scrapers P P when attached to a sliding bar O, arranged as shown, to admit of the scrapers being passed laterally over the surfaces of the wheels C, when necessary, and not be in contact with the latter when not desired for use, as herein set forth.

No. 37,754.—CHARLES W. S. HEATON, of Belleville, St. Clair county, Ill., assignor to J. J. PIGGOTT and HENRY RENTCHLER, of same place.—*Improvement in Corn Planters.*—Patent dated February 24, 1863.—This machine, mounted on wheels, is intended to plant two check rows at once, and the novelty of the devices particularly refers to the dropping and covering arrangements, which are duplicated, one for each row. The corn is placed in hoppers, on the floor of which a slide valve works, having four holes arranged in a rhomb for the reception of corn, and which, on retraction, drop it down two channels; at the foot of these is another slide valve with holes which drop the corn immediately behind the share. These two slide valves are connected by a rocking lever, so that their action is alternate, and the upper one is in the hopper obtaining a supply while the lower one is discharging.

The corn is covered by a roller attached to a dragging frame, on which is a box to hold the necessary weight.

Claim.—First, the employment of two alternating slide valves, in connexion with separate channels, substantially as and for the purpose set forth.

Second, the arrangement of the holes in the valves and the arrangement of the tubes, on a rhomb instead of a square, for the purpose set forth.

Third, the combination of the tooth or share, two valves and a series of tubes or channels, substantially as and for the purpose set forth.

Fourth, the employment of weight boxes in connexion with a coverer, the whole constructed substantially as and for the purpose described.

Fifth, the arrangement of the devices above claimed in connexion with the frame A A, goose-neck lever, slotted rock-shaft, all constructed and operating substantially as and for the purpose described.

No. 37,755.—AUSTIN D. HOFFMAN, of Bellville, Wayne county, Michigan.—*Improvement in Board Measure.*—Patent dated February 24, 1863.—This device consists of a square stem, each side having two columns of similar graduations, but differently numbered. At the end of the stem is a wheel and a central internal screw with a traversing nut, so arranged that five revolutions of the wheel shall move the nut, and the index fingers on the outside, from one of the graduated marks to the next; and on a central column each revolution may be read off.

The wheel is marked with eight circles to correspond with eight columns, and each of the circles and its corresponding column is designed for a specific length of board, as 10 feet, 12 feet, &c.; each of these circles is divided into as many divisions as correspond with the number for which it is intended to be used.

The edge of the wheel, the index on the wheel, as well as those on the stem, being at zero, is rolled on the end of the board, beginning with zero at the starting edge, and the first series is indicated on the face of the wheel, and the number of revolutions on the stem, so that after passing in this way over the ends of all the boards, the reading of the result may be seen on the stem, plus the amount on the index, in the column and circle of the figure which corresponds with the length of the board.

Claim.—The dial wheel B, having several circles differently graduated, in combination with the indices E, and several scales or columns of figures, all arranged to measure different lengths of lumber, substantially in the manner and for the purpose set forth.

No. 37,756.—B. B. HOTCHKISS, of Sharon, Litchfield county, Conn.—*Improvement in Percussion Fuze for Shells.*—Patent dated February 24, 1863.—This invention relates to that class of percussion shells in which fulminates are exploded by a loose hammer in the act of striking the object, and consists in making the sliding hammer with a hard shell or casing and a soft metal interior and base, so that in the act of firing, the inertia of the striker shall bring it against the back end of the interior of the fuze plug, batter up the soft base of the striker, and thus gradually overcome the inertia of the striker, without causing a rebound that might explode the cap; the hard exterior prevents the distortion of the cylindrical form of the striker which would hinder it from sliding easily in the fuze plug.

Claim.—A percussion hammer or striker constructed substantially as herein described, having a hard exterior and a soft interior and base, for the purpose specified.

No. 37,757.—MOSES G. HUBBARD and ANDREW J. SMITH, of Syracuse, N. Y.—*Improvement in Driving Power for Spinners.*—Patent dated February 24, 1863.—The speeder shaft is driven by the pressure upon it of a driving pulley; a driving rim which receives its motion from the machinery impinges upon this pulley, and another rim, similar in shape, which rotates freely on its axis, but has no lateral motion, is connected with the driving rim by parallel bars which work freely in their points of attachment to either wheel; these parallel bars are set at an angle, of say 70 degrees, with the faces of the rim-wheels, and the effect of the device is, that should the resistance of the shaft cause the driving rim to slip on its

surface, the action of the parallel bars which connect the two rims will be to cause a greater pressure of the two rims together, and consequently increase the adhesion of the driving surfaces on the speeder shaft.

Claim.—The construction and arrangement of the parts in such manner as to increase the pressure on the shaft C, by its own resistance and the driving power operating together, for the purposes substantially as set forth.

No. 37,758.—THOMAS KENDALL, sr., of San Francisco, Cal.—*Improved Gold Miners' Washing Pan.*—Patent dated February 24, 1863.—This apparatus is composed of two pans fitting tightly on their upper margins, the outer one having steeper sides, so as to leave a pocket between them. A hole in the bottom is closed by two flanged disks, which are clamped together by a screw bolt, retaining the edge of the orifice between them.

Claim.—The pocket *c*, as formed and made by pans A and D and coupling G, with its parts F and O and packing *r*, with screw Z in combination, as constructed and arranged and substantially described therein.

No. 37,759.—JOHN F. KLEIN, of Trenton, N. J.—*Improvement in Apparatus for determining the Size and Form of the Head and adapting the Hat thereto.*—Patent dated February 24, 1863.—The arms of the conformitor are made to project so far in one direction from the stock that holds them as to serve for taking the form, and shaping a hat to fit it, the projecting end of the arms being of sufficient thickness to allow for the leather lining with which the hat is finished.

The lower ends of the arms are turned out, so as to render it easier to fit it on to the head and to keep it from falling into the hat.

Claim.—A composition constructed substantially as described, to wit: so that it can be used to take the form and size of the head, and then put into a hat to shape it (the hat) to fit the head.

No. 37,760.—LUCIUS J. KNOWLES, of Warren, Worcester county, Mass.—*Improvement in Fancy Looms.*—Patent dated February 24, 1863.—The invention principally consists in the employment of cranks and toothed crank-wheels operating in connexion with revolving lifter and depresser wheels, so arranged that the cranks may be turned to the highest or lowest point of their revolution for the purpose of raising or lowering the heddles or the drop-box, and in this way, for the weaving of checks and figured goods, run the loom with economy of time and power by dispensing with the cam.

There are other points of improvement in this loom which are mentioned in the claim, but the limits of an abstract will not admit of a detailed description.

Claim.—Operating the heddles by means of cranks capable of being turned independently of each other to the opposite extremes of their throws, as indicated by the pattern chain, or its equivalent, substantially as described.

Also, operating movable shuttle-boxes by means of cranks so arranged as to be turned independently of each other from one extreme of their throws to the other, under the direction of a pattern chain, or its equivalent.

Also, the rotating lifter and depresser cylinders, operating as set forth, for the purpose described.

Also, the crank wheels *c c2*, constructed and operating substantially as described for the purpose specified.

Also, the gear *k* and segmental gear wheel *h*, in combination with a rotary lifter and depresser cylinder, for the purpose set forth.

Also, the cam *s* upon the shaft of the wheel *k*, in combination with the ledge *r* upon the segmental gear *h*, for the purpose described.

Also, loosening up the harness cords by means of the vibrating guide rolls, or their equivalents, for the purpose described.

Also, connecting the drop box with the mechanism by which it is operated by means of a cord and pulley, substantially as described.

No. 37,761.—HERBERT MARSHALL, of Dracut, Middlesex county, Mass.—*Improved Pie Stamp.*—Patent dated February 24, 1863.—Attached to the stock is a revolving handle and a revolving crimping wheel with a guide to follow the curve of the pie dish. As the wheel is brought to a place to commence making the print, it is simply drawn around the track as the wheel in its revolution follows the margin of the pie by the automatic rotation of the handle.

Claim.—The combination and arrangement of the revolving handle A with the crimping wheel C and curved lever-guide E, in the manner hereinbefore described and represented in the accompanying drawings.

No. 37,762.—JAMES P. MAYNARD, of Leitersburg, Washington county, Ind.—*Improved Clothes Frame.*—Patent dated February 24, 1863.—This invention consists of a central casing with slotted vertical faces, and containing within it in a folded or collapsed state the devices upon which to hang the clothes. These consist of three arms hinged on each side at different heights, and connected to a slide which has handles attached; these handles being pulled

out commence to elevate the hanging arms, and pull forward a side plate which fits into the casing, which, as it is protracted, forms a post for supporting the arms in their horizontal position, by dropping the shanks of the handles into notches in the said side plate.

Claim.—First, the use of downwardly-folding arms, in combination with yielding hinges *f*, operating in the manner described to adapt the arms to fold within a smaller space.

Second, the combination of the slides *E* with the side plates *C*, and arms *F*, substantially as and for the purposes set forth.

Third, the general combination of the centre post *A*, side plates *C* *C'*, and downwardly-folding arms *F* *F'* *F''*, when constructed, arranged, and operating in the manner and for the purposes specified.

No. 37,763.—J. U. MUELLER, of Detroit, Mich.—*Puzzle*.—Patent dated February 24, 1863.—The invention relates to that class of toys in which, by means of several pieces of wood of different colors and different shapes, a variety of figures can be formed. In this case the forms are triangles of two configurations, two of each, in certain relative positions forming a square, and by multiplication of pieces being susceptible of forming a variety of patterns; the peculiar relations of their sides and angles being defined in the claim.

Claim.—The employment or use, in a puzzle, of two different sets of triangles *A B*, which are of such a shape that two sides of each triangle of one set are equal to two sides of each triangle of the other set, and the three angles of the triangles of one set are different from those of the other set, substantially as and for the purpose herein shown and described.

No. 37,764.—CHARLES PERLEY, of New York, N. Y.—*Improvement in Breech-loading Fire-arm*.—Patent dated February 24, 1863.—The breech piece containing the charge chamber swings laterally, being released by a tapering sleeve which is retracted along the barrel to a stop. The breech piece has a connexion obliquely with the axis with a supporting piece which is screwed on to the rear of the barrel, and the fitting of the gas-tight joint between the breech piece and its supporter is adjusted by a set-screw in the extreme rear, working on a conical projection on the rear of the breech piece. The sleeve, when the breech piece is closed, is brought back to its place over the breech and there locked by a catch.

Claim.—The swinging breech or chamber *d*, in combination with the tapering sleeve *g*, and breech supporter *b*, substantially as and for the purposes specified.

Also, in combination with the foregoing, the adjusting screw *l*, hemispherical or conical projection *m*, and the inclined lug *k*, for the purposes and as set forth.

No. 37,765.—CHARLES PERLEY, of New York, N. Y.—*Improvement in End-thrust Bearings*.—Patent dated February 24, 1863.—On the propeller shaft is a collar having a circular groove on its face; in this groove are friction balls which run on an annular plate which abuts against the journal-box through which the shaft passes.

Claim.—The collar *d* and balls *i*, arranged and applied as set forth, to take the end-thrust of the propeller shaft, as specified.

No. 37,766.—CHARLES PERLEY, of New York, N. Y.—*Improvement in Travelling Batteries*.—Patent dated February 24, 1863.—This battery is mounted upon wheels, and has plated sides and a V-shaped forward part to deflect balls; it has also a frame to precede it similar to a cow-catcher, and mounts a swivel gun, to be fired through port holes. The floor of the car between the pairs of wheels hangs low near the rails, and has rails affixed to it for the purpose of restoring the battery to the track if it has been run off, and removable where it is necessary, to repair the track.

Claim.—The travelling battery specified, provided with the V-shaped end *e*, and inclines *e'*, as set forth.

Also, the arrangement of the movable platform sections *h h*, as and for the purposes specified.

Also, providing the movable platform sections *h h*, with the rails *4 4*, for the purposes and as set forth.

No. 37,767.—CHARLES PERLEY, of New York, N. Y.—*Improvement in Hose Coupling*.—Patent dated February 24, 1863.—The two flanges on the ends of the pipes are coupled together by a hinged clasp, which locks down upon them and is screwed in position.

Claim.—A hose coupling having the hinged clasp *e d*, fitted with the screw *f*, and receiving the flanges *1 2*, in the manner and for the purposes set forth.

No. 37,768.—CHARLES PERLEY, of New York, N. Y.—*Improved Steering Apparatus*.—Patent dated February 24, 1863.—The rudder stock is surmounted by a bevel wheel, which is supported on bulls running in a groove in it and in the casing surrounding the gearing, the wheel being rotated by a bevel pinion on a horizontal tiller shaft by the ordinary tiller wheel.

Claim.—The arrangement of the horizontal shaft *g*, pinion *k*, and wheel *f*, within and sustained by the casing *e*, as and for the purposes set forth.

Also, the horizontal wheel *f*, in combination with the rudder stock, when fitted substantially as specified, so that the rudder is free to work endwise without disturbing or altering the position of the wheel *f*, as set forth.

No. 37,769.—CHARLES PERLEY, of New York, N. Y.—*Improved Naval Ram for the Destruction of the Enemy's Ships*.—Patent dated February 24, 1863.—A shaft or bolt is constructed, which lies along on the keel of the vessel and capable of being projected through the prow by means of a rack and pinion beneath it. The orifice in the prow through which it passes is guarded by valves inside and outside, when the ram is not run out, and the latter is provided with a charge-chamber and a cutting-edge at its point, and with a weighted-box at its rear to assist its momentum.

Claim.—First, the stop-cock or cocks *d* and *e*, applied at the end of the vessel below the water-line, in combination with the movable ram *a*, for the purposes and as specified.

Second, the circular cutting-edge and the cannon applied to and combined with the movable ram in the manner specified, so that said cannon can be loaded when the ram is drawn into the vessel, or a new cutting-edge substituted, as specified.

Third, the ram fitted to slide in the opening in the vessel through which it is projected, in combination with the weighted-box *h*, contained in the vessel, but not attached thereto, for the purposes and as specified.

No. 37,770.—CHARLES PERLEY, of New York, N. Y.—*Improvement in Closing Doors*.—Patent dated February 24, 1863.—A saddle piece is pivoted to a plate on top of the door with a cord attached to it which passes between horizontal pulleys and then over another pulley, where it hangs within the door casing, having a weight attached. As the door closes under the draught of the cord the saddle piece settles itself between the two horizontal pulleys so as to bring the door to rest parallel with its frame.

Claim.—The saddle piece *i*, receiving the weight cord, in combination with the rollers *e e'*, and acting to close the door, in the manner and as specified.

No. 37,771.—CHARLES PERLEY, of New York, N. Y.—*Improvement in Discharging Shells from Balloons*.—Patent dated February 24, 1863.—The bomb is placed in a basket, which consists of two parts joined by a pin in a barrel. The basket is elevated by a balloon or gas-bag, and a time match lighted, which, as the fire reaches the end, ignites the powder in a nipple and explodes the charge in the barrel, driving out the pin and allowing the bomb to drop.

Claim.—The employment of a divided basket or receptacle, sustained by a gas-bag, and carrying the bomb or other article to be dropped by the opening of said basket, as set forth.

Also, the employment of the hinge-pin *e* and barrel *f*, to disconnect the halves of the basket by firing out the said pin *e*, as set forth.

Also, a bombshell, or its equivalent, attached to and conveyed by a gas-bag, in combination with automatic means for disconnecting the said bomb at a given time, as set forth.

No. 37,772.—TREAT D. PROSSER, of Fond du Lac, Wis.—*Improvement in Ventilators*.—Patent dated February 24, 1863.—The movable perforated disk and the perforated plate on which it works are both made of glass.

Claim.—A ventilator constructed by cutting out suitable orifices in a pane of glass or other transparent substance, and applying thereon a movable disk of a similar transparent material, in the manner substantially as set forth.

No. 37,773.—E. B. REQUA, of Jersey City, N. J.—*Improved Combination of Globe and Chimney for Lamps*.—Patent dated February 24, 1863.—This combined globe and chimney consists of a chimney or neck with an oblate spheroidal top; the point of junction of the two portions being contracted, and the oblate spheroid ground on one side, and plain on the other.

Claim.—The combined globe and chimney composed of the oblate spheroidal part *a* and the conical neck *b*, so arranged that it may be applied to the burner and have the relative position to the jacket and cone thereof and to the flame as herein set forth.

Also, having one side *f* of the part *a* of the globe and chimney ground, and the other side *g* plain or unground, as specified.

Also, forming the upper part of the neck *b* of the globe and chimney with a circumferential sunken portion *a'*, but this only when used with the particular form of a globe and chimney, as herein described.

No. 37,774.—PIERRE EUGENE RICHARDIERE, of Paris, France.—*Improvement in Buttons*.—Patent dated February 24, 1863.—A bar or bolt is formed in the interior of the button, over which the thread may be passed without being exposed on the outer surface of the button.

Claim.—A button, having formed in its interior one or more bars or partitions, over which the thread passes, substantially as herein described, to secure it to the cloth or other material without being exposed on the face of the button.

No. 37,775.—E. H. SAWYERS, of West Grove, Davis county, Iowa.—*Improvement in Cultivators*.—Patent dated February 24, 1863.—This cultivator is suspended beneath a carriage, guided by the driver by means of a lever and a vertical crank rod, which deflects the forward point of the cultivator to the right or left, vibrating on a spindle, which projects downwardly from the carriage. The upper end is attached by a draught rod to the tongue, and its rear is adjusted vertically by a lever and chains.

Claim.—The main frame C, guide rod G, metallic support J, levers H I, rods a a, plough frame F, and spindle j, the whole combined and arranged to operate in the manner and for the purpose specified.

No. 37,776.—U. A. SHOCKLEY, of Litchfield, Montgomery county, Ill.—*Improvement in Seeding Machines.*—Patent dated February 24, 1863.—This machine consists of a triangular frame, with a wheel at the forward angle, and two seed boxes towards the rear, the forward one for sowing in hills and the rear one for sowing in drills. The gates sliding in the bottoms of the seed troughs are in either case driven by a band from the roller, and when planting in hills the intermittent action is obtained by a toggle, operated by the revolving shaft and connected with the seed slide.

Claim.—The combination, in the manner herein shown and described, of the shaft I, toggle H, the seed slides G G, and lever A', with the shaft D, hoppers C, supporting wheel B, pulleys c c, and frame A, all as herein set forth.

No. 37,777.—HENRY SIMON, of Providence, R. I.—*Shirt Studs and Sleeve Button.*—Patent dated February 24, 1863.—The stud is composed of a shell or case of sheet metal with a backing or filling of enamel.

Claim.—The improved stud or button described, composed of a shell of sheet metal with a backing of enamel, the whole article being substantially such as specified.

No. 37,778.—DAVID L. STILES, of Rochester, N. Y.—*Improvement in Cooking Stoves.*—Patent dated February 24, 1863.—The front and rear sides of the elevated oven are provided with flue plates, which are connected at their lower ends and diverge as they rise, so as to compel the heated air to pass to the upper corners of the stove: passing thence, it circulates along the top of the oven, and is deflected downward and up again over the middle of the oven to the exit flue. A heated air chamber, having communication with the outside, is connected with the oven by tubes passing across the flue and thimbles, which are dropped over the tubes through holes in the floor of the oven.

Claim.—The flue plates b b and d d, conjoined at the bottom but diverging toward the outer corners at the top of the oven, so that the heated air, in equal columns, is concentrated at those corners as it rises, in combination with the interior flue plates f f and movable division plates b b, in elevated oven stoves, for the purpose of equalizing the heat throughout the same, substantially as set forth.

Also, the arrangement of the loose perforated thimbles k, in combination with the stationary heated air tube i, substantially as and for the purposes shown and described.

No. 37,779.—LEWIS S. THOMSON, of Brooklyn, N. Y.—*Improved Mosquito Frames.*—Patent dated February 24, 1863.—This frame is made expansible to fit within the casing of a window. The corners are riveted together and the side detached in the middle, so as to be put together by running a sleeve upon them, or detachable, packing them away for transportation or to be laid aside.

Claim.—An expanding mosquito frame formed of bars fitted so as to be increased or decreased in length to fit the window and receiving the netting or gauze, and in combination therewith the joint at the angles, for the purposes specified.

No. 37,780.—SILAS VERNON and NICHOLAS OVERFIELD, of Meskoppa, Wyoming county, Penn.—*Improved Revolving Shelves.*—Patent dated February 24, 1863.—The shelves are affixed to a vertical shaft, which is pivoted above and below. The central shaft is four-sided, with square mortises in the sides at such distances as may be convenient for the shelves; vertical strips are then fastened to the central axis, and through the mortise, of which the strips form one side, the slats for the shelves are arranged. The same construction is repeated on each side.

Claim.—The post A, notched or recessed, as shown, and having the side strips or boards c secured to it, in combination with the slats B B', all arranged as shown, to form a new and improved article of manufacture, for the purpose specified.

No. 37,781.—HENRY E. TURNER, of Boston, Mass.—*Improvement in Draught Regulators.*—Patent dated February 24, 1863.—The invention consists in dividing the smoke flue by a vertical partition; that from the fire being commanded by a damper, and that communicating with the exterior by a ventilating register, permits them to be used separately or together, and to dampen the fire or to ventilate, as may be desired.

Claim.—The combination of the register D, the damper E, and the division plate or partition G, operating as set forth, for the purpose described.

No. 37,782.—JAMES WARNER, of Springfield, Mass.—*Improvement in Sights for Firearms.*—Patent dated February 24, 1863.—The two sights are pivoted to a base plate, which is fastened to the barrel of the gun. The higher sight and the base plate are both slit at the hinge end, so that the motion of the screw shall tighten all parts of the joint.

Claim.—The combination of the screwed joint pin, the slit b in the base A, and the slit g in the leaf B, substantially as herein described, whereby the screwing up of the pin is caused to tighten all parts of the joint.

No. 37,783.—G. A. WATKINS, of Springfield, Windsor county, Vt.—*Improvement in Hooks for Fastening Garments.*—Patent dated February 24, 1863.—A hook is formed with a hole in the flattened shank; through this an eyelet is passed, the fabric or material being between them, and the tube of the eyelet riveted down upon the shank of the hook, constituting a hooked eyelet.

Claim.—A fastening for India-rubber and other blankets and garments designed for military and army use, composed of a hook and an eyelet attached permanently to the shank a, substantially as herein shown and described.

No. 37,784.—WILLIAM H. WILSON, of Providence, R. I.—*Sleeve Button.*—Patent dated February 24, 1863.—The invention consists of a bar acting in connexion with two studs on the back of the button to connect the cuffs; the studs or posts which pass through the button-holes are there retained by the vibration of the bar which is attached to one post, engages with a notch in the other, and is retained by an elastic catch which is passed behind a projection on the back of the button.

Claim.—The combination of the two posts a b, the bar B moving in a plane parallel with the head of the button, the elastic arm C', and the projection f, the whole operating substantially as herein specified.

No. 37,785.—J. A. ENGLEHARD, of St. Louis, Mo., assignor to Self and GEORGE HARTMAN, of same place.—*Improved Money Safe for Travellers.*—Patent dated February 24, 1863.—This consists of a flat case to be worn on the breast, slung by straps passing over the shoulders and buckling to the side of the case, which is divided off into pockets for the reception of money, &c.

Claim.—The safe A, with its pockets B D E and straps g k or m n, all being constructed and arranged substantially as and for the purposes specified and represented, as a new article of manufacture.

No. 37,786.—JAMES W. GUERNSEY, of Tioga, Pa., assignor to Self and H. A. GUERNSEY, of Wellsborough, Pa.—*Improvement in Hydrant Valves.*—Patent dated February 24, 1863.—Underneath the chamber from which the discharge pipe proceeds is a rotary disk with two openings which permit the water to escape up through them when they are brought to register with the discharge openings in the head of the chamber; the motion of the disk "shuts off" or "lets on" the water, the pressure of the latter keeping the valve to its seat.

Claim.—The employment of the double-way cap E, constructed as set forth, in combination with the perforated disk valve J, stem H, and chamber A, all in the manner herein shown and described.

No. 37,787.—ROBERT M. HUGHES, of Oxford, Chester county, Pa., assignor to Self, J. A. BLAKE, and S. WOOD, of Philadelphia, Pa.—*Improvement in Coupling Heads for Railroad Cars.*—Patent dated February 24, 1863.—The heads are counterparts of each other, and a link is permanently connected to each by being hung upon the projecting hook and secured by the pin; when the cars are to be coupled either of the links is introduced into the coupling head of the other car, and as it enters raises the catch lever which it passes, and the latter falling behind it, secures it in position.

Claim.—First, the combination of the coupling head A and link D, when the latter is permanently connected to the former by the hooked projection i and pin m, or their equivalents, and when the head is so formed in respect to the link as to allow the same to be raised or lowered, the whole being constructed substantially as and for the purpose herein set forth.

Second, in combination with the said coupling head A and link D, the catch lever B, hung to the head and arranged and operating substantially as and for the purpose specified.

No. 37,788.—DAVID KRAUSER, of Pottsville, Pa., assignor to Self, HENRY P. STICHTER, and LEWIS C. THOMPSON, of same place.—*Improved Ice Caulk.*—Patent dated February 24, 1863.—This caulk is attached to a stirrup or frame, which embraces the heel in such a manner as to be thrown into position under it with the points down, or stowed away in under the shank of the boot when not required for use; to accomplish this motion it is pivoted to the front bar of the frame which surrounds the heel.

Claim.—The heel frame A, in combination with the flat plate C, when the latter is so attached to the former and arranged in such relation therewith as to admit of being placed directly beneath the heel when the spurs or points f are required for use, and admit of being turned over into the hollow of the sole when not required for use, substantially as shown and described.

No. 37,789.—P. B. and L. C. REYNOLDS, of Prophetstown, Whitesides county, Ill., assignors to Themselves and CLARK G. REYNOLDS, all of same place.—*Improvement in Cultivators.*—Patent dated February 24, 1863.—This two-horse cultivator is intended to stir the breadth of two baulks, and has adjustable side beams which carry the shovels so as to bring the rear shovels nearer to the row of corn which is spanned by the machine.

These rear shovels are made adjustable laterally, so as to throw a greater or smaller amount of soil to either side by means of a plate on the side bar to which they are attached, which is rotated and confined to a determinate position by a pin.

Metallic bands which descend from the front bar follow a line below and parallel with the side beams, giving a lower and secondary support to the shovel stocks, which, as the side bars are contracted, move in slots in the middle transverse bar of the frame.

Claim.—First, the arrangement upon adjustable beams B C of two or more pairs of perforated lever adjusting plates H H i, for the purpose of adjusting two or more pairs of shovel stocks G1 G2 i t, in the manner and for the purpose described.

Second, the arrangement of the bent sustaining bars F F, side beams B C, and slots b c s s, in the manner and for the purpose described.

Third, the arrangement of the frame A B C D E, swingletree I, draught rods J J, adjustable hangers K K, perforated lever adjusting plates H H H H, swivelling square or flat top standards G1 G2, bent sustaining bars F F, and slots b c s s, the whole constructed and operating together in the manner and for the purposes described.

No. 37,790.—JOHN F. SCHUYLER, of Philadelphia, Pa., assignor to WILLIAM E. LOCKWOOD, of same place.—*Improvement in Machines for Planishing Paper.*—Patent dated February 24, 1863.—Two rollers are suitably journaled in standards, the lower one having a smooth surface and heated by steam, the upper one having a slightly ribbed surface made by draw-filing longitudinally.

A third and smaller roller with a larger diameter at the middle than at its ends is journaled on springs located in front of and between the other rollers.

The paper is passed over the smaller and between the pair of rollers, the lower moving faster than the fabric by the slight retention of the paper by the action of the upper and the supplementary roller.

The slip of the lower roller on the fabric has the effect of planishing it, and the greater middle diameter of the small roller spreads the paper and removes the creases.

Claim.—The use of the smooth planishing roller E, in combination with the pressure roller D, when a number of small longitudinal ridges are formed on the latter roller, as set forth for the purpose specified.

Also, the auxiliary pressure roller K, of the form described, in combination with the upper and lower rollers D and E, for the purpose specified.

No. 37,791.—JOHN F. SCHUYLER, of Philadelphia, Pa., assignor to WILLIAM E. LOCKWOOD, of same place.—*Device for Feeding Paper to Cutting Machines.*—Patent dated February 24, 1863.—The clamp is composed of two plates, which are compressed together by raising a cam lever so as to grasp the edge of a sheet of paper to be pushed towards the cutting apparatus. At the rear end of the clamp is a pawl which engages with the vertical side of notches in a rack let into the table, and, as the pawl comes in contact with a tooth, the cutter descends; the pawl is then tripped out of contact with the tooth, and the paper is pushed along until another tooth is engaged, the distance between the teeth of the rack being the measure of the feed.

Claim.—The clamp composed of plates D and E, the cam lever G, or its equivalent, and the pawl F, the whole being constructed substantially as set forth, and operating in conjunction with a rack B, as specified.

No. 37,792.—JOHN F. SCHUYLER, of Philadelphia, Pa., assignor to WILLIAM E. LOCKWOOD, of same place.—*Improvement in Apparatus for Bending and Folding Paper Collars and other Articles of Apparel.*—Patent dated February 24, 1863.—The fabric to be operated upon is first cut into shape and placed piece by piece upon the endless tapes, being regulated by the motion of a registering arm so as to have the collars the proper distance apart; steam is admitted below and retained by a double inclined roof above, lined with oiled silk, to render the collars flaccid preparatory to their being folded; as they reach the point where the tapes descend a bar falls, which grips the collar by the rear edge, and while it is thus suspended a knife comes forward which pushes it between two rollers that press it flat and discharge it on to a table.

Claim.—First, a trough Y, to which steam is admitted, in combination with the endless traversing tapes x x, the whole being arranged and operating substantially as set forth for the purpose specified.

Second, the roof W, with its lining y of oiled silk, or its equivalent, when arranged in respect to the trough Y and endless tapes x, substantially as and for the purpose set forth.

Third, the registering arms T, or their equivalents, when arranged in respect to and operating in conjunction with the endless tapes, substantially as set forth for the purpose specified.

Fourth, the combination of the bar n, shaft H, with its pulleys, the endless tapes x x, and adjustable ledge 7, the whole being arranged and operating substantially as set forth for the purpose specified.

Fifth, the reciprocating blade J, adjustable ledge 7, folding rolls F and G, and table 4, the whole being arranged and operating as and for the purpose herein set forth.

No. 37,793.—AMOS H. SEARFOSS, of Newark, N. J., assignor to ANNA MARIA HYDE, of same place.—*Improvement in Grinding Mills.*—Patent dated February 24, 1863.—The stones in this mill are set with their surfaces in a vertical plane, the bed stone being fixed to the frame and surrounding a central shaft which has a projecting pinle entering a socket in the axis of the revolving stone. The shaft passing through the bed stone has a spiral groove which connects at one end with the grain in the hopper and at the other discharges it between the stones, the supply from the hopper being regulated by a gate; the revolving stone is adjusted to the bed stone by a screw acting endwise upon the end of its axis.

Claim.—Constructing a vertical mill with its bed stone secured and held to the frame-work in the manner described, combined with a feeding screw and feeding apparatus, arranged, constructed, and operated as described.

No. 37,794.—THOMAS SHAW, of Philadelphia, Pa., assignor to Himself and PHILIP F. JUSTICE, of same place.—*Improved Steam Gauge.*—Patent dated February 24, 1863.—The pressure of steam is indicated by the rise of mercury in a tube from a chamber beneath, where it rests upon a diaphragm of rubber; underneath this is a piston whose lower end, with a disk of rubber intervening, is exposed to the pressure of steam from the boiler, which, raising the piston, drives the mercury up into the tube.

Claim.—An apparatus when arranged substantially as set forth and for the purpose specified.

No. 37,795.—SAMUEL STEINMETZ, of Chicago, Ill., assignor to ANDREW RIERSON, of same place.—*Improvement in Steam Boiler.*—Patent dated February 24, 1863.—The improvement consists in making one part of the shell of the boiler weaker than the rest, and arranging it so that when it gives way it shall be held and controlled to admit of the passage of the steam and retain the portion raised, which, in the illustration, is shown as a valve held down with a determinate pressure by four levers and spring hooks.

Claim.—First, a steam boiler, constructed with a known portion D of its exterior surface or shell, more yielding than the remainder, for the purpose of carrying off any excessive pressure which can possibly occur, the said yielding portion being held and controlled substantially as herein explained so as to be automatically released when raised from its seat, and thus prevent disastrous consequences from an explosion.

Second, the combination of the yielding head D, levers I1 I2 I3 I4, spring hooks J1 J2 J3 J4, and returning spring H, all constructed, arranged, and operating substantially as herein shown and described.

No. 37,796.—AWSBENT H. WAGNER, of Chicago, Ill., assignor to Himself and CHARLES KAESTNER, of same place.—*Improvement in Grinding Mills.*—Patent dated February 24, 1863.—The invention consists in the method of hanging and adjusting the bed stone, which is set with its face in a vertical plane, and is required to be adjustable to the revolving stone, the latter being firmly attached to its axis or shaft, which passes through the bed stone and rests on bearings in the frame beyond. In the rear of the bed stone is a vibrating frame with four arms resting on bearings, and the bed stone resting against it adapts itself vertically and horizontally to the runner. The bed stone is supported at two points by pivots which rest on bearings from the inside of the case. The shoe is shaken by a pin on the shaft coming in contact with a vibrating arm to which it is attached, and agitators on the runner projecting into the eye of the bed stone agitate the grain.

Claim.—The peculiar construction of the vibrating frame M, having four bearings, by which means the stationary stone I can adjust itself vertically and horizontally to the running stone.

Also, the pivots J J, grooves K K, for holding the stone I, when combined with my devices for holding and shaking the shoe R, and the floats or agitators V V, arranged and operating as described.

No. 37,797.—JOEL HOOD, of Milwaukee, Wis.—*Improvement in Snow Scrapers.*—Patent dated February 24, 1863.—This scraper, which is made to fit the rail with a straight edge and a flange, is placed at the end of a pivoted standard which has a backward and forward motion, governed by springs which tend to restore it to the perpendicular. It has also a spring above it, so that obstructions may deflect or raise it without injury. A stirrup passing down from the frame of the car protects it from any considerable lateral displacement.

Claim.—First, the combination of the scraper E, having a tongue or projection F, with the standard A, attached to a frame B by a pin C, and springs M M and I, and connecting rods O O, as and for the purpose herein set forth.

Second, the stirrup L, in combination with the devices or means recited in the above first claim, as herein described.

No. 37,798.—J. L. ALBERGER, of Buffalo, N. Y.—*Improvement in Apparatus for Distilling Coal Oils.*—Patent dated March 3, 1863.—This retort is supported on rollers, so that an oscillating or rotary motion may be imparted to it. The retort is provided with a steam coil for heating, a perforated pipe for introducing at will, either moist or superheated steam to

the body of oil, and a worm to carry off and condense the vapors. Any or all these pipes may pass through suitable stuffing boxes. Moist steam is first introduced, which, condensing, washes the oil, and the latter is gradually raised in temperature until the impurities, coloring matter, and water are driven off and pass through the condenser. Superheated steam is then introduced to evaporate the oil. The entire operation is effected without direct contact of the oil with fire surfaces, and when completed the superheated steam is shut off, and the temperature of the apparatus rapidly reduced for the reception of a new charge.

Claim.—The employment, simultaneously, within an oil-distilling retort, of a steam-supplying and a steam-heating system of pipes, substantially in the manner and for the purpose herein shown and described.

No. 37,799.—WILLIAM W. ANDREWS, of Warrensville, Cuyahoga county, Ohio.—*Improved Boat Detaching Hook.*—Patent dated March 3, 1863.—This invention consists in so constructing a davit hook and eye bolt that the weight of the boat shall keep the hook closed, but when the weight is removed by the flotation of the boat, the hook is cast loose by a spring.

Claim.—The combination in a mechanical apparatus of the hook B, shoulder B', stud I, lever E, spring G, catch F, and dog C, the several parts being arranged substantially as and for the purpose herein specified.

No. 37,800.—JOHN BABILLION, of Detroit, Wayne county, Mich.—*Improvement in Drying Grain.*—Patent dated March 3, 1863.—The invention consists of a series of floors one above the other, constructed in sections, so that the grain can be dumped from one floor to the other, until discharged by the lower inclined floor.

Claim.—The employment of several floors, arranged one above the other, and so constructed that the sections composing the floors can be dumped, and the grain fall upon the floor below, thereby admitting the grain in process of drying to a series of relays, and when dried, of ready transmission from the machine by tilting the floor B, substantially as described.

No. 37,801.—ABEL H. BARTLETT, of Spnyten Duyvil, West Chester county, N. Y.—*Improved Refrigerator.*—Patent dated March 31, 1863.—This invention consists in a combination which may be described in general terms as an interior inverted conical ice and water chamber, with a number of cold-air or provision chambers on each side, with provision for drainage by pipe and faucet.

Claim.—First, the corrugated metallic ice and water box, constructed and combined with the trough K, the pipes Z and H, the faucets I and J, or their equivalents, and made and arranged substantially as and for the purpose shown and described.

Second, the combination and arrangement of the ice chambers F and W, the plank Y, the reservoir G, the pipes Z and H, the faucet I, or their equivalent, whereby the ice meltings from the chamber W can be either conducted into the reservoir G, and retained with the water therein, or the whole allowed to pass off through the faucet I, and opening X, substantially as and for the purpose shown and described.

No. 37,802.—JOHN BAIRD, of New York, N. Y.—*Improvement in Valves for Steam Engines.*—Patent dated March 3, 1863.—Patented in England, June 21, 1862.—This invention consists in appliances to relieve a slide valve from inordinate pressure, and to hold it steady under the variable pressure at its two ends, and this is accomplished by means of an adjustable face plate between which and the seat the valve works, said plate being operated by keys against which it is supported by springs, the pressure being further equalized by apertures through the valve, which at the proper time communicate with the recesses or pockets in the face plate.

Claim.—First, the combination of a valve with parallel faces with a seat and a face plate, all operating substantially as described, by means of keys supporting the face plate and permitting its adjustment, substantially in the manner specified.

Second, in combination keys to support a face plate, springs to hold the latter in contact with the former, a face plate and a sliding valve with parallel faces, the combination being substantially such as specified.

Third, in combination with a slide valve and equalizing recesses or pockets, substantially such as described, apertures through the valve itself, which, at the proper time, make a connexion, substantially as specified, between a passage for steam or exhaust and a recess or pocket, for the purpose specified.

No. 37,803.—FREDERICK BENNETT, of Bagillt, Flint county, England.—*Improvement in the Manufacture of Zinc.*—Patent dated March 3, 1863.—The process is as follows: Calcine the zinc ore, mix it with coal or coke, etc., add chlorine in some shape as common salt for instance. Then condense and collect. The proportion of common salt may average 10 per cent.

Claim.—The use or employment of a chloride or compound of chlorine in the manufacture of zinc, by mixing it with the calcine ore and with the carbonaceous matter in the smelting retorts, substantially in the manner set forth.

No. 37,804.—JOHN T. BEVER and MARIA L. BEVER, of Springfield, Sangamon county, Ill.—*Improved Ironing Stand.*—Patent dated March 3, 1863.—The invention consists in the construction and adjustment of the several parts, whereby it may be made to serve the purpose of receptacle for clothing, seat or lounge, ironing table, and rack for drying clothes.

Claim.—The combination of leaf F with the frame D D and slides H H, poles J, and cords K, when arranged with the receptacle for clothing or mattress, substantially as and for the purposes set forth.

No. 37,805.—GEORGE S. BISHOP, of Washington, D. C.—*Improvement in Car Coupling.*—Patent dated March 3, 1863.—The invention consists in the peculiar construction of the coupling latch, in combination with the link to connect the cars.

Claim.—First, the construction of the latch or coupler A, with its foot E, spur D, and wide arm B, in the manner and for the purpose herein set forth.

Second, the stirrup F and step K, in combination with the latch A, with its foot E and spur D, as and for the purpose herein described.

No. 37,806.—HOBERT HENRY BISHOP, of Bristol, Conn.—*Improvement in Device for Converting Motion.*—Patent dated March 3, 1863.—This invention consists in the arrangement of a treadle with two hooked parallel arms, in combination with two pulleys provided with tangential driving arms and set to turn the fly-wheel in the same direction in such a manner that by the action of the oscillating treadle on the two pulleys, a positive continuous motion of the fly-wheel is produced.

Claim.—The combination with the fly-wheel and its hub b, made as represented, of the two arms c c of unequal length, the two pulleys D D' of unequal interior diameters, the cords h h, and the hook-armed treadle E, the whole constructed and operating in the manner herein shown and described.

No. 37,807.—EDWARD BRADY, of Philadelphia, Pa.—*Improved Means of Affixing Defensive Armor Plates.*—Patent dated March 3, 1863.—The invention consists in attaching metallic plates edgewise to vessels by means of bolts, &c., which enter holes in the inside of said plates, and are enlarged inwardly or intersected by transverse apertures in any way.

Claim.—First, protecting the sides, decks, or other parts of vessels or fortification with metallic plates secured edgewise thereto by means substantially as herein shown and described.

Second, securing the said plates by means of bolts or other fastenings applied to or within apertures or cavities formed in the inner edges of the said plates, and enlarged within the body thereof or intersected by transverse apertures in any way, substantially as explained.

No. 37,808.—WILLIAM H. BROWN, of Erie, Pa.—*Improvement in Dumping Tubs.*—Patent dated March 3, 1863.—The invention consists in adjusting the point of suspension, relatively to the centres of gravity, in such a manner that the tub will be top up when empty, and will be reversed when filled, subject to the condition in this latter case of being restrained.

The skip is pivoted to arms suspended from a cross-bar, and retained in position or restrained from dumping by a vibrating bar which is hung on pivot bolts, so that the part passing round the back of the tub preponderates over the forward part and rests upon brackets. The anterior ends of the bar carry segments, notches in which receive pins secured to the arms by which the skip is suspended; by raising the rear end of the bar the detent is released, and the skip discharged, returning to its position by the counterbalancing weight of the rear portion when empty.

Claim.—The skip or tub balanced and restrained, substantially as described, and dumped when required, in the manner and for the purpose specified.

No. 37,809.—J. WINSLOW CHAPMAN and WM. Z. W. CHAPMAN, of New York, N. Y.—*Improvement in Setting Artificial Teeth.*—Patent dated March 3, 1863.—The invention consists in constructing a plate which on its one side is formed by a cast from the gums, and the other side fitted to the base of the teeth, which are carefully fitted, one by one, on a base of wax so as to articulate with the corresponding teeth in the lower jaw; the outline of base thus obtained is made the mould for a permanent plate, the other side having been fitted to the gums, the teeth are then attached by screws through the plate to platina dies in the teeth.

Claim.—The construction and employment of a plate of metal or other suitable substance, as herein described, between the teeth and the gums, in the manner and for the purposes set forth, detached from and independent of said teeth, said plate conforming to the irregularities of the base of the teeth and the surface of the gums, substantially as herein specified.

Also, uniting the base or saddle plate with the teeth, as and for the purposes set forth, so that said plate and teeth can be readily separated for repairs or otherwise, as herein described.

No. 37,810.—WILLIAM A. DAVIS, of Salem, Columbiana county, Ohio.—*Improvement in Wool-packing Device.*—Patent dated March 3, 1863.—The table consists of a middle and side pieces, upon which the fleece is spread out, with the slotted strap underneath it occupying the central portion. The cords are passed through holes and then to the roller, where they are secured to spikes. By a treadle the side pieces are raised and the wool lapped over on to the centre; the free end of the strap is then doubled back and attached to the roller which is turned, compressing the wool into a roll to be tied.

Claim.—First, the hinged side pieces E E of the platform D, provided with the bars F, and used in connexion with the bars G G', or their equivalents, to serve as stops for the bars F, to retain the side pieces in a vertical position, as set forth.

Second, the arrangement of the bars G G', connecting rod H, spring i, rod I, crank shaft J, and levers h J', substantially as shown, for the purpose of raising the side pieces E E to a vertical position, and releasing the same so that they may be turned down to a horizontal position as herein described.

Third, the cords b placed on the spools a, in connexion with the spikes or teeth t, when said parts are used in connexion with the slotted packing strap P, as and for the purpose specified.

Fourth, the packing strap P attached at one end of the platform D, in combination with the roller K and bearing plate O, as and for the purpose herein set forth.

No. 37,811.—TIMOTHY DRAKE, of Windsor, Conn.—*Improvement in Vapor Lamps.*—Patent dated March 3, 1863.—This is an arrangement by which the heat of the flame is transmitted to the fluid so as to generate gas to be ignited at the orifice of the burner, and consists of a pair of semicircular pallets which receive the heat of the flame and transmit it by rods down to the fluid in the generating chamber, which is separated by a diaphragm from the gas-collecting chamber, the latter communicating with the orifice of the burner.

The upper part is detachable from the lower tube.

Claim.—The combination of the heaters m n, chamber k, diaphragm h, and vaporizing chamber a, substantially in the manner as and for the purpose described.

Also, the heaters m n, with the interior perforated diaphragm h, substantially in the manner and for the purpose described.

No. 37,812.—HENRY J. HALE and HENRY J. HALE, jr., of Indianapolis, Ind.—*Improved Dovetailing Machine.*—Patent dated March 3, 1863.—The lumber to be operated upon is fastened to a bench with the necessary adjustments and motions. It is there operated upon by two chisels whose stocks move up and down in ways or guides which are adjustable so as to regulate the angularity of the sides of the dovetail slot. The two chisel stocks are attached to a walking beam, and a crank from a motor rocks the beam and drives the chisels, the depth of their cut being adjusted by attaching the connecting rod nearer to or further from the centre of vibration of the walking beam.

Claim.—First, the arrangement of the vertical or oblique cutters l l, the walking beam C, having the slot e and the pitman K, by which the depth of the cut is regulated, in the manner described.

Second, controlling the direction of the cutters l l by means of the adjustable grooved plates ff, constructed and arranged with reference to the slides k k, substantially as described.

No. 37,813.—GEORGE ENGLE, of Bunker Hill, Grant county, Wis.—*Improvement in Harrowers.*—Patent dated March 3, 1863.—These improvements mainly relate to the frame of the machine, which consists of a truss or braced frame tightened by a suspending and adjusting screw, and with angular suspension rods for the cutter bar, braces, bars and rods, to stiffen the truss and its outlying parts and afford points of attachment for the working parts, and for the seats of the driver and raker.

Claim.—First, the truss or suspension draught frame, for a reaper or mower, constructed substantially as set forth.

Second, the arrangement of the driver's and the raker's seats in the relation to each other shown, and with respect to the platform and the tongue of the machine, and upon the truss frame and standards G G', substantially in the manner described.

Third, the combination of the angular bracket P, or its equivalent, and the hangers M M, applied and operating substantially as described.

Fourth, the suspending and adjusting screw Q, applied and operating substantially as described.

Fifth, the combination cable k2, and the arms i i, and bracket P, substantially as and for the purpose set forth.

Sixth, the hangers M M, when used as guides for loops of the arms i i, substantially as described.

Seventh, the arrangement of the bar N, with respect to the main frame and gearing, substantially as set forth.

Eighth, the adjustable skeleton triangle divider, made in one piece, in combination with the deflecting board Y, as set forth.

No. 37,814.—R. J. HAMILTON, of Chicago, Ill.—*Improvement in Journal Boxes for Car Wheels.*—Patent dated March 3, 1863.—This invention is an arrangement within the axle-box for preventing the waste of the lubricating oil, and consists of a stationary and fixed collar within the oil-box, and a leather collar around the shoulder of the axle in the neck of the box.

Claim.—The combination and arrangement of the adjustable collar A and the washer C, when cut, as described, and both are operated upon and used with the springs a and e, or their equivalents, and the openings g and f, when all are arranged and operating substantially as and for the purposes delineated and set forth.

No. 37,815.—J. C. G. HOWITZ, of Copenhagen, kingdom of Denmark.—*Improved Composition for Purifying Gas.*—Patent dated March 3, 1863.—The invention consists in the use, for the purpose of purifying gas, of iron ore and spent-tan or saw-dust, by which the combinations of sulphur with carbonic acid and carbonic oxyd and other impurities are absorbed, the oxyd of iron converted into sulphuret of iron, cyanide of iron, carburets of iron, &c.

Claim.—The employment or use of the within described composition of iron ore and spent-tan or saw-dust, mixed together in about the proportion herein specified, for the purpose of purifying coal gas substantially in the manner set forth.

No. 37,816.—HUTSON E. HUGHES, of Cincinnati, Ohio.—*Improved Machine for Sawing Bevels.*—Patent dated March 3, 1863.—This is a circular saw which rotates through a slit in the table. The arbor on which it runs has two points of support—one near the head of the mandril and pivoted, and the other adjustable in a quadrant, so as to bring the circular saw to a greater or less angle to the plane of the table, and consequently to vary the bevel of its cut in lumber exposed to it.

Claim.—First, the arrangement of the movable arbor frame H, supported in bearings at one end and adjustable at the other, in the manner and for the purpose set forth.

Second, the movable table B, with the bevelled slot L, when it has a transverse motion in relation to the saw, for the purpose herein described.

Third, the combination of the movable arbor frame H, with the quadrant I and transverse moving table B, vertical sliding frame D, substantially as and for the purpose set forth.

No. 37,817.—JOHN F. H. KING, of Richmond, N. Y.—*Improved Marine Battery Rams.*—Patent dated March 3, 1863.—A rod projects from the submerged prow of the vessel so as to strike a vessel below the water line. This rod or ram has a reciprocating motion, being connected to a crank and fly-wheel.

Claim.—The use of a submerged thrusting or striking bolt or ram for penetrating the bottom or sides of a vessel of an enemy, when actuated and receiving its reciprocating motion, substantially as and for the purposes described.

No. 37,818.—C. W. THEODORE KRAUSCH, of Chicago, Ill.—*Improvement in Machine for Moving Railroad Cars.*—Patent dated March 3, 1863.—This machine is intended to increase the traction of a hand car upon the rails so as to enable the operators to move cars by the revolution of the winch and gearing applied by an endless chain to the axis of the two wheels which support it under pressure derived from the end being set under the car, the weight of the operators acting as on a lever to press the wheels upon the track as they stand upon the suspended platform. The wheels are made to run free upon the axle when desired to use it as a barrow.

Claim.—First, a lever-traction truck, substantially as described, and for the purpose set forth.

Second, the providing of a truck which has two wheels, with the suspended platform and the jaws d d, or their equivalents, substantially as described.

Third, the providing of a truck which has two wheels and a lever frame, with gearing as described, for the purpose set forth.

Fourth, tongue washers in combination with the grooves in the wheels of a truck operating as described, for the purpose set forth.

No. 37,819.—IRA LYNDE, of Marathon, Cortland county, N. Y.—*Improved Clothes Dryer.*—Patent dated March 3, 1863.—This clothes dryer consists of a frame with lines stretched from the projecting arms, and made to traverse by wheels on a grooved track so that the frame may be hung with clothes and then run out of doors upon the extension track for exposure to the air.

Claim.—The arrangement of the wheeled line-carrying clothes frame C (one or more,) in combination with the sectional grooved elevated track A A', constructed and operating in the manner and for the purpose herein shown and described.

No. 37,820.—JOHN MCCLELLAND, of Washington, D. C.—*Improvement in Hydrants.*—Patent dated March 3, 1863.—On the inside of a cap or cover of a hydrant or fire-plug is a pivoted arm on which is a valve sliding in a guide so as to close or open the orifice of the water-main for the attachment of the hose. It is operated from the exterior by a cross handle rotating a crank whose pin works in a slot in the pivoted arm.

Claim.—The sliding valve C, with its slotted arm F, and the crank or eccentric D, with the cap or cover of a hydrant or fire-plug, in the manner herein described for the purpose set forth.

No. 37,821.—JOSEPH A. MONTGOMERY, of Columbus, Ohio.—*Improved Machine for Cutting Square Threads of Wood Screws.*—Patent dated March 3, 1863.—The wooden screw blank being chucked in the lathe, it is submitted to the action of the tools, which are three, and all mounted on one slide rest which has a longitudinal and a transverse motion. The tool in front is a turning-off bit, and as it is advanced to the blank the others recede in the rear. When the blank is dressed off the transverse slide is brought forward and the rotary square

facéd cutter tool is presented to the blank having its plane of rotation parallel to the pitch of the screw to be cut. A V-shaped cutter on a stock hinged to the slide-rest is brought into action when a V-threaded screw is required, which pares off the angle of the square thread.

Claim.—First, cutting screw threads with vertical or square edges on wooden blanks by means of a rotary tool.

Second, the combination of a rotary and hinged tool on the one stock or slide-rest, substantially as described and for the purpose set forth.

Third, the construction of the periphery of the rotary tool substantially as described.

Fourth, the combination of the rotary tool, hinged adjustable V-shaped tool, and the turning-off bit or tool, with the slide rest, substantially as described.

Fifth, setting the shaft of the rotary tool oblique with respect to the centres of the lathe, substantially as set forth.

Sixth, the combination of the two driving belt pulleys or drums with the tools for turning off the bench screw blank, cutting V-threads on the same, or for cutting the square or perpendicular edged screw threads, substantially as and for the purpose set forth.

No. 37,822.—JOHN NEUMANN, New York, N. Y.—*Improvement in Pressing and Polishing Metal Vessels.*—Patent dated March 3, 1863.—The vessel is mounted on a mandrel in a lathe, and a tool consisting of a lever and a hard metal polishing roller is pressed against it by being rested on a slide-rest as a fulcrum, and by the motion of the latter fed along the whole length of the vessel to be polished.

Claim.—The employment or use, in combination with a lathe and mandrel, of a lever C, provided with a steel or other hard metal roller P, applied to a slide-rest, or other equivalent feed mechanism, in such a manner that the latter will properly feed the lever and roller along while the same is pressed against the vessel G on the mandrel, and also serve as a bearing or fulcrum for the lever, substantially as and for the purpose herein set forth.

No. 37,823.—BENJAMIN O. PAIGE, Lowell, Mass.—*Improved Stop Motion for Drawing Heads.*—Patent dated March 3, 1863.—A tripper revolves with the upper roller, and should the sliver break or become so diminished as to let the upper down to the lower roller, a projection on the roller trips the lever catch out of the notch in the slide rod, the consequence of which will be a stoppage of the railway drawing head and the carding mechanism connected with it.

Claim.—An improved or positive stop motion or mechanism, the same consisting of the tripper A, or its mechanical equivalent, combined with a lever latch z, and so applied to the upper calender roller as to revolve with it or be revolved by its shaft, and be thereby caused to operate in manner and under circumstances substantially as hereinbefore specified.

No. 37,824.—HERMANN G. C. PAULSEN, of New York, N. Y.—*Improvement in Refining Sugar.*—Patent dated March 3, 1863.—The improvement consists in passing through the mass of sugar an alcoholic vapor at a low temperature to leach or drain out the sirup suspended by capillary attraction among the crystals of sugar. This is done by the suction of an air-pump connected to the lowest part of the refining vessel, together with a surface condenser and receiver. The contents of the vessel being cooled to 90° or 100° Fah., the mother liquor is blown out by a blast of air, communication closed, and the vessel exhausted of air by the other air-pumps; the vapor at a temperature of 100° to 150° Fah. is then admitted from the vessel where it is heated, and drawn through the mass of sugar.

Claim.—The application of alcoholic vapors of the temperature and for the purpose as herein stated to refine crystallized sugar.

No. 37,825.—JOHN HERMANN RUDOLPH REFFELT, of Hoboken, N. J.—*Improvement in Numeral Frames.*—Patent dated March 3, 1863.—The various wires are occupied by balls of lengths proportionate to their relative value as numerals on that board. This may be a regular arithmetical series, as 1, 2, 3, &c., or decimal, as 1, 10, 100, &c., or fractional, as 1, $\frac{1}{2}$, $\frac{1}{4}$, &c., to be used in teaching notation and in performing arithmetical processes.

Claim.—The division of the balls used into sections of compartments denoting units, tens, hundreds, and thousands, (or any denominations desired,) and the use of sliding pieces of various proportionate lengths, to denote fractions.

No. 37,826.—ANDREW J. REYNOLDS, Dayton, Ohio.—*Improvement in Pumps.*—Patent dated March 3, 1863.—In this pump the piston or plunger is hollow, and by a recurved neck discharges the water; the piston works in a double-acting pump chamber beneath the level of the water, and it has two openings, one above, and the other with a gravitating valve on its lower end, so as to admit water at each stroke, the chamber in which it works having two valves, one of which admits water at each motion of the reciprocating piston. The piston rod is suspended by a collar on the ends of two bolts which pass through the arms of the bell crank in which the oscillating lever or pump handle is socketed.

Claim.—First, the hollow piston D D' E F f, containing the double-acting disk valve C'', within the said piston; the whole being constructed and operating in connexion with a double-acting pump cylinder, or its equivalent, substantially as set forth.

Second, the arrangement of bolts N N', serving the twofold purpose of pivots and set screws, the collar O, bell crank K L M M, and pedestal H I I, the whole being combined with and serving to operate a water-discharging piston rod D', in the manner set forth.

No. 37,827.—GEORGE P. ROBERTS, of St. Louis, Mo.—*Improved Box Machines.*—Patent dated March 3, 1863.—On the horizontal bench is a vertical back board and two stocks, which latter are made adjustable relatively to each other by set screws projecting into holes in the bench. A plate is affixed to the back board having slots, through which project spring clamps, which slide by sleeves upon arbors behind the back board and are thus held against the stocks. The side or end pieces of the box being set up, are held for nailing between these clamps and their respective stocks.

Claim.—First, the employment of the adjustable gauge stocks C, in combination with the plate B, all being constructed and arranged to operate substantially as and for the purposes set forth.

Second, the spring clamps g, constructed and arranged to operate substantially as herein described in combination with the stocks C, as and for the purposes set forth.

No. 37,828.—WM. S. SAMPSON, of New York, N. Y.—*Improvement in Conduit Pipes.*—Patent dated March 3, 1863.—The tube is formed of annular sections, which are made of bricks having on their respective faces a tongue and a groove to fit one within the other and avoid lateral displacement. The annular sections are attached and retained by iron rods and annular plates which strain the sections together; the iron exposed is covered by cement.

Claim.—Forming tubes or cylinders for water pipes, cisterns, &c., of tongued and grooved (or otherwise equivalent-shaped) bricks and iron bond-plates and tie-rods, in combination with a composition or cement lining covering the iron-work, substantially as and for the purposes herein before set forth.

No. 37,829.—GEORGE W. SAYRE, of Pisgah, Butler county, Ohio.—*Improvement in Grading and Dressing Roads.*—Patent dated March 3, 1863.—The invention consists of a scraper suspended by a frame from the hounds and axles of a wagon, and operating for the width of the wagon track to level the ground, being advanced obliquely so as to throw the ground to the off side, and returning, raise the ground in the middle of the road. A plough in front of the scraper is used when desired to make a track for a water-course or ditch.

Claim.—First, the combination of the scraper A with beam C, angle brace d, hinged brace E, and levers G G'.

Second, the plough P, in combination with scraper A, when constructed as and for the described purposes.

Third, the above-described machine when combined, arranged, and constructed as and for the purposes set forth.

No. 37,830.—JOHN J. SCHILLINGER, of Washington, D. C.—*Improvement in Percussion Apparatus for Explosive Shells.*—Patent dated March 3, 1863.—This shell is divided into two chambers by a partition which contains a cap tube. The forward end contains the explosive charge, and the rear chamber a plunger for exploding the cap on the impingement of the shell against the object. This plunger is attached to the base of the projectile by a combustible cord.

Claim.—First, dividing the interior space of a shell or the hollow part of projectile into two separate chambers, one containing the charge of powder, the other containing a plunger, when the said plunger is secured to the shell as hereinbefore specified.

Second, fastening the said plunger to the end or rear part of the shell or projectile by means of a combustible cord, in the manner and for the purpose substantially as herein described.

No. 37,831.—WM. SPALDING, of Port Clinton, Ottawa county, Ohio.—*Improvement in Grading Machines.*—Patent dated March 3, 1863.—This scraper is to be attached underneath a farm or log wagon, being suspended by a chain from the axle and a bolt from the axle, and drawn by bolts attached to eye-bolts beneath the axles. The scraper is raised and lowered and its inclination adjusted by a lever chain and segment rack and by a screw-nut on the hind axle from which the rear of the scraper is suspended.

Claim.—First, the arrangement of rods a b b, in combination with staples or eye-bolts c d, for attaching a plough and scraper combined, as described, to the axles of an ordinary farm or lumber wagon, thereby adapting said wagon to use as a grading machine as specified.

Second, the pivoted lever H, segment rack I, and chain e, in combination with the eye-bolts c d G, rods b b, and screw-winch or lever-nut J, for raising and lowering or adjusting the inclination of the plough and scraper combined, when connected with a wagon in the manner substantially as described.

No. 37,832.—JOHN J. SQUIRE, of New Haven, Conn.—*Improved Register for Gas and Water Meters.*—Patent dated March 3, 1863.—The invention consists in combining cams and levers with the ordinary toothed-wheels or movements whereby the figures indicating the measurement are exposed at orifices in the face plate which are in front of each dial, the action of the shields, which are operated by the levers and cams, being to hide the receding figure and prevent confusion.

Claim.—The above-described arrangement of the cams, levers, and shields when applied to gas or water meters as and for the purpose herein set forth.

No. 37,833.—JOHN TEMPLE, WM. M. MILLS, and ATLAS L. STOUT, of Middletown, Butler county, Ohio.—*Improvement in Water Wheels*.—Patent dated March 3, 1863.—The upper annular rim has a curved lower face, and the lower rim an inclined upper face, between which the buckets of scroll shape are placed, having a centre discharge.

Claim.—The combination of the curved or concave top flange or rim A with the inclined straight flange or rim B, constructed and operating in the manner and for the purposes substantially as described.

Also, the combination of the flanges or rims A B, constructed as set forth, with cyma-reversa or scroll buckets c, in the manner and substantially as specified.

No. 37,834.—WILLIAM S. TODD, of Mechanicsville, Cedar county, Iowa.—*Improvement in Corn-Planters*.—Patent dated March 3, 1863.—The frame of the planter is supported on wheels which are journaled in hinged frames. One wheel follows each seed box, which discharges its seed in the groove left by a share or rod.

Claim.—The arrangement of the secondary hinged frames H forming the bearings for the axles of the wheels G, in combination with the main frame A and the driver's seat F, all constructed and operating substantially as and for the purposes shown and described.

No. 37,835.—WILLIAM G. TUTTLE, of Geneva, N. Y.—*Improvement in Saws*.—Patent dated March 3, 1863.—The teeth are alternately a double cutting tooth and a straight clearing tooth, the face of the latter being hollowed so as to present a cutting corner sharper than a straight rectangular dress.

Claim.—The employment of alternate clearing teeth d d, the ends of which are concave or notched, so as to form sharp or pointed corners, in combination with the triangular pairs of cutting teeth a a' arranged on a single saw blade, substantially as and for the purposes herein set forth.

No. 37,836.—MAXIMILIAN WAPPICH, of Sacramento, Cal.—*Improved Defensive Armor Plates*.—Patent dated March 3, 1863.—The improvement consists in the manner of forming the plate and the fitting, strengthening and adapting it to varied positions and circumstances. It consists generally of a plate with a fair exterior face, with projections which pass through the wooden casing and inner plate and are there keyed. It has also flanges or bent ends having notches in their edges, and bracing plates extending from its inner surface to the inner plating of the vessel, to which the armor is further secured by bolts, which, keyed on the inner side of the plating, are fastened to projecting lugs on the inside of the armor. The port-hole is secured by a square frame, which occupies the space between the armor and inner plating and a plate which supports it inside. Rebates on the inner edges of contiguous plates are filled with break-joint strips.

Claim.—First, armor plates having projections f to pass through the side of the vessel, substantially as and for the purpose described.

Second, the projection k, which is formed on the inside of the flanged armor plate to clasp the head of the bolt l, in combination with the bolt l when fastened with key h, in the manner and for the purpose substantially as described.

Third, the combination of the bent ends and angular projections and notches m m with the flanged armor plates, substantially as and for the purpose described.

Fourth, applying to the side of the vessel and behind the armor plates backing ribs d d in an edgewise position, substantially as and for the purpose described.

Fifth, securing the port-hole by a united ring r, inside frame o, and flanged armor plates, combined substantially as and for the purpose described.

Sixth, providing the adjoining edges of the flanged armor plate with grooves or recesses w, in the manner and for the purpose set forth.

No. 37,837.—W. POWELL WARE, of New York, N. Y.—*Improvement in Mica Lamp Chimneys*.—Patent dated March 3, 1863.—The frame of the chimney is formed of angular metallic plates within rebates, in which the flat panes of mica are secured.

Claim.—A mica lamp chimney formed of a frame constructed in such a manner as to admit of the insertion of flat slabs or panes of mica, substantially as herein set forth.

No. 37,838.—JOHN WARNEKE, of Buffalo, N. Y.—*Improved Composition for Restoring Colors to Cloth, &c.*—Patent dated March 3, 1863.—Composition: Two gallons rain water, two ounces ammonia, two and a half ounces cochineal, one ounce cudbar, half an ounce English tin, one-quarter of an ounce spirits of salt, one-quarter of an ounce alcohol. Mix; apply warm with a stiff brush, thoroughly saturating the cloth.

Claim.—The composition of matter herein described and the mode of applying it, for restoring colors to faded and soiled cloth, substantially as herein set forth.

No. 37,839.—ELI K. WISELL, of Warren, Trumbull county, Ohio.—*Improved Spoke Machine*.—Patent dated March 3, 1863.—Upon the frame of the machine posts are erected which support the traverse rod, and on this the traverse rest moves, carrying two head blocks, each with two sets of mandrels for the securing of the pattern and the spoke, which are passed

the length of the traverse track in contact with a revolving cutter, and then automatically rotate the spoke and pattern simultaneously a part of a revolution by means of an inclined plane, pawl, and ratchet, and thus proceeds till the whole surface of the spoke has been turned off in accordance with the pattern by a series of longitudinal movements. When the spoke and pattern, whose mandrels are geared together, have performed their full revolution, the traverse frame is thrown out of gear and the spoke dropped.

Claim.—First, cutting the spokes in longitudinal sections by means of a revolving cutter and a traversing motion of the spoke and pattern, and the rotation of the spoke and pattern by sections in concert with each other, in the manner specified.

Second, the roller K, upon which the pattern rests, for the purpose specified.

Third, the inclined planes J J, in combination with the pawl and ratchet I I', when arranged and operating as and for the purpose specified.

Fourth, the finger P and rod T, when arranged and operated as described, for throwing the traverse frame out of gear.

Fifth, the traverse frame D and mandrels F F' and G G', in combination with the revolving cutters, arranged and operating as set forth.

No. 37,840.—JACOB WOLF, of Fort Madison, Gee county, Iowa.—*Improvement in Razor Straps*.—Patent dated March 3, 1863.—This improvement consists in substituting a plate of polished zinc for leather on one side of a razor strap, to be used dry or wet. The razor to be moved edge forward in the act of sharpening.

Claim.—A razor strap, provided with a surface of polished zinc, as and for the purpose herein shown and described.

No. 37,841.—SOLOMON S. MECAY, of Kilbourne, Delaware county, Ohio, assignor to SPENSER MECAY, of same place.—*Improvement in Rotary Steam Engines*.—Patent dated March 3, 1863.—Between two disks are certain convoluted plates whose form may be seen in the illustration. At the centre, through the hollow axle, steam is admitted, and its points of egress are at the narrow ports between the plates driving the wheel, partly by impingement of the steam on the atmosphere, and partly by the non-equilibrium of the wheel.

Claim.—Constructing the drum or propelling cylinder of a rotary, steam, or other motor with segmental rims D D D D, having hooked or bent ends E E E E, so combined and arranged together as to form short compressing channels F F F F, and exhaust outlets G G G G, disconnected and remote from the ports B B, and whereby is acquired an enlarged area of capacity, and an accumulating chamber I I I I, thereby affording an increased volume of steam and also avoiding friction, substantially as set forth, shown, and described.

No. 37,842.—H. M. PRESTON, of St. Louis, Mo., assignor to A. H. BAKER, of same place.—*Improved Machine for Tenoning Spokes*.—Patent dated March 3, 1863.—This invention consists in the construction and operation of a cam upon the revolving cylinder so that the cutter shall receive a lateral as well as a rotary motion, to impart an oval shape to the tenon of the spoke.

Claim.—The employment of the cam F, arranged upon the cylinder E, or its equivalent in effect, in such manner as to impart to the cutter a reciprocating motion, in combination with its rotary motion, for the purpose of forming oval or flattened tenons for spokes of wheels, substantially as herein set forth and represented.

No. 37,843.—JACOB DUNTON, of Philadelphia, Penn.—*Improved Can or Flask*.—Patent dated March 3, 1863.—The bottle is covered with a casing of wood, and an outer shell of metal and the projecting neck of the bottle is protected by a flange or shelf which rises from the top of the flask.

Claim.—The combination of an outer casing C of sheet metal and interposed body B B', of cork, wood or analogous material, with a flask or bottle A A', in manner herein described and for the purposes set forth.

Also, the guard D applied to the outer casing C, to protect the neck of the bottle or flask in the manner explained.

No. 37,844.—JACOB DUNTON, of Philadelphia, Pa.—*Improved Pack-Saddle*.—Patent dated March 3, 1863.—Pivoted to the saddle is a transverse beam, from the ends of which the load is suspended. The load is held against the sides of the animal and steadied by guys from the pommel and cantle.

Claim.—First, the application of a pivoted beam to a bearing saddle, substantially as and for the purposes set forth.

Second, a pack-saddle provided with a beam or beams, constructed substantially as described, and adapted for the suspension of burdens from adjustable points, in the manner and for the purposes herein set forth.

No. 37,845.—WILLARD H. SMITH, of New York, N. Y.—*Improved Perforations in Lamp Burners*.—Patent dated March 3, 1863.—The improvement consists in making the perfora-

tions through the lamp burner with a raised rim, on which the chimney rests, so that a current of cold air shall circulate beneath the flange of the chimney and prevent the conduction of heat from the chimney to the burner.

Claim.—A raised perforation, as shown at *c*, in Fig. 2 and Fig. 3, when used in coal-oil and other burners, the whole being arranged substantially as and for the herein-described purposes.

No. 37,846.—STEPHEN M. ALLEN, of Woburn, Mass.—*Improvement in Reducing Long-staple Fibre.*—Patent dated March 10, 1863.—Fibres of flax, hemp, jute, and like materials, are subjected to the air and vapor process as patented by the same inventor the 20th of March, 1860, and then steeped in warm water and an alkaline solution, and alternately washed and rinsed and then boiled and bleached. The fibres, as thus prepared, are then drawn down by rollers until they are fully stretched, when the fibre is ready to be spun into yarn, or for other purposes.

Claim.—First, the process of treating long-stapled fibre for the purpose of converting the same into a short-stapled fibre by the application of the fibre to be reduced of successive washings in warm water, increasing in temperature as herein described, in combination with the use of alkaline solution, substantially in the manner and for the purposes hereinbefore set forth.

Second, in combination with the treatment of long-stapled fibre by successive washings in warm water and subsequent boiling, the method of reducing the same mechanically, in the manner and purpose herein described.

No. 37,847.—EVANS BACKUS, of Cocksackie, Green county, N. Y.—*Improvement in Stoves.*—Patent dated March 10, 1863.—The application of the panes of mica in the construction of this stove is such that the fire may be exposed or not by the rotation of an inner movable band or rim, so as in the act of kindling fires to prevent the mica from being rendered opaque and worthless by the smoke.

Claim.—The insertion of mica *i* in a movable band or rim *K*, or in an equivalent slide, arranged in relation with the openings *a* in the cylinder *E*, or body of the stove, for the purpose set forth.

No. 37,848.—FRIEDRIK BECKER, of Scranton, Luzerne county, Pa.—*Improved Composition for Lining Oil Barrels, etc.*—Patent dated March 10, 1863.—The composition is as follows: Boil one pound of glue in a quart of water, then add one quart plaster of paris, two ounces rosin, one ounce turpentine, four ounces sulphur, one ounce shellac; mix and boil thoroughly; apply hot.

Claim.—The application of the above-mentioned composition, to prevent barrels, boxes, &c., from leaking, even kerosene oil barrels.

No. 37,849.—FRIEDRIK BECKER, of Scranton, Luzerne county, Pa.—*Improvement in Securing Shutters and Show-Windows.*—Patent dated March 10, 1863.—The invention consists in an arrangement for locking and unlocking simultaneously all the catches of a peculiar construction which fasten a window or shutter by devices located inside. This is accomplished by attaching the handle or salient part of each catch to a common chain or connecting links, which cause them to move together.

Claim.—The mode of securing the shutters by means of the peculiar constructed catches *C*, governed by the apparatus as above described and shown in the drawings.

No. 37,850.—LEWIS G. BRADFORD and CHARLES O. CHURCHILL, of Plymouth, Mass.—*Improvement in Machines for Leathering Tacks.*—Patent dated March 10, 1863.—This invention consists in the application of a stop motion to the tack separator, so as to arrest the motion of the latter in case of obstruction in the arrangement of the grippers which hold the tacks perpendicularly while being driven through the leather; also in an arrangement of parts for cutting the washers.

Claim.—First, the application of the regulator or stop motion *M*, by the action of which any obstruction to the free movement of the horizontal reciprocating separator *K* is detected and the motion of the separator stopped.

Second, the combination and arrangement of the tack guide substantially as described, by which the tack is taken from the separator and held in a perpendicular position (causing each tack to be centred alike) while being driven through the leather, and a uniform appearance of the washers insured.

Third, the combination with the bottom of the piston *G* of the plate *p* and elastic piece *q*, the whole being arranged to operate in connexion with the stationary circular cutter *R* in a tack-leathering machine, as and for the purposes set forth.

No. 37,851.—CLARISSA BRITAIN, St. Joseph, Berrien county, Michigan.—*Improvement in Floor-Warmers.*—Patent dated March 10, 1863.—This invention consists in the application of a reflector to the bottom of a stove in such a manner that the heat is reflected on the floor beyond the stove.

Claim.—The application to the bottom of a stove of a reflector *A*, constructed and operating in the manner and for the purpose specified.

No. 37,852.—H. M. and W. W. BURSON, of Atkinson, Henry county, Illinois.—*Improvement in Binding Attachment to Harresters.*—Patent dated March 10, 1863.—In operating, the handle *O* is raised, elevating the arm and depressing the rear extension which carries the reel, and paying off the twine until it reaches the ratchet *M*; the gavel being then shoved to the binder and the arm brought down, the ratchet *L* drawing on the wire gives it the required tension and the ends are fastened.

Claim.—First, the combination of the arm *C*, fore-arm *C'*, handle piece *D*, lever *E*, with groove *g*, acting substantially as and for the purpose set forth.

Second, the combination of the ratchet pulley *N* with the spring ratchets *L* and *M*, acting substantially as described.

Third, extending the arm *C* back of its bearing *a*, and placing thereon the reel *G* and pulley *k*, for the purposes herein set forth.

Fourth, the combination of the handle-piece *D*, slide *F*, lever *E*, and cord *I*, acting substantially as and for the purpose set forth.

No. 37,853.—T. M. CHAPMAN, of Old Town, Penobscot county, Me.—*Improvement in Device for Gunning Saws.*—Patent dated March 10, 1863.—The two levers, which respectively operate the clamp and the die, are pivoted, the lower clamp lever at the end and the upper die lever in the middle; and as they are vibrated by the rotation of the screw, the first movement is to vibrate the lower lever on its centre and bring the clamp down on the saw plate, and when that is in contact, the lower lever becoming a fixture, the upper lever being further vibrated, brings the upper die upon the lower and cuts off the piece of metal.

Claim.—The male die *C*, clamp *I*, and female die *a*, combined and arranged to operate as and for the purpose herein set forth.

Further, the combination of the levers *D G*, bar *H*, and screw-rod *F*, arranged with or applied to the stock *A*, as a particular means for operating the die *C* and clamp *I*, as herein described.

No. 37,854.—ROSWELL F. COOK, of Watertown, Jefferson county, N. Y.—*Improvement in Breech-loading Fire-arms.*—Patent dated March 10, 1863.—This improvement has relation to that class of breech-loading fire-arms in which the breech is exposed by the partial rotation of the chamber relatively to the stock, and the special device refers to the withdrawal of the spent cartridge chamber by the said rotation of the barrel and stock relatively to each other; and relates further to facilities for loading from the magazine below the pintle, or for loading the ordinary way at a point midway between that and the position for firing. By the rotation of the barrel the slide is withdrawn by the vibration of the dog, and a tooth projecting downward from the slide behind the flange of the metallic cartridge withdraws the latter from the chamber.

Claim.—First, the lever *k*, spring *m*, slide *n*, and spring *p*, the whole applied in combination with each other and with the hooked slide *l*, the chamber piece *E*, or barrel, and the breech *B*, and operating substantially as and for the purpose herein specified.

Second, in combination with the arrangement of the magazine below the axis about which the barrel and stock move relatively to each other, so constructing the frame *A B* that at a certain position between that proper for firing and that proper for loading from the magazine, the rear end of the barrel or chamber is exposed in an open condition, thereby providing for loading by hand, or from the magazine, as may be convenient, substantially as herein described.

No. 37,855.—N. B. COOPER, of Gratis, Preble county, Ohio.—*Improvement in Wagon Bodies.*—Patent dated March 10, 1863.—This improvement consists of a frame-work to be placed above the bolsters and between the standards of the wagon, and so constructed with end pieces that it may, by the addition of flaring boards in appropriate grooves, be made to form a rack, or by their being fitted into vertical grooves and a floor laid to form a close body, or by being removed altogether to form a hay ladder, &c., as may be required.

Claim.—The ends of the wagon body, as herein fully set forth and described, in combination with the frame *D* and the side pieces *H* and *O*, as and for the purpose specified.

No. 37,856.—C. DANN, of Rushford, Fillmore county, Minn.—*Improved Jointed Scull Propeller.*—Patent dated March 10, 1863.—This propeller consists of a jointed blade which works in a rectangular tube, and is so arranged as to expel the water by the lifting and depressing motion derived from a rock-shaft through the medium of beams and suspension rods. As the beam rises, being pivoted eccentrically, the forward end (in the case represented) will first rise, then the middle or point, and lastly, the rear end, in each case forcing the water towards the rear, and as the beam descends the same order is observed with the same effect. By shifting the pivot to the other end of the slot in the beam, the action is reversed, the rear end descending first, and the motion of the water changed.

Claim.—First, the arrangement of the jointed blades A A', in combination with the beams C, suspended eccentrically from a pivot c, in the loose ends of oscillating arms D, all constructed and operating substantially as and for the purpose shown and described.

Second, the arrangement of the slots e' in the beams C, in combination with the pivot c on the oscillating arms D, and with the sculling blades A A', constructed and operating substantially in the manner and for the purpose herein specified.

No. 37,857.—JOHN R. DAVIS, of Racine, Wis.—*Improvement in Moulds for Castings.*—Patent dated March 10, 1863.—This improvement consists in making movable legs operated simultaneously to raise the upper flask with the match-board so that it may be drawn from the sand without disturbing the edges of the latter.

Claim.—The application of movable legs H, operated by means of a screw D, and hinged levers F, or their equivalents, in combination with the match-board or pattern A and flask C, substantially as and for the purpose herein shown and described.

No. 37,858.—WILLIAM H. DOANE, of Cincinnati, Ohio.—*Improvement in Saw Stave Jointers.*—Patent dated March 10, 1863.—The stave is fixed by its ends into a carriage, having a bar in the centre to give it the requisite bulge, and operated by a lever rack and cam, which traverses with the carriage. The jointing saws are hung upon mandrels whose pitch is varied by a lever and connexions, which operate a vertically sliding post and connecting rods to the outer end of the mandrel frames.

Claim.—First, springing or bending the stave in the carriage during any stage of its progress between the saws or at any point on the bed plate, by the actuation of simply a lever connected with bending mechanism, and without adjusting the carriage to a certain position relatively to a bending bar, substantially as set forth.

Second, the cam gear and rack, or their equivalents, arranged to move with the carriage, and operating substantially as herein described, for the purpose set forth.

Third, the combination of the curved spring stop, hand lever, sliding rack and bender, substantially as and for the purposes described.

Fourth, adjusting the pitch of the saws by means of a combination of a horizontal axis, with a vertical sliding post, substantially as and for the purpose described.

Fifth, the combination of the horizontal lever, vertical double hinging post and saw arbor frames or yokes, substantially as described.

Sixth, the angular slotted spring lever R, curved stop-plate and vertically acting lever Q, in combination with the double hinging vertical post for maintaining the desired pitch of the saws, substantially as described.

No. 37,859.—JOSEPH M. DRAKE, of Amityville, Suffolk county, N. Y.—*Improved Pulley Block.*—Patent dated March 10, 1863.—The sheave or wheel of this block has its inner face grooved, and runs upon balls around its axis.

Claim.—As an improved article of manufacture, a pulley block made with its wheel B, grooved centrally and provided with balls C, as herein shown and described.

No. 37,860.—T. C. FAULDER, of Albany, N. Y.—*Piano-forte Action.*—Patent dated March 10, 1863.—These improvements consist in the construction and arrangement of the parts involved in the motion work, the hammer-but and jack, with their connecting spring and cord, and the method of cushioning the point of contact of the jack and the but.

Claim.—First, the spring b attached to the jack, and connected with the lower part of the hammer-but, substantially as and for the purpose herein specified.

Second, the regulating screw d, applied in combination with the jack, and with the spring b, substantially as and for the purpose herein specified.

Third, arranging the connexion of the spring b and the hammer-but between the top of the spring and an elongation of the lower portion of the hammer-but, substantially as herein set forth.

Fourth, the second cushion g, applied at the back of the cushion h, within a hole bored for its reception in the hammer-but, as shown in Fig. 2, and herein described, for the purpose set forth.

No. 37,861.—WILLIAM B. FREDERICK, of Pontiac, Mich.—*Improvement in Straw Cutters.*—Patent dated March 10, 1863.—In this machine the knife is obliquely set in a vertically moving gate, which is worked by a treadle; the gate is counterpoised by a weight, and a spring above the weight coming in contact with a bar, helps to start the gate at the commencement of its upward stroke.

Claim.—The arrangement together of the apron f, knife F, gate D, box A, treadle E, weight G, spring J, pulley I, and connecting cord H, all in the manner herein shown and described.

Also, the combination of the weight G with the spring J, for the purpose described.

No. 37,862.—PERRY G. GARDINER, of New York, N. Y.—*Improvement in Railroad Car Springs.*—Patent dated March 10, 1863.—The spring-box is composed of several cylinders, in which are fitted spiral springs, with a filling of compressed wool to add to their rigidity,

The plungers which enter these cylinders have a central plug of wood, and are filled with coils of different lengths, so as to come into action consecutively, and make an increased elastic resistance.

Claim.—First, the manner of applying the wool (or other fibrous materials) within a spiral or circular steel spring, so as to hold the wool in a columnar form and compressed to a sufficient degree of compactness to act as a spring itself, and also to aid and strengthen the spiral spring at the same time and hold it in a straight line.

Second, the peculiar construction of the followers b' b', in being composed of a wooden plug within the hollow cylinder, thereby producing lightness and economy.

Third, in combination with the other parts of the spring, the manner of giving a progressive or increased elastic resistance, according to the increase of the load, by making the columns constituting the springs of different heights, as described.

No. 37,863.—MELVIN A. GENUNG, of Granville, Ohio.—*Improved Door Bells.*—Patent dated March 10, 1863.—The wires from the room are passed through brackets, and have springs attached, which relieve the bell-spring; from the brackets the wires are connected by chains to an arm, on the centre shaft of which a spring is wound, operating the hammer-arm inside the hemispherical bell.

Claim.—The combination of the chain X, brackets D, springs F and G, and supporting hinge S, when all are arranged as and for the purpose specified.

No. 37,864.—HENRY S. GOLIGHTLY and CHARLES S. TWITCHET, of New Haven, Conn.—*Improved Folding Chair.*—Patent dated March 10, 1863.—The back, arms, and front legs are made of continuous curved pieces. The back supports and hind legs are pivoted to the back, and have side-rails which hook over pins on the front piece. The front piece is jointed, and the chair folds so that each piece fits the curve against which it is closed.

Claim.—The combination and arrangement described of the legs A A, back or arms B B, legs C C, and seat bars S, when the same operate to fold and lock in the manner substantially as herein specified.

No. 37,865.—GEORGE W. GRISWOLD, of Logansport, Ind.—*Improvement in Wrenches.*—Patent dated March 10, 1863.—The openings in the flat bar are formed of slots or mortises, larger on one side than on the other; so that, by turning the bar, a greater number of sizes for operating on nuts, burrs, &c., may be obtained.

Claim.—Making the notches or openings of a bar wrench of two sizes or capacities, so that, by turning it over it will present different areas of openings, substantially as herein represented.

No. 37,866.—LIVERAS HALL, of Charlestown, Mass.—*Improved Caoutchouc or India Rubber.*—Patent dated March 10, 1863.—The process consists in immersing the caoutchouc in a mixture composed of chloride sulphur, 1 part; carbon spirits, 40 parts; or the mixture may be spread on.

Claim.—The improved product, manufacture, or composition herein-above explained, it consisting of caoutchouc, as described, combined with or having applied to it the carbon spirits and chloride of sulphur, by means or in manner substantially as specified.

No. 37,867.—CARL A. KLEEMAN, Erfurt, Kingdom of Prussia.—*Improvement in Lamps.*—Patent dated March 3, 1863.—The improvement consists in making a notch at the bottom edge of the inverted cylinder of the fountain supply, so as to admit of a smaller bubble of air entering the cylinder; in making the central tube around which the wick ascends with a spiral depression, so as to increase its rigidity without impairing its lightness; and in arranging a cylinder with a funnel-shaped top around the outside wick-tube to catch and return superfluous oil.

Claim.—The notch i in the cylinder f, for the purposes and as specified.

Also, the interior air-tube k of the burner, formed of thin sheet-metal, with the screw-thread made by bending said sheet-metal, as specified.

Also, the arrangement of the wick-tube o, cylinder p, and cup 3, at the upper end of said cylinder p, to return any overflow of oil to the inside of the cylinder h, as specified.

No. 37,868.—C. W. THEODORE KRAUSCH, of Chicago, Ill.—*Improvement in Lamp and Lantern Burners.*—Patent dated March 10, 1863.—This invention consists in enclosing the flame of the wick with a coil of wire, by which it is surrounded with a body of heated air, the smoking of the flame on the moving of the lamp is prevented, and more perfect combustion insured when the flame is low.

Claim.—Heating and supplying air to the flame of a lamp or lantern in a space included within a spiral coil, substantially as and for the purpose described.

No. 37,869.—C. W. THEODORE KRAUSCH, of Chicago, Ill.—*Improvement in Grain Dryers.*—Patent dated March 10, 1863.—This machine consists of a series of devices by which the grain is continuously carried back and forth through a hot-blast or suction currents, and

at intervals agitated and cleaned from dust, then carried to a scourer and subjected to a cooling blast, and finally separated. At the lower part of the machine is a furnace, the heated air from which ascends through a chamber, the sides of which are occupied by a vertical series of agitated wire shoes, and the centre of a vertical series of horizontally-moving endless belts, which carry the grain across the machine from shoe to shoe; from this part of the machine it passes to a scourer, where it is exposed to and cooled by a fan-blast, and at last it is raised by an elevator and discharged on a separating riddle.

Claim.—First, the combination of an agitating, cleaning, and conducting device or devices, with the carrier belt or belts of a grain-dryer, substantially as and for the purpose set forth.

Second, the arrangement of mechanism for vibrating a series of agitating and cleaning sieve shutes, arranged at opposite ends of a series of endless grain-carriers or belts of a grain-dryer, substantially as described.

Third, producing a circulation of air through the chambers of a grain-dryer, and expelling the same therefrom, for the purposes set forth, by means of one or more fans, applied with respect to the endless grain-carriers, the air-heating chambers, and the drying chamber, and operating substantially as described.

Fourth, the arrangement of the fire-furnace, hot-air chambers *e e*, adjustable valve or valves *f f*, and drying chamber B, or their equivalents, substantially as and for the purposes set forth.

Fifth, the valves *j j'*, in combination with the fan cases and the drying chamber and its valves *f f*, substantially as and for the purposes set forth.

Sixth, the air-chambers *k k' l l*, in combination with the fan cases and the drying chamber, substantially as described.

Seventh, the combination of the scourer with the drying apparatus, substantially as described.

Eighth, the combination of the separator with the grain-dryer, substantially as described.

Ninth, an organization, substantially as described, whereby the grain is dried, agitated, dusted, scoured, separated, and cooled, as set forth.

No. 37,870.—PETER B. LAWSON, of Cold Spring, Putnam county, N. Y., and ALFRED BERNEY, of Jersey City, N. J.—*Improvement in Chambered Trunnions for Disabling Ordnance.*—Patent dated March 10, 1863.—The invention consists in making provision for blowing off the trunnions of cannon by a charge chamber with a screw plug in the trunnion.

Claim.—Providing cavities in the trunnions of ordnance for the reception of charges of gunpowder, by the explosion of which the trunnions may be broken off or destroyed, substantially as herein specified.

No. 37,871.—WILLIAM MILLER, of New York, N. Y.—*Improvement in Coal Scuttles.*—Patent dated March 10, 1863.—This sheet-metal coal scuttle has a corrugated wrought-iron bottom.

Claim.—The application of a corrugated cast-iron bottom D to a coal scuttle A, as and for the purpose herein shown and described.

No. 37,872.—DAVID R. PROCTER, of Gloucester, Mass.—*Improved Mast Hoop.*—Patent dated March 10, 1863.—The square ends of the wooden hoop come together and are held closed by a curved strap, whose ends fit in recesses in the hoop. The strap is held to the hoop by bands or sleeves, and a projection on the sleeve affords the means of lashing the leach of the sail to the hoop.

Claim.—A mast hoop having the ends that abut against each other closed and held firmly together by the wedge-shaped brace or tie secured to the hoop by the two iron rings or bands I I'.

Also, in combination with the above, the attached concave piece K, that holds the leach rope and prevents the friction of the opposite side of the hoop upon the mast.

No. 37,873.—WILLIAM RIDONOUR, of Springfield, Ohio.—*Improvement in Hay Presses.*—Patent dated March 10, 1863.—This is a horizontal trunk, in which a follower works under the pressure of a toggle operated by capstan, rope, and pulleys. The discharge is at the end, and the band grooves are in vertical planes as the bale is on its side. The boards which line the passage are attached at their rear end, and loose at their forward end, being confined by cams during the act of pressing, and slackened to loose the bale for its discharge. The vertical sides of the trunk are formed of boards, against which the hay is tramped in charging the press, and which move forward with the follower in the act of pressing, to maintain the lamination of the hay and the shape of the bale.

Claim.—First, the end-discharging horizontal trunk B, made widest horizontally, and having its band grooves in vertical planes longitudinal of said trunk, the whole being combined and operating substantially as set forth.

Second, the end-discharging horizontal trunk B, whose sides *b b'*, toward its discharging end, are disconnected from the frame, and are confined by cams I I' for the pressing of the bale, and are adapted to spread for the release of the bale, substantially as set forth.

Third, constructing the follower of an end-discharging horizontal hay or cotton press with side wings H H', which project forward and embrace the hay or cotton on two opposite sides during the advance of the follower, in the manner set forth.

Fourth, the rear upper door C, hinged at the back, and having the sliding panel *c* adapted to close the rear end of the trunk until the passage of the follower, as herein explained.

Fifth, the provision, in an end-discharging horizontal press, of an expelling block or blocks X, attachable to the front of the follower and operating as described.

Sixth, the described arrangement of pressing and retracting windlasses N and P, sweep T Q q, gearing S S', treadle P, cords O and K, pulleys L, toggle M, and follower G, as and for the object stated.

No. 37,874.—Suspended.

No. 37,875.—ALEXANDER ROSS, of Brooklyn, N. Y.—*Improvement in Fire-Alarm and Heat-Detectors.*—Patent dated March 10, 1863.—The invention consists in the application of a compound strip of two different metals to complete or close the electric circuit by the increase or decrease of heat, and in combination with a movable index and a scale to close the circuit at any predetermined point or degree of heat, so that the closing will spring an alarm or actuate any suitable device.

Claim.—The combination with the compound strip of an index movable on a scale to complete the circuit at any degree of heat corresponding with the point on the scale at which the index may have been set, and for the purpose described.

No. 37,876.—AMOS W. SANGSTER, of Buffalo, N. Y.—*Improvement in Dies for Turning Flanges.*—Patent dated March 10, 1863.—The object is to bend over to a flat flange, with a smooth edge inside, the swaged groove on the end of the cylinder forming the foot of the lamp. This is accomplished by a pair of dies, one of a cylindrical shape, and the other fitting upon it, and having a descending flange embracing the end of the other die.

Claim.—The dies B and G, constructed and operated as and for the purpose set forth.

No. 37,877.—W. ANTHONY SHAW, of New York, N. Y.—*Improvement in Lining Lead Pipes with Tin.*—Patent dated March 10, 1863.—The cylinder of lead which is forced through the die has an inner cylinder of tin around the core which makes a lining of tin to the lead pipe as it exudes from the die under hydraulic pressure.

Claim.—The manufacture of lead pipe with a lining of tin by forcing an ingot of tin and an ingot of lead while over a core out of a cylinder through a die by hydraulic pressure, as specified.

No. 37,878.—B. T. STOWELL, of Quincy, Ill.—*Improvement in Excavating and Ditching Machines.*—Patent dated March 10, 1863.—This consists of a cutter suspended from a travelling frame which carries an endless apron to remove the dirt raised by the cutter and a transverse endless apron to carry it off for discharging on the bank. The outer end of the transverse carrier is supported by a yoke and wheel.

Claim.—The employment or use of an adjustable yoke M applied to the end of the swinging or adjustable frame L, and provided with a wheel N, in combination with the side cutter B, cutter G, and endless aprons H K, the latter being placed in the swinging or adjustable frames F L, and all arranged substantially as and for the purpose set forth.

No. 37,879.—SAMUEL H. SUGETT, of Eden, Hancock county, Maine.—*Improved Fid.*—Patent dated March 10, 1863.—The fid is made in two parts, and the thumb being placed in the recess on one end the cap is screwed on. The cringle is then pulled over the fid until it falls into the thumb, when the cap is unscrewed and the fid withdrawn.

Claim.—A fid made in two pieces or sections, so as to hold a thumb between said sections while a cringle is being driven over or on to it, and over or on to the thumb, and then capable of removal therefrom, substantially as described.

No. 37,880.—TAPPEN TOWNSEND, of Brooklyn, N. Y.—*Improvement in Spurs.*—Patent dated March 10, 1863.—This spur has two clamps which embrace the heel, fixing it in position without straps, having flanges which fit between the sole leather of the heel and the upper leather. It has also a heel plate attached to a screw running through the shank of the spur, the plate having a flange upon its lower edge, which is inserted between the heel and the upper.

Claim.—First, the use of the socket *g*, as described, and capable of receiving the dovetails on the ends of the branches *f*, in combination with the conical screw, or its equivalent, which perfects the joint while it causes the clamping of the sides of the heel.

Second, the flanged heel plate moved by the screw *e*, in combination with the flanges *i i*, the three flanges preventing in their use the depression of the spur.

Third, the heel plate *e* with its screw, in combination with the flat hooks *j* on the ends of the branches, by the joint functions of which the spur is clamped on and to the heel in the direction of its length.

Fourth, the combination of the conical screw-nut *d*, or its equivalent, the heel plate *e* flanged at its lower edge with its screw, and the flanges *i i*, as affording a practicable method of attaching spurs.

Fifth, the combination of *d e* and *i i* with the socket *g* and branches *f*, substantially as described.

No. 37,881.—JESSE URMY, of Wilmington, Delaware.—*Improvement in Harvester*.—Patent dated March 10, 1863.—One of the arms of the revolving reel is so arranged that as the rake-bar which is attached to it strikes the platform it is rotated horizontally to whirl the gavel round ninety degrees and drop it behind the machine with the ears of the grain towards the rear side of the track. This rotation is performed by the inner end of the rake-bar, which is pivoted, coming in contact with a projection which swings it on its axis. The height of the reel standard is adjusted simultaneously with the platform by connecting rods and levers and the speed of the reel regulated by a nest of cone pulleys and a chain-tightener. A single-bar grain guard is rigged from the draught frame so as to be adjustable.

Claim.—First, the raking attachment, or its equivalent, as a substitute for one of the bars of an ordinary reel, when such attachment is capable of sliding in and out, and also of swinging around in the arc of a horizontal circle, substantially as and for the purpose set forth.

Second, the loop-pivot *N*, on one of the arms of the reel, for the purpose set forth.

Third, the manner, substantially as described, of fitting the reel standards *C C'* to the platform, draught frame, and adjusting lever *H*, for the purpose set forth.

Fourth, the spring rod *R* and eye-bracket *T*, in combination with a rake attachment *M2*, which operates substantially as described for the purpose set forth.

Fifth, the trip *W2*, constructed and applied and operating substantially as and for the purpose set forth.

Sixth, the manner of combining the slide *O* and rake-bar *M2* so that they move in and out together, while the rake-bar can turn independent of the slide, substantially as and for the purpose set forth.

Seventh, providing the holes *V Z* in the cam, reel, arm, and rake attachment, in combination with having the rake teeth and friction roller *Q* removable, for the purpose set forth in the manner described.

Eighth, the manner, substantially as described, of fitting the cam *L* and the reel-shaft bearing for operation together, with a view of having them adjustable, as set forth.

Ninth, in combination with the nests of pulleys for operating the rake reel at varying speeds, the chain-tightener, applied and operating substantially as described.

Tenth, the single-bar grain guard, applied on the front end of the draught frame, through the agency of a swivel-slotted device *J*, substantially as and for the purpose set forth.

Eleventh, so applying the grain side wheel to a lever-hanger, which is connected to the reel standards and to the draught frame, substantially as described, that both the platform, with the cutting apparatus, and the reel with the rake attachment, are elevated by the lever *H*, substantially as set forth.

No. 37,882.—MAXIMILIAN WAPPICH, of Sacramento, Cal.—*Improvement in Gun Carriages*.—Patent dated March 10, 1863.—The trunnions of the gun are pivoted upon the ends of vibrating arms whose inclination is governed by supporting screws or by another arm whose horizontal expansion is governed by a screw, so that by the combined movements of the breech elevating screw, and the screw supporting the cheek, the requisite elevation or depression may be obtained.

Claim.—First, elevating and depressing guns by their trunnions, through the agency of a folding and expanding carriage, or its equivalent, substantially as and for the purpose set forth.

Second, the construction of the cheek plates of a gun carriage so that they operate as levers, substantially as set forth.

Third, the application of the screw or screws *S* in the manner and for the purpose substantially as set forth.

Fourth, the training of the gun horizontally by a combination of circular and straight movements, substantially as and for the purpose set forth.

Fifth, adapting a gun which requires elevation and depression and horizontal training for use, in connexion with a port-hole which is in size very little greater than the muzzle of the gun, substantially as set forth.

No. 37,883.—ISAAC M. WATSON, of Grand Rapids, Mich.—*Improvement in Rat Traps*.—Patent dated March 10, 1863.—The weight is suspended above a drop platform which vibrates under the weight of the animal, discharging it into the cage beneath; the trap door is then replaced by the counterpoise weight being started quickly in its upward motion by the spring against which it strikes.

Claim.—The reacting spring *G*, in combination with the guides *b* and *d*, operated in the manner and for the purpose herein fully set forth and described.

No. 37,884.—J. D. BILLINGS, of Rutland, Vt., assignor to Himself and GEORGE R. WEED, of same place.—*Self-Inking Stamp*.—Patent dated March 10, 1863.—This invention is a method of operating, inking, and stamping apparatus within the compass of an ordinary piece of office furniture, and consists of a plunger with the usual spiral spring for retraction; this being rotated in one direction, by means of a wheel meshing into a rack, brings a slide carrying the stamp with its face over an inking roller, and on being rotated in the opposite direction restores the stamp to its original place; then being thrust down, it presses on the end of a lever, whose other end actuates the pressure pad, and the impression is given.

Claim.—The slide *B*, having the stamp *D* and apron *E* attached, and operated through the medium of the wheel *F*, rack *C*, and groove rod *G*, provided with the spring *O*, in combination with the roller *L* and the pressure pad *K*, operated from the rod *G* by means of the lever *H*, all arranged as shown, or in an equivalent way, for the purpose herein set forth.

No. 37,885.—JOHN B. DOUGHERTY, of Rochester, N. Y., assignor to Himself and MARY ANN LAWLER, of same place.—*Improved Machine for Sawing Barrel-heads, Shingles, &c.*—Patent dated March 10, 1863.—The plan of the frame of this machine resembles the segment of a circle, and is traversed horizontally by a segmental frame, in which the block is clamped to be carried over the horizontally revolving saw. This clamping is done by placing one edge of the block against a sharp edge and drawing a serrated edge against it by means of a wheel and pinions. The alternate raising of each end of the frame in sawing shingles is performed by the bent lever *K* and the vibrating frame moved by the handle *H*, which partly supports the rocking frame.

Claim.—First, the combination of the rack and pinions *P P R R* and movable bar *N* with the frame carrying the bolt, the whole operating in the manner and for the purpose substantially as described.

Second, the arrangement of the rods *l l* and the bar *N*, as herein described, whereby the latter may be adjusted so as to grasp a bolt of any shape.

Third, the combination of the bent lever *K* with the frame *V V*, said frame being made to rock on the shaft *f*, so as to allow a bolt to be entirely cut into shingles, in the manner set forth.

Fourth, the combination of the rod *H* with the frame *C C* and shaft *B*, said rod being so arranged as to allow the weight resting upon the rollers *r r* to be accurately adjusted.

No. 37,886.—EUGENE LEMERCIER, of Paris, France, assignor to AMASA BEMIS HOWE, of New York, N. Y.—*Improved Apparatus for Holding and Supporting Boots and Shoes for use with Machines for Screwing on Soles and Heels*.—Patent dated March 10, 1863.—This machine consists of two anvils for supporting the heel or the sole, as may be required. The former is adjusted in a socket beneath the frame carrying the screw, and the other is pivoted on an arm which projects radially from the standard of the heel socket so as to fall in the range of the screw when required for use.

Claim.—First, the combination of the movable, vertical, and beak-shaped anvils or supports, so that either may be moved into or out of action, as the case may require, substantially as and for the purpose set forth.

Second, arranging the anvil *d* on a frame or arm *g* that turns around the axis of the other anvil *a*, so that the face of either of the anvils, that is, for the time being in use, shall be in the line of the axis of the screw that is being fed in, substantially as described.

No. 37,887.—JOHN JACOB MILLER, of Chicago, Ill., assignor to Himself and ERNST PRUSSING, of the same place.—*Improvement in Lamps*.—Patent dated March 10, 1863.—A supporting cone and conical deflector joined, base to base, with perforated sides, are slipped up and down on the wick tube, being supported by a spring clamp.

Claim.—The combination of the perforated supporting cone *G'*, with the perforated conical deflector *G* the latter converging upward in straight lines at an angle of 45°, or thereabout, with the perpendicular, and this either with or without the coronal flange *H* and the spring clasp or socket *F*, by which the cap may be adjusted vertically upon the wick tube.

No. 37,888.—AUG. WILH. SCHELL, of Clausthal, Kingdom of Hanover, assignor to GEORGE ASMUS, of Houghton, Mich.—*Improved Shaking Machine for Separating Ores*.—Patent dated March 10, 1863.—The ore is passed through a chamber in which it is exposed to the action of water which lifts and separates it, by which the heavier particles are brought to the bottom. A pipe passes up through the ore, and is covered by a cap or cylinder, so arranged that the heavier portions are continually falling into the end of the tube, while the lighter are removed from the chamber by the waste opening.

Claim.—The employment or use of the tube *a*, and cylindrical jacket *b*, in combination with the sieve *A* of a shaking machine, constructed and operating substantially as and for the purpose herein shown and described.

No. 37,889.—CHARLES D. TISDALE, of East Boston, Mass., assignor to Self and BAMA W. TISDALE, of Boston, Mass.—*Mode of Applying Cars to Railroad Tracks of Different Gauges*.—Patent dated March 10, 1863.—The track is laid with a converging section con-

necting the tracks of the different gauges with a guard-rail between to compel the flange or the wheel to hug the rail. A switch-rail on the broad-gauge track, and an extra broad-gauge track rail, arranged parallel with one of the guard-rails, extend from the switch down to the narrow-gauge track. The wheels are pushed in or out by yokes which operate sleeves on the axles.

Claim.—The wheel-changing rails C C, and the locking mechanism, or their equivalents, in combination with the two tracks A A B B, of different gauges, and with the wheels applied to the axles of the carriage, substantially as specified; and in combination therewith the guard-rails D D, for the purpose and to operate as described.

Also, the combination of the switch E E and the extra broad-gauge track rail F with the wheel-changing rails and locking mechanism, and the two tracks A A B B, of different gauges, combined with wheels applied to the axles of the carriage, in manner and so as to operate therewith substantially as specified.

Also, the peculiar wheel-locking mechanism, the same consisting of the two yokes G G and the wheel tubes made and applied to the axles, substantially in manner and so as to operate therewith as hereinbefore specified.

No. 37,890.—ISAAC C. SINGER, of Ellensburg, Cambria county, Pa.—*Improvement in Bending and Setting Tire.*—Patent dated March 10, 1863.—The machine consists of a middle fluted roller, supported by standards and driven by a crank and side rollers, which are adjustable relatively to the middle one by the teeth on the upper edge of the rack-bar, so as to bend the tire to the circle required. The tire is withdrawn by raising one end of the middle roller, the standard of which is slotted for that purpose. The side of the rack-bar is gauged for tires of different diameters.

Claim.—The arrangement and combination of the rack plates B, the movable upright I, the fluted roller J, the portable rollers E, with movable collars G, as operated by gear-wheels M and N, and gauged by figures, as described, and for the purpose herein set forth.

No. 37,891.—J. B. ATWATER, of Chicago, Cook county, Ill.—*Improvement in Projectiles for Rifled Ordnance.*—Patent dated March 17, 1863.—This invention provides an elastic belt in a cylindrical fissure around the elongated ball, which is expanded in the act of firing by certain wedges operated by plungers through the base of the ball.

Claim.—First, the corrugated wire web or cloth, or its specified equivalent, for the purpose herein described.

Second, in combination with the wire cloth and head band, the tongued wedges and flanged plungers, arranged in the manner substantially as described.

No. 37,892.—GEORGE E. BURT, of Harvard, Worcester county, Mass.—*Improvement in Horse-powers.*—Patent dated March 17, 1863.—The improvement consists in keeping the connecting chain links firmly in position by a hollow boss or tube passing nearly through the tread wood, relieving the tread bolt of its strain, placing the driving gear wheel directly under the horse, and making it gear with both the upper and under gears of the moving platform, connecting the links of the support by a bar near their centre to guide them more perfectly, proportioning the length of the supporting roll link to the circumference of the end track roller, that the link may pass at an acute angle and without jerking.

Claim.—First, the projecting boss *r*, in combination with the link *a*.

Second, the combination of the cog-wheel *f* and the endless platform, arranged in the manner and for the purposes set forth.

Third, the connecting of the links *h h* by the bar *j*, for the purpose described.

Fourth, the combination of the link *h* with the supporting rolls and end track, constructed, and operating substantially in the manner specified and for the purposes set forth.

No. 37,893.—D. W. C. BAXTER, of Philadelphia, Pa.—*Improved Knapsack Sling.*—Patent dated March 17, 1863.—This improvement is intended to prevent the pressure of the knapsack upon the small of the back and the cramping of the movement of the arms, and it consists in supporting the sack by strips of wood extending from the shoulder to the hips; also in securing the chest straps so as to leave the arms free.

Claim.—First, the independent knapsack sling or supporter, constructed, arranged, and operating in the manner described.

Second, the strips A A, arranged and operating substantially in the manner described.

No. 37,894.—THOMAS BELL, of Bellport, Suffolk county, N. Y., and LOUIS KULEN, of New York, N. Y.—*Improvement in Stump Extractors.*—Patent dated March 17, 1863.—The invention consists in a frame on wheels, to which pendent inclined levers are attached; said levers, after their points have been insinuated under the spur roots of the stump, being forcibly raised by screw rods worked by nuts on washers above the frame.

Claim.—The bars or teeth D, in combination with the screw rods E, the above parts being attached to the frame C, and the latter placed on a wagon or mounted on wheels in any suitable way, and all arranged to operate as and for the purpose herein set forth.

No. 37,895.—EDGAR M. BIRDSALL, of Penn Yan, Yates county, N. Y.—*Improvement in Threshing Machines.*—Patent dated March 17, 1863.—This invention consists in a sleeve support of peculiar shape, through which the extension rod of the tumbling shaft passes to its connexion with the bevel gearing which drives the threshing cylinder; said sleeve support, by a curved arm extension, affording a socket or bearing for the outer end of the axis of the pinion and the spur wheel, which drives the cylinder.

Claim.—First, the support G, when made and used as and for the purpose specified.

Second, the wheels C D and E, when arranged as specified and used in combination with the support G, as set forth.

No. 37,896.—SAMUEL BISSICKS, of New York, N. Y.—*Improvement in Combined Washstand and Water-closet.*—Patent dated March 17, 1863.—The improvement consists in the arrangement of the parts, being a washstand above; in a cupboard below is a water-closet basin, which swings in or out, and, while in, serves for a receptacle for the dirty water from the wash-basin.

Claim.—The combination and arrangement of the stand A, or its equivalent, with the bowls B and C, faucet I, valve L, pipes G and E, and swivel F, substantially as described.

No. 37,897.—MATTHEW C. BOGIA, of Philadelphia, Pa.—*Improvement in Machine for Removing Snow and Ice from Railroads.*—Patent dated March 17, 1863.—This invention consists of a furnace upon a truck, with an artificial blast and a chimney which is divided at the front of the truck into two flues, and, being bent down, brings the heated air to impinge upon the two rails to melt the ice thereon.

Claim.—The fire chamber C, pipes F and F', and blower E, the whole being constructed, arranged on a truck, and operating substantially as set forth.

No. 37,898.—ADOLPHUS BONZANO, of Detroit, Mich.—*Improvement in Machine for Rifling Cannon.*—Patent dated March 17, 1863.—This apparatus is designed for rifling or re-rifling cannon by being attached to the muzzle of the piece and operated without dismounting it. A four-square yoke is attached centrally to the muzzle, and a cutter-head, with the requisite number of cutters, and mounted upon the end of a screw, is introduced as far back in the bore as the rifling is designed to extend, and then, by means of the screw, is retracted, bringing the cutter against the bore, and producing the groove. The screw is withdrawn by the revolution of the nut in which it runs, and the twist is given by a certain amount of revolution of the screw under the control of gearing from the retracting mechanism and a pin running in a slot in the axial screw in the bore. The cutters are mounted upon inclined seats, and controlled in their rear by a washer, and in front by a spring. In inserting the cutters, their friction upon the muzzle causes the spring to recede; but in drawing back, the hold taken by the cutters in the metal brings them as far back as is permitted by the washer, and then forcible retraction makes the rifle groove.

Claim.—First, the cutter-head, having its cutters *i i*, or stock to which the said cutters are attached, fitted to grooves *r r*, with inclined bottoms, and having applied, in connexion with them, a spring *t* and collars *q s*, substantially as herein specified.

Second, the employment, for producing a regular or progressive twist of the rifle grooves, of a barrel *m*, connected by a cord or chain with the cutter bar, and geared with the said bar, substantially as herein specified.

No. 37,899.—JOHN H. BRECKENRIDGE, of West Meriden, New Haven county, Conn.—*Improvement in Lanterns.*—Patent dated March 17, 1863.—The object of this improvement is to so construct a lantern that the wick of the lamp may be operated from the outside without opening the lantern. The usual lamp is enclosed within a cylindrical base, to which is attached the globe glass. From the wick tube extends a shaft, by which the feed rollers are rotated. A head on the end passes to the outside, and lies in a cup-shaped recess, so as not to project beyond the circle of the base. A T-shaped groove on the lower side of this recess admits of the shaft and head being slipped down so as to withdraw the lamp at will.

Claim.—The combination of the head of the shaft of the mechanism that controls the wick with an opening in the lantern case and a receptacle within the lantern, the combination, as a whole, operating substantially as set forth.

Also, constructing the receptacle upon the interior of the lantern case with a slot, to permit the introduction of the shaft of the mechanism that controls the wick of the lamp, substantially as set forth.

Also, the combination of the receptacle within the lantern with the shaft of the instrument that acts upon the wick, the whole operating substantially as set forth.

No. 37,900.—ADAM S. BROWN, of Lebanon, Pa.—*Improved Washing Machine.*—Patent dated March 17, 1863.—This machine consists of a stationary tub, in which is an inclined concave, formed of rollers pivoted at their ends into a frame. Above this is a rubber, which is formed of slats fastened to a vibrating frame, and driven by an arm and pitman from the rock-shaft G.

Claim.—The combination and arrangement of the slatted rubber E, concave washboard D, jointed arms H H J J, and rock-shaft G, substantially as and for the purpose herein described.

No. 37,901.—EDWARD CONWAY, of Dayton, Ohio.—*Improved Liniment*.—Patent dated March 17, 1863.—This improvement consists in the production of an amber-colored transparent liniment by the distillation of the following compounds: Tincture of camphor, one part; ammonia, one part; tincture of opium, one part; spirituous extract of orris root, one part; spirituous extract of white-oak bark, one-half part; spirituous extract of cedar bark, one-half part; 4th-proof brandy, one-half part; whiskey 35° above proof, one-half part.

Claim.—The production by distillation from the above-described ingredients, in the above-described amounts and strength of the above-described liniment, for the stopping of blood, the cure of rheumatism, cuts, and inflammation of all kinds.

No. 37,902.—GEORGE L. CUMMINGS, of New York, N. Y.—*Improvement in Carriage Jacks*.—Patent dated March 17, 1863.—Upon a sill-piece are standards, between which is a rest sliding by vertical slots upon bolts which pass through it and through both standards. This slide rest has a series of notches or steps of increasing height to suit the varying heights of axles under which it is placed; it is elevated by an eccentric lever journaled to the standard beneath the slide rest.

Claim.—The combination of the eccentric lever C with the upright slide rest D, by which the power to raise the axle is obtained, substantially as described and set forth as above.

No. 37,903.—JAMES DAYKIN, of Cleveland, Ohio.—*Improvement in Water Elevators*.—Patent dated March 17, 1863.—The improvement is in the form of the chain and the windlass wheel, the former being made of a round rod, each link of the former consisting of a rod bent so as to have two hooks to grasp the eyes of the preceding link, and two eyes to form a point of attachment for the next link, and enclosing a nearly rectangular space into which the rounded projections of the windlass wheel protrude in the act of rotation.

Claim.—First, the flat chain, (Figs 3 and 4,) when the links are formed by means of the rings or eyes *b b*, cross-bar *c*, rods *a a*, and hooks *d d*, arranged and operating substantially as set forth.

Second, the herein-described windlass wheel C, when constructed as specified, in combination with a flat chain, arranged and operating as specified.

No. 37,904.—HAMPTON DODGE, of Buffalo, N. Y.—*Improvement in Apparatus for Nicking Horses*.—Patent dated March 17, 1863.—This consists of a saddle and a metallic back strap, to which is fixed a crupper and a hinged bar for retaining the tail in an elevated position. The tail is also tied to a point on the back strap.

Claim.—First, the saddle C, in connexion with the metal plate A, for the purpose herein set forth.

Second, the hinged bar *j*, for the purpose specified.

Third, the strap *g*, the bar *j*, and the crupper bars H, arranged as and for the purpose herein set forth.

No. 37,905.—JAMES P. EATON, of Manchester, N. H.—*Improvement in Sheep Racks*.—Patent dated March 17, 1863.—Along the middle of the platform on which the hay is placed is a raised walk, and on each side above the heads of the sheep, which feed at the sides, is a board, inclined inwards so as to allow the hay upon it to slide down and be reached by the sheep.

Claim.—The construction of sheep racks with an elevated walk A between them, in combination with the inclined feeders E E, substantially as herein set forth.

No. 37,906.—A. H. EMERY, of New York, N. Y.—*Improvement in Projectile for Firearms*.—Patent dated March 17, 1863.—The soft metal body of the shot contained in the case is provided with a stay of a lighter and more rigid character, so as to prevent the swaging of the soft metal, and to keep the rear of the projectile relatively lighter than the anterior portion.

Claim.—The construction and arrangement of the hard metallic stay H with the soft body of the shot A, essentially as and for the purposes herein described and set forth.

No. 37,907.—MARTIN R. ETHERIDGE, of Bethel, Oxford county, Maine.—*Improved Machine for Lasting the Uppers of Boots and Shoes*.—Patent dated March 17, 1863.—The last is placed in an inverted position on a toe rest and ankle support, and the upper leather pressed against and caused to lap over the edge of the sole by the mitred-edged crimping jaws, operated by yokes, cams, and springs, and by a spring heel presser. The crimping jaws have cushions interposed between them and the leather, and the heel support and toe piece are adjusted vertically by set screws.

Claim.—The construction of the crimping jaws with the mitred joints or ends arranged together, substantially as described.

Also, the combination of a flexible or heel spring presser E, as described, with the crimping jaws and a toe rest, substantially as specified.

Also, the peculiar combination for operating or moving the crimping jaws, both toward and from the last, the same consisting in the yoke M, the cam or cams N, the springs *g g*, and the mitre joints *b b b b*, the whole being arranged substantially as specified.

Also, in combination with the crimping jaws, mechanism substantially as described for holding the last both at its heel and toe, and mechanism for adjusting it, at either or both ends, vertically with reference to the crimping jaws.

Also, the combination and arrangement of the elastic cushions *a2 a2* with the crimped jaws D D.

No. 37,908.—JOHN J. FORT, of Oshkosh, Winnebago county, Wis.—*Improvement in Car Couplings*.—Patent dated March 17, 1863.—The coupling link is held level, and on entering the draw head runs up the incline, and, striking the guard *d*, falls with the link, the latter being retained by the permanent catch.

The link is detached by the motion of the toggle attached to the guard, which raises it and the link, throwing the latter off the catch.

Claim.—First, the construction, application, and adjustability of the guard D *d*, and the use thereof, in combination with the catch *c* and frame *a a*, substantially as set forth.

Second, the application of the arm *e*, lever *f*, and shaft *g*, for the uses and purposes set forth.

No. 37,909.—OTHNIEL GILMORE, of Raynham, Bristol county, Mass.—*Improved Machine for Arranging Nails for use in Machines for Nailing Shoes*.—Patent dated March 17, 1863.—This machine has two inclined planes with a reciprocating plunger sliding in a recess in the space at their intersection. The plunger drives them to a conduit which is so arranged as to pass the nails out of the machine when their heads are wrongly presented, and place the others in the receiver.

Claim.—The combination of the impeller or plunger D, the two inclined planes A B, the space C, and the receiver I, the whole being arranged and to operate substantially as specified.

Also, in combination therewith, the conduit H, so constructed and arranged with respect to the space C as to enable the reversed nails to be discharged laterally out of the collection in manner as specified.

No. 37,910.—F. A. GLEASON, of Rome, N. Y.—*Improved Machine for Mitre Doretailing*.—Patent dated March 17, 1863.—The invention consists in arranging a series of cutters at such angles and in such relative positions that they shall cut both tongue and groove of a mitre dovetail joint, at any intermediate point between the extremities of any piece of lumber.

Claim.—The particular arrangement of cutting tools by which a mitre dovetail joint, complete in both its parts, i. e., tongue and groove, may be cut at any intermediate point between extremes of any piece of lumber; doing the cross-cutting and dovetailing simultaneously in the same operation.

No. 37,911.—JAMES H. HARTWELL, of Jefferson county, Ind.—*Improved Evaporator for Saccharine Liquids*.—Patent dated March 17, 1863.—The furnace consists of a direct and a return flue alongside of each other, and above is a pan, one-half of which is divided longitudinally and the other transversely, by partitions, which cause the saccharine liquid to take a serpentine course over the bottom of the pan from the spot where it is received from the strainer, under the supply-pipe, to its exit as condensed sirup.

Claim.—First, the divided pan F, in combination with a furnace, also divided as shown, both arranged and operating substantially as described and for the purpose set forth.

Second, the pan F, composed of a longitudinally and horizontally divided portion, for the purpose set forth.

Third, the strainer E, in combination with the double pan F and divided furnace, the whole to form an improved evaporator, as and for the purpose described.

No. 37,912.—AARON HIGLEY, of Warren, Trumbull county, Ohio.—*Improvement in Corn-shellers*.—Patent dated March 17, 1863.—The corn is fed into the machine from a hopper, and exposed between the toothed cylinder and a slide rest, which is pressed towards the cylinder by arms and springs; the slide rest is inclined, and the cylinder toothed spirally, so as to drive the cob out of the machine at a hole, while the corn falls into the hopper bottom and is discharged.

Claim.—The special arrangement of the hopper B, slide rest L, arms N, springs S, in combination with the toothed cylinder C, when operating conjointly as and for the purpose set forth.

No. 37,913.—AMASA B. HOWE, of New York, N. Y.—*Improvement in Sewing Machines*.—Patent dated March 17, 1863.—Patented in England February 8, 1862.—The improvements in this machine consist, first, in an adjustable needle or needle-bar box, by which the needle, whether coarse or fine, can be regulated and made to operate in the required proximity to the shuttle race, shuttle, hook, or other device used for securing the loop of the needle. Second, a device for counteracting the lateral deflection of the needle. Third, an adjustable and detachable presser foot or cloth holder. Fourth, in the feeding apparatus.

The devices are explained at length in the claim.

Claim.—In combination with the needle-bar box B B', the screw *p* and the spring *o*, for adjusting and controlling the proper adjustment of said needle-bar box and the needle bar and needle therein, substantially as described.

Also, in combination with the needle, the clip or arm *e* of the lever *c d e f*, and the cam *g*, for bringing the needle into proper position should it be deflected by any cause, the whole operating in the manner and for the purpose substantially as described.

Also, the combination of the adjustable needle-bar box with the clip *e* and its operative parts, substantially as described.

Also, the arrangement of the compound levers and their action upon and with the feed wheel, as herein described and shown.

No. 37,914.—GUSTAVUS A. HANKINSON, of Manahocking, Ocean county, N. J.—*Improved Automatic Nose-Bag*.—Patent dated March 17, 1863.—This nose-bag is suspended by a cord which passes through a ring on the nose band, through the loop at the junction of the cheek strap and brow band, and then over the hames, so that the lowering of the head of the horse brings the bag against the animal's nose.

Claim.—Suspending the nose-bag in such manner that the natural movements of the horse in feeding will cause the bottom of the bag to approach or recede from his mouth, substantially as described.

No. 37,915.—K. P. KIDDER, of Burlington, Vt.—*Improvement in Bee-hives*.—Patent dated March 17, 1863.—The improvements in this hive consist of a series of separating plates with marginal cleats placed between the movable comb-frames, to keep them at their relative distances; also in a plate placed at the entrance of the hive, to regulate the height of the opening and prevent the passage of drones and the queen, while admitting the ingress and egress of the workers.

Claim.—First, providing the division plates *E* with cleats *g h*, as shown and described, for the purpose of retaining or holding the comb-frames *D* in proper position in the hive, as specified.

Second, the regulator *F*, provided with a longitudinal slot *k*, two vertical slots *l l'*, and a notch *j*, combined as shown; the regulator being applied to the bee-entrance *m* by means of the button *G*, substantially as and for the purpose herein set forth.

No. 37,916.—JOHN K. LEEDY, of Bloomington, Ill.—*Improvement in Sugar Evaporators*.—Patent dated March 17, 1863.—The sorghum juice is exposed to the fire in pans and a still, over holes in the roof of the furnace, which is covered with water except where held back by the rims which surround the boiler holes. The vapor from the still passes through a worm in the reservoir, and discharges through an opening into a bucket or the pans.

Claim.—First, the water tank *B*, constructed in the manner and for the purpose herein specified.

Second, the bottom of the pans arranged in the manner herein set forth, in connexion with the rims on which they rest.

Third, the movable reservoir, and movable still, as herein fully described.

Fourth, the extension of the side walls of the furnace, for the purpose herein described.

No. 37,917.—JOHN G. LEFFINGWELL, of Newark, N. J.—*Improvement in the Mode of Elevating Lamp Chimneys*.—Patent dated March 17, 1863.—The collar and dome on which the chimney is supported are made to rise by slides and guides to a sufficient height to trim the wick. The slides being attached to the collar, and the guides to the burner, embrace each other by lapping flanges.

Claim.—First, the guides *B*, or their equivalent, when attached to the exterior of the burner.

Second, the slides *g*, or their equivalent, when attached to the exterior of the gallery, and working either on the insides or outsides of guides *B*.

No. 37,918.—ADOLPH MILLOCHAN, of New York, N. Y.—*Improvement in Preparing a Paint Oil from the Petroleum Residuum*.—Patent dated March 17, 1863.—The residuum is mixed with 40 per cent. of water, to remove the acid with which the petroleum has been treated, and then the resinous matter treated with 20 per cent. of caustic alkali, to neutralize the remaining acid.

Claim.—The process, substantially as herein specified, of manufacturing oil adapted to mixing with paints and colors, from the acid residuum in the refining of petroleum or coal oils, as set forth.

No. 37,919.—PETER W. NEEFUS, of New York, N. Y.—*Improvement in Ponchos*.—Patent dated March 17, 1863.—This consists of a blanket with an air-tight compartment in its corner, or elsewhere, to act as a pillow when inflated; or it may be made large enough to serve as a shelter-tent, with inflatable margins to afford pillows for the occupants.

Claim.—A poncho convertible into a blanket or tent, and having attached to it an air-pillow or air-pouch, as and for the purpose substantially as described.

No. 37,920.—T. J. PENNY, of Wooster, Ohio.—*Improved Combined Wrench, Scraper, and Screw-driver*.—Patent dated March 17, 1863.—The screw-driver is at the end of the handle, and the scraper is formed by sharpening one of the jaws that hold the screw-nut.

Claim.—As an improved article of manufacture, a combined wrench, scraper, and screw-driver, constructed substantially as herein set forth.

No. 37,921.—SAMUEL REMINGTON, of Ilion, Herkimer county, N. Y.—*Improvement in Securing the Base-pin of Revolving Pistols*.—Patent dated March 17, 1863.—This is an additional security for revolving pistols, in which the base-pin cannot be drawn out in front without first moving the lever. It consists in so arranging the base-pin and the lever, that the latter retains the base-pin and prevents it from being drawn out beyond a certain point.

Claim.—So constructing the base-pin and arranging the joint of the lever in relation to the base-pin, that said joint shall prevent the base-pin from being drawn entirely out of the frame, substantially as herein specified.

No. 37,922.—GILES BOLIVAR ROE, of Paine's Point, Ill.—*Improvement in Foot Corn-Planters*.—Patent dated March 17, 1863.—The corn for each hill is dropped by hand into the hopper of the planter, and is driven into the ground by pressure upon an oscillating step to which the foot is lashed, the step being connected with the plunger.

Claim.—The combination of the oscillating foot-board *F* with the box *A*, plunger *E*, spade *C*, and plate *D*, all in the manner herein shown and described.

No. 37,923.—GILES B. ROE, of Paine's Point, Ogle county, Ind.—*Improvement in Cattle Pump*.—Patent dated March 17, 1863.—A reservoir is provided in the well, and connected with it is an elastic drum; the weight of the animal drives the water from the drum into the drinking trough, and the removal of the weight of the animal causes the elastic drum, in assuming its original dimensions, to fill itself again from the cistern.

Claim.—First, the drum *C*, placed in the well *B*, and provided with a valve *D*, at its lower end, in combination with the elastic or flexible drum *I*, connected with the movable platform *G*, and communicating with the drum *C*, to operate as and for the purpose set forth.

Second, the combination of the pipes *F K* with the tube *E*, arranged as shown, when used in connexion with the drums *C I*, for the purpose set forth.

Third, the suspended or self-adjusting trough *M*, placed on the platform *G*, for the purpose herein set forth.

No. 37,924.—TECUMSEH STEECE, United States Navy.—*Improvement in Rifling Ordnance*.—Patent dated March 17, 1863.—The rear of the bore is smooth, and towards the muzzle it is grooved in a manner which is clearly explained in the claim.

Claim.—A cannon, or other fire-arm, having at its rear end a smooth cylindrical bore *A*, and near its muzzle longitudinal or nearly longitudinal grooves *B*, which constitute enlargements in the bore, and are separated by lands *b*, the ridges or inner surfaces of which lands are in their radial distance from the centre equal to the radius of the smooth portion *A* of the bore, all as herein described, so as to guide the projectile during its entire passage through the bore, confine the gases as much as possible until the projectile approaches the muzzle, and then permit their escape longitudinally, to impart rotation to the projectile by acting against oblique surfaces thereon, or on a sabot or casting to be used therewith.

No. 37,925.—ABBEY S. SMITH, of Lockport, Niagara county, N. Y.—*Improved Mechanism for Starting Sewing Machines*.—Patent dated March 17, 1863.—This improvement consists in a vibrating segment which is operated by a lever on the table of the sewing machine so as to bring the teeth of the segment against the teeth of a wheel on the fly-wheel shaft of the machine to start it beyond the dead point without reaching down to grasp the fly-wheel.

Claim.—The self-adjusting elongated segment *H*, or its equivalent, whose lever is jointed to the frame, in combination with the friction wheel *G*, whether said parts are provided with teeth or not, in such a manner that when at rest the segment is raised and removed from the wheel, but that when engaged sufficient motion is imparted to the wheel to throw the crank past the dead point, arranged and operating substantially as herein set forth.

Also, in combination with the segment and its lever, the adjusting joint, composed of the pivot *f*, and slots *g g*, or their equivalents, and the coiled spring *L*, or its equivalent, for the purpose of allowing a vertical movement to the segment and producing the proper reaction, substantially as and for the purposes herein specified.

No. 37,926.—LOWELL H. SMITH, of Owensville, Clermont county, Ohio.—*Improvement in Camp Stoves*.—Patent dated March 17, 1863.—This stove is made in sections which fit within each other; when the upper or outer section is raised and supported upon legs, the other sections slip out telescopically to the extent admitted by their flanges.

Claim.—The construction of a portable stove in flanged sections *A B C*, adapted to be extended for use by the elevation of the upper section *A* on legs *F*, occupying sockets *E*, and when not in use to be slid within one another in the manner set forth.

No. 37,927.—N. H. SPAFFORD, of Providence, R. I.—*Improvement in Machinery for Assorting Bristles*.—Patent dated March 17, 1863.—The bristles are automatically fed at regular intervals to a travelling horizontal belt and carried to the carding and combing devices, and to those by which they are "evened up" at one end; they are then passed between and carried along by two endless horizontal travelling belts, pulled out, assorted, and deposited according to their respective lengths in boxes by means of nippers placed upon a reciprocating horizontal travelling platform.

Claim.—First, automatically conveying the bristles to the feeding belts for the assorting devices preparatory to their being carded and evened up by means of positive mechanical devices, arranged and operating substantially as described.

Second, the arrangement of the box T, with its sliding plate Y, and seizing tongues or jaws, so operating together as to first cause the tongues to seize or take a layer of the bristles inserted in the receiving chamber of the machine and then convey them to the belts l and m, substantially as described.

Third, in combination with the mechanism employed in machines for assorting bristles, the devices hereinabove described, for feeding or conveying the bristles to the same, arranged and operating as set forth.

Fourth, the peculiar arrangement and combination of the cam-shaped wheels L M with their rack bars P Q, connected with the box T and its plate Y, in the manner and operating together as described for the purposes specified.

Fifth, giving the pinion a, engaging with the rack bar of the sliding plate Y, a sufficient rotary motion while the box T is being turned upon its shaft R as a centre, so as to prevent a leverage upon the same by the said bar and thus obviate friction and binding of the parts, substantially as described.

Sixth, imparting to the bristles contained in the receiving chamber a motion in the proper direction, by means of a pawl w and ratchet wheel v, the said pawl being arranged and operating in connexion therewith substantially in the manner and by the devices described.

Seventh, the use of the vertical separator i, for piercing and separating the bristles in their receiving chamber, arranged and operating as described.

Eighth, the forked swinging plate I, so arranged and operated that while it prevents the escape of the bristles from the receiving chamber it will yet allow of the easy removal of the same by the devices described.

Ninth, the combination of the lever n, loose tongue e, of the sliding plate y, and projecting rod or arm q of the driving shaft, arranged together and operating in the manner and for the purpose specified.

Tenth, automatically drawing out or taking the bristles from the machine, according to their respective lengths, and thus assorting the same by means of a series of nippers or any suitable seizing devices operating substantially as described.

Eleventh, the combination of the travelling platform k', studs f' f', &c., and nippers n' n', &c., so arranged and operating together as to open and close the said nippers, and to both seize the bristles and deposit them in boxes at the proper times, substantially as described.

Twelfth, the arrangement of the horizontal trip rod S'', having a reciprocating rectilinear movement at regular intervals of time imparted to the same by any proper means, and operating substantially as described and for the purposes specified.

Thirteenth, the combination of the trip rod s'', inclined lever e'', and cam-shaped grooved sector or drum y'', operating together as described.

No. 37,928.—W. G. STERLING, of Bridgeport, Conn.—*Improvement in Lamps.*—Patent dated March 17, 1863.—The collar upon which the flame spreader is mounted is separated from the wick tube by a non-conducting composition. The flame spreader is punched out of one piece and made in a double bridge shape so as to offer a resistance to the flame and cause a more perfect combustion, and is pivoted so as to lie over in trimming the wick and be retained in a vertical position by a stop.

Claim.—First, the skeleton bridge spreader G, constructed as herein described, when the same is combined with the wick tube and isolated from this tube and the lamp cap by means of a non-conducting medium, substantially as described.

Second, securing the bridge-holding cap c to the wick tube by means of a non-conducting cement, substantially as herein described.

Third, pivoting the skeleton bridge G, or its equivalent, to an isolated cap c, as and for the purposes herein described.

Fourth, the stops e e on cap c, in combination with the pivoted bridge G, substantially as described.

Fifth, constructing the open or skeleton bridge G of one piece of metal stamped out so as to form the pivot holes, openings k k, portions l l, and arched bridges n n, as described.

No. 37,929.—SHERMAN R. WARNER, of New Haven, Conn.—*Improvement in Pipe Coupling.*—Patent dated March 10, 1863.—The pipes have a collar and flange soldered to their ends, and two of these being brought together form a wedge-shaped flange; semicircular clamps are forced upon and close them, in which position they are retained by a ring upon their inclined or slightly conical periphery.

Claim.—The combination and arrangement described of the rings A A, clamps E, and forcing ring F, in the manner and for the purpose substantially as herein specified.

No. 36,930.—JOSEPH VAN KIRK, of Philadelphia, Pa.—*Improvement in Coal-Oil Burners for Lamps.*—Patent dated March 17, 1863.—The dome whose flange supports the chimney is attached to a cylindrical perforated case which fits within an outer perforated case, being lifted therefrom to trim the lamp without detaching the chimney. Another space between the perforated cases admits of the ingress of air.

Claim.—First, the case B, with the dome or deflector G connected permanently to the same, when combined with and rendered detachable from the case A, substantially as and for the purpose herein set forth.

Second, so constructing and arranging the perforated cases A and B, that an annular space shall intervene between the two for the purpose specified.

No. 37,931.—WM. WEITLING, of New York, N. Y.—*Improvement in Sewing Machines.*—Patent dated March 17, 1863.—This invention consists in the application to a sewing machine of a double-thread holder, which operates, in conjunction with the needle, a thread-carrier, and a shuttle, to form the button-hole stitching. The double-thread holder crosses its two threads under the needle and vertical thread carrier, the threads of which interloop with the crossed threads which are secured by the shuttle thread, passes through the loops of the needle and vertical thread-carrier and results in a button-hole stitch.

Claim.—First, a double-thread holder operating in such a manner as to cross its two threads alternately to the right and to the left, and having a reciprocating motion to and from the needle or needles of a sewing machine, substantially in the manner and for the purpose herein described.

Second, also, in combination with a sewing mechanism provided with a thread-carrier operating through the opening of the button-hole, a double-thread holder operating in such a manner as to cross its two threads alternately to the right and left, and having a reciprocating motion to carry the crossed threads to and under the needle and vertical thread-carrier c, substantially in the manner and for the purpose described.

Third, a thread-holder consisting of a pair of levers moving on a common fulcrum toward and from the needle or needles and having also a crossing motion of its arms, whose ends e' and e'' are each provided with an eye or thread leader for the passage of thread, as herein described and for the purpose set forth.

Fourth, the combination of a shifting double-thread holder and a thread-carrier with a sewing mechanism, substantially as herein described and for the purpose set forth.

Fifth, securing the thread-holder plate b to the angular supporter q, by means of double hinges i' and i'', so as to raise or lower the double-thread holders e' and e'' at pleasure, substantially in the manner and for the purpose described.

Sixth, the button-hole guide consisting of the two pins o' and o'', whether attached to the bed-plate or to the cloth-presser, when the same are constructed and operated substantially in the manner and for the purpose described.

No. 37,932.—JAMES E. WOOD, of Worcester, Mass.—*Improvement in Mowing Machine.*—Patent dated March 17, 1863.—This arrangement is intended to elevate the cutter bar suddenly from the ground, and consists of a lever pivoted to the axle of an auxiliary wheel which runs behind the cutter bar, a projection on the said lever engaging a lug on the cutter bar to raise it on the rotation of the hand lever by the driver.

Claim.—The combination of the arm p and the cam q, or their mechanical equivalent or equivalents, with the auxiliary wheel m, its operative lever, and the cutter bar G, hinged or applied to the frame A, or the supporting part i thereof, substantially in the manner and so as to operate as described, the said appliances to the cutter bar and its supporter constituting what may be termed a duplex motion or mechanism, by the aid of which, such cutter bar may be elevated or raised off the ground and above the same with great celerity when the mowing machine may be in use.

No. 37,933.—WILLIAM WRIGHT, of South River, Middlesex county, N. J.—*Improvement in Grates.*—Patent dated March 17, 1863.—The bars of this grate are independent and introduced through holes in the furnace from the front and supported by cross plates and the furnace back.

Claim.—A fire grate for furnaces constructed of a series of independent sliding bars C, fitted in bearing plates B, and extending through the front of the furnace, substantially as set forth.

No. 37,934.—JOSEPH M. YATES, of Fultonville, Montgomery county, N. Y.—*Improvement in Skates.*—Patent dated March 17, 1863.—The tread of this skate is made of one piece with the runner, being re-curved and flattened out to support the foot, and the ends of the heel and sole pieces are connected by a spring to the upper edge of the runner. A thumb-screw passes through a heel piece into the boot, and through a slot in the head of the screw the instep strap is passed which binds that part of the foot to the skate.

Claim.—First, constructing the toe and heel plates B and D and runner A all in one piece, by turning and bending over the ends of the runner and flattening the same, as set forth, in combination with the springs C E attached to the plates B D, and resting on the runner A, as set forth.

Second, attaching the screw or heel spur F to a thumb plate G, the latter having a slot made in it to allow the heel strap H to pass through, and the former being allowed to turn in the plate D, substantially as and for the purpose specified.

No. 37,935.—MILLS L. CALLENDER, of New York, and NELSON W. NORTHRUP, of Greene, N. Y., assignors to Themselves and CHARLES H. WELLING, and by mesne assignments to JAMES R. EADS, of St. Louis, Mo.—*Improvement in Operating Ordnance*.—Patent dated March 17, 1863.—This invention consists in supporting the gun platform upon a piston in a steam cylinder, by which it can be raised and lowered and rotated freely, the object being to project the platform even with the deck of the gunboat to discharge the gun and to lower it, so that the roof of the gun shall form the deck of the boat and the men be protected in loading. It also consists in leading the steam through the piston, and piston rod, head and arms supporting the gun, so as to bring a pressure on either side of the trunnions to run the gun out or in.

Claim.—The construction and arrangement of the gun, platform, and shield, so that it may be freely revolved while supported on a cushion of steam within the cylinder, as described.

Also, the method of transmitting steam pressure to either or both sides of the trunnions without interfering with the free rotation of the platform and shield, substantially as described.

No. 37,936.—AUGUSTUS N. CLARK, of Boston, Mass., assignor to the Rubber Clothing Company, of same place.—*Improvement in Knapsacks*.—Patent dated March 17, 1863.—To the lower side of the knapsack a strap is buckled, which passes up the front side of it and there bifurcates, passing to the upper edge, where they run over guides, and from them over the shoulders, across the breast, and fasten at the lower front corners.

Claim.—The combination with shoulder straps radiating from an adjustable centre strap, as described, of guides or loops fixed to the upper side of the knapsack, the whole being arranged together and operating substantially as described and for the purpose specified.

No. 37,937.—CHARLES JACKSON and T. GOODREM, of Providence, R. I., assignors to CHARLES JACKSON, aforesaid.—*Improvement in Breech-loading Fire-arms*.—Patent dated March 17, 1863.—The barrel of this piece rotates on the stock for loading at the rear of the barrel, and is retained in position or allowed to rotate by a pivoted stop.

A plate attached to the breech acts so as to rotate and withdraw the spent cartridge case on the rotation of the barrel.

Claim.—First, the stop E arranged on a pivot *d* in such a manner, in combination with the barrel and breech and with a screw *b*, or its equivalent, as to serve as a stop in both the opening and closing movements of the barrel, but so as to permit, when desired, the unscrewing of the barrel far enough to detach it from the breech, substantially as herein specified.

Second, the plate *k* attached firmly to the breech and applied in combination with the screw D to produce both a rotary and a longitudinal motion of the cartridge cases for the purpose of withdrawing them from the barrel, substantially as herein specified.

No. 37,938.—Cancelled.

No. 37,939.—SAMUEL J. OLMSTEAD, of Binghamton, N. Y., assignor to Himself, WARING S. WEED, and D. S. AYRES, of same place.—*Improvement in Ploughs*.—Patent dated March 17, 1863.—A large part of the landside of the plough is occupied by a wheel in line with the landside, and extends below the sole, so as to revolve and diminish the friction. The wheel is supported by a projection cast upon the mould-board.

Claim.—First, the attachment of a wheel upon the landside, forming a large part thereof, and projecting below the bottom of the plough, while its exterior or outer surface is in line with the landside, for the purpose of removing the friction of the plough while at work, as set forth.

Second, making the supporting arm *e* of the wheel a part of the mould-board casting.

No. 37,940.—PASCAL PLANT, of Washington, D. C., assignor to Himself and RUFUS WAPLES, of same place.—*Improvement in War Rocket*.—Patent dated March 17, 1863.—The improvement consists in pressing the rocket composition around the powder magazine, so as to leave a space between it and the outer casing for the communication of fire, and in the arrangement of conical heads with openings toward the rear to give direction to the missile.

Claim.—First, the pressing of the rocket composition around the case of the powder magazine, forming a cylinder of less circumference than the interior of the outer case, that the gas may pass through the annular space to the holes in front, and thence pass to the cap pieces.

Second, one or more conical cap pieces of less diameter than the body of the projectile to give direction to the gas from the burning composition, constructed and operating substantially as and for the purposes described.

No. 37,941.—WILLIAM M. WELLING, of New York, N. Y., assignor to SAMUEL G. WELLING, of New Rochelle, N. Y.—*Improvement in Rings for Martingales*.—Patent dated March 17, 1863.—This martingale ring consists of a metallic core with a composition covering.

Claim.—The ring for martingales, &c., manufactured as set forth, with a metal ring enveloped in composition, as and for the purposes specified.

No. 37,942.—BENJAMIN F. SMITH, jr., of Albany, N. Y.—*Improved Submarine Batteries*.—Patent issued March 17, 1863.—Antedated November 15, 1862.—The invention consists in fitting a tube through the prow of a vessel through which a shell is projected to be exploded against the enemy's ship by percussion. A suitable valve is provided to close the tube when not occupied by the plunger, and the latter is projected by friction wheels on a long tail or shaft in the rear of the plunger.

Claim.—The application to and combination with vessels of otherwise ordinary or suitable construction of a mechanism for driving or thrusting shells or other explosive missiles against vessels or other bodies accessible by water and there by contact to explode; said mechanism being constructed and arranged to operate substantially in the manner herein set forth.

No. 37,943.—HIRAM BECKWITH, of Grass Lake, Jackson county, Mich.—*Improvement in Trimming or Cutting Bolts*.—Patent dated March 24, 1863.—This invention consists of a combined arrangement of a pair of jaws, with a semicircular recess and cutter in each, hinged together at the ends, the shorter one having attached to it a tongue which protrudes through a slot in the longer one giving attachment to a cam lever.

Claim.—The bars A C, provided with the semicircular recesses *e e*, and cutters G G, in combination with the link B, cam D, and lever E, all constructed and arranged as shown, to form a new and improved implement for the purpose specified.

No. 37,944.—HENRY J. BEHRENS, of New York, N. Y.—*Improved Marine Governor*.—Patent dated March 24, 1863.—The object of this invention is to make an ordinary pendulum or ball governor available for marine engines, and to arrange the same so that the rolling and pitching of the vessel has no disturbing influence on the action of the governor, by a universal or gimbal joint in a suitable frame so as to retain it in a vertical position.

Claim.—First, the combination with an ordinary pendulum or ball governor A of a universal joint or gimbal B C D, constructed substantially as herein described, for the purpose set forth.

Second, the arrangement of the three bevel wheels E F G with the driving shafts *j*, pivot *h*, and spindle *d*, of the governor A, when the latter is suspended from a universal joint or gimbal B C D, substantially as and for the purpose herein shown and described.

Third, so arranging the rising and falling rod *f* with the governor A, and universal joint or gimbal B C D, that the top of said rod coincides with the universal centre of the gimbal when the balls of the governor assume their mean position, substantially as and for the purpose specified.

Fourth, placing the rod *l*, which transmits the motion of the balls to the throttle-valve, loosely on the top of the rising and falling rod *f*, substantially as and for the purpose specified.

No. 37,945.—JOHN O. BLYTHE, of Philadelphia, Pa.—*Improvement in Lamp Burners*.—Patent dated March 24, 1863.—The improvement consists in the peculiar construction of the tube and its attached parts of a collar and tube plate, the burner projecting above the collar without perforations.

Claim.—The peculiar construction of the burner S, in combination with the collar F F, and tube plate *l l*, as combined with it (the tube) and attached to the screw in the top of the lamp, as shown in the drawing, or in figure No. 4; this burner having no perforations in its sides or wire cloth, and rising above the collar, and having a narrow flange turned over at the top with a screw cut upon it, as substantially described and set forth.

No. 37,946.—ADOLPHUS BONZANO, of Detroit, Mich.—*Improvement in Implement for Disabling Ordnance*.—Patent dated March 24, 1863.—This is a plug to be driven into the muzzle of a cannon having recesses with inclined bottoms arranged around its periphery, and with cutters and springs occupying said recesses so arranged that it will readily pass into the bore as the cutters are thereby pressed to the deeper portion of the groove, but cannot be retracted, as the act of drawing, in bringing the cutters firmly against the bore, raises them on the incline, and sinks them more deeply into the sides of the gun as the power to retract the plug is increased.

Claim.—The apparatus for disabling ordnance, composed of a block A, having grooves *e e*, with inclined bottoms, a series of cutters B B, fitted to said grooves, and a series of springs C C, applied to the cutters, the whole combined and operating substantially as herein specified.

No. 37,947.—EDWARD and JOHN BOURNE, of Pittsburg, Pa.—*Improvement in Dampers*.—Patent dated March 24, 1863.—This invention consists in passing a rod through the hinges of a stove door, occupying the place of its pintles, having a circular rack on the *s* *aco* between the hinges, which meshes into the toothed segment projecting from the periphery of

a circular damper, attached to the face of the door, so as to open and close the door or doors by the rod, and yet admit of their being opened otherwise without interfering with their mechanism.

Claim.—Moving the disks on the doors by means of the rod passing through their hinges, in combination with the frame thereof, in the manner as herein set forth.

Also, combining the disks with the rod by means of the toothed segments and the circular racks so as to admit of the doors being opened and closed without being affected by the mechanism of the parts.

No. 37,948.—ERNEST BREUL, of Hanover, Kingdom of Hanover.—*Improvement in Tobacco Spinning Machine.*—Patent dated March 24, 1863.—The object of this improvement is to save time, space, and labor in the operation of twisting tobacco by winding it up as fast as it is spun and twisted; this is accomplished by placing a revolving drum inside of a revolving frame and set at right angles to the latter, so that it presents its winding surface to the hollow mandrel which supports one end of the frame, and through which the tobacco leaves are passed to the guide roller which traverses on the screw-shaft, and from the roller to the drum on which it is wound.

Claim.—In combination with the revolving spinning frame, the revolving drum P, for spinning and winding tobacco, substantially in the manner and for the purposes set forth.

Also, in combination with a spinning frame and winding drum P, substantially as herein described, the screw shaft x, and guide roller F', when constructed and operated substantially in the manner and for the purposes herein set forth.

No. 37,949.—ALEXANDER BRESSWELL, of San Francisco, Cal.—*Bill-Holder.*—Patent dated March 24, 1863.—This bill-holder consists of a back and two flaps hinged together by elastic bands, which retain the flaps to the central portion and at the same time serve as springs to maintain the catch of one of them, in the recess formed by the bevel projection of the other, also to close the lid which may be lifted to examine the indorsed end of the bill.

Claim.—The plate F, with its bevel projection f, and lateral opening e, in combination with the plate G, with its tongue g, when used in connexion with elastic bands applied to a bill-holder, substantially as and for the purposes set forth.

No. 37,950.—E. H. CAMP, of Jackson, Mich.—*Improvement in Soldering Sheet Metal Eave Troughs.*—Patent dated March 24, 1863.—This is a clamping box of a semicircular interior form, in which the sections of trough may be brought together and clamped securely while being soldered; the edge is wound around the stiffening rod and placed within the recess, where the section to be operated upon is forced down to the shape of the semicircular box and retained there by a clamp which hooks over the edge; this is fastened by a tightening screw while the operation is performed.

Claim.—The semicircular box A, provided with rockers G G and bands B, curved at one end, as shown, to form recesses a, with a rod C secured to them, in combination with the straps D, arranged as shown, and adjusted by screws and nuts, or their equivalents, for the purpose specified.

No. 37,951.—P. A. CHADBOURNE, of Williamstown, Berkshire county, Mass.—*Improvement in the Manufacture of Paper Stock from Wood.*—Patent dated March 24, 1863.—The log to be operated upon is placed upon arbors in a horizontal position in a tank above it; suspended from a frame, is a vertically reciprocating gate; to the lower bar of this gate are two inverted U-shaped springs, to the lower end of which are attached files, rasps or scrapers, set obliquely with the line of their motion and shaving off the fibres of wood as they are driven up and down, and the log is rotated between them.

Claim.—First, the inclined reciprocating rasps, files or scrapers I, in combination with the rotating log J, placed between the centre points c c', and within a cistern A, all arranged to operate as and for the purpose specified.

Second, the attaching of the rasps, files, or scrapers I to springs G, arranged substantially as shown, in relation with the log J, to insure the pressure of the rasps, files, or scrapers against the log at all times during the gradually diminishing diameter of the same.

Third, the combination of the crank shaft D, connecting rods E E, bar F, spring G, rasps, files, or scrapers I, screw K, rotating arbor M, from which the shaft D is driven by a belt P, the log J, and cistern A, all arranged for joint operation, as and for the purpose specified.

No. 37,952.—FRANCIS M. CHANDLER, of Buffalo, N. Y.—*Improvement in Apparatus for Folding the Plaits in Shirt Bosoms.*—Patent dated March 24, 1863.—It consists of a folding board with a raised edge on one side and a raised underent ledge. A number of loose thin slats are provided, and the linen being lapped on one, its end is inserted under the ledge B, and its side against the edge A. The linen being folded back, a slat is dropped on the first and the linen folded forward over it. Another slat being dropped on it alongside of the two, the same operation is continued to form the series of plaits.

Claim.—The combination of the stop catch B and spring bar C, or either of them, with the plates and board, when arranged and constructed in the manner and for the purpose substantially as set forth.

No. 37,953.—PERRY DICKSON, of Utica, Winona county, Minn.—*Improvement in Converting Motion.*—Patent dated March 24, 1863.—This invention consists in an arrangement of dogs pivoted to a lever located within the rim of a wheel, which lever is vibrated by a reciprocating movement; by the movement in each direction one of the dogs is caused to bite the inside of the rim of the wheel and the other to be free from contact with it, and this alternate action causes a continuous rotary motion of the wheel. By a shifting arrangement the motion of the wheel is reversed.

Claim.—The employment, in combination with each other and the dogs b b* and their carrying levers, of a pin k with cranks i l, a spring f, and a cord or chain g, the whole operating substantially as and for the purpose herein set forth.

No. 37,954.—WARREN W. DUTCHER, of Milford, Worcester county, Mass.—*Improvement in Roller Temples for Looms.*—Patent dated March 24, 1863.—The invention consists in extending the cap of the temple roller down across the inner end of the roller, and to a level with or into the trough thereof, and making the said trough with a closed inner end, so as to prevent the enclosed roller of the temple from injury arising from a blow of the shuttle; the two ends of both its trough and cap being closed and made in two separate parts connected by screws.

Claim.—In combination with the trough so made, and with the cap of the roller, the extension b, arranged so as to project downward from the cap and across the inner end of the roller, substantially as described.

Also, the improved temple, made not only with its cap and trough closed at both ends of each, but having such a trough formed in two separate parts and connected together by screws or their equivalents, as specified.

No. 37,955.—JACOB DUNTON, of Philadelphia, Pa.—*Improved Wagon for Transporting Medicines.*—Patent dated March 24, 1863.—The interior of the body of the wagon is occupied by boxes divided into drawers, and otherwise so arranged as to form convenient packages for transportation on pack-saddles.

Claim.—The subdivision of the body of a wagon or cart into a number of packages or compartments, so constructed and arranged that they will adapt themselves to the twisting and lurching of the wagon, preserve their contents from injury, and be capable of convenient transportation on the backs of animals, substantially as set forth.

No. 37,956.—M. B. DYOTT, of Philadelphia, Pa.—*Improvement in Lamp Cones.*—Patent dated March 24, 1863.—This invention consists in corrugating the side of the cone or deflector so that the chimney, which rests upon the base of the cone, cannot cover the apertures through which air is admitted to the flame.

Claim.—Corrugating or swaging the sides of the cone or deflector so as to form prominences or indentations, by which the necessary supply of air is prevented from being intercepted or cut off, whether admitted through perforations in the base of the cone or through air ducts formed by corrugations or prominences upon the base of the cone, substantially as and for the purpose above set forth.

No. 37,957.—RUDOLPH EICKEMEYER, of Yonkers, N. Y.—*Improvement in Sewing Machine Guides.*—Patent dated March 24, 1863.—This invention consists in devices to fold the edge of the band and put together and sew the crown piece and band of a cap or hat lining. It consists of a guide for folding the edge of the band and a circular rotating disk carrying the crown piece, with a sewing machine for fastening them together.

Claim.—First, the guide B C constructed with holes d, which are arranged in such oblique direction that they not only admit the finger and thumb to draw the band into the guide, but guide the finger and thumb in the proper direction to commence the turning of the fold, substantially as herein specified.

Second, the guide B C and rotating disk F combined with each other and with the sewing machine, substantially as specified.

No. 37,958.—JOHN EVANS, of New Haven, Conn.—*Improved Forge Fire.*—Patent dated March 24, 1863.—The invention consists of a hollow cold water chamber in front of the fire, whereby the smoke is deflected to the chimney flue and the gases condensed to add to the combustion.

Also, in the arrangement of hollow air chambers surrounding the fire with a current of cold air, which serves for the blast, and is so applied as to relieve the blacksmith from the radiated heat.

Claim.—First, the arrangement of the hollow water chamber front D in combination with the fireplace B of a Lehigh fire A, constructed and applied substantially as and for the purpose set forth.

Second, the arrangement of the air chambers G G' in combination with the fireplace B of a Lehigh fire A and communicating with the air-supply channel j and discharge pipe or tuyere n, the whole being constructed and operating substantially as and for the purpose specified.

No. 37,959.—GEORGE W. FULLER, of Cambridgeport, Mass.—*Improvement in Submarine Lanterns*.—Patent dated March 24, 1863.—The air is admitted to this lantern by an induction tube under pressure, so as to prevent the breaking of the glass by the weight of the column of water, and also to prevent leakage of water into the lantern. The water that may leak in is collected in a reservoir at the bottom, and not allowed to come in contact with the heated chimney to be vaporized and dim the light; besides which there are many other points of adjustment specified at length in the claim.

Claim.—A lantern as made or provided with an air induction conduit, and with a valve opening and valve arranged with respect to the body of the said lantern and for the purpose of supplying air to the lamp thereof, and of discharging the smoke and spent products of combustion into the water, when the lantern may be submerged therein, as specified.

Also, the combination for applying the glass window *b* to the body *A* of the lantern, and so as to enable such window not only to be closed with a water-tight joint, but to be opened on a hinge for the purpose as described, the same consisting of the rings *c d*, the hinge and the sections of screws connected with or applied to the rings and the lantern case, substantially as specified.

Also, the combination and arrangement of the air-ventilating devices *N O*, and their screw stoppers or their mechanical equivalents, with the lantern body or case, the same being for the purpose set forth.

Also, the arrangement or combination of the air inlet or inlets *q* with the lamp and glass window, in manner so that the air forced into the lantern case may be, on its entrance therein, discharged either against the inner surface of the glass window, or upward between the same and the flame or chimney of the lamp, the same being for the purpose hereinbefore set forth.

Also, the combination and arrangement of mechanism for raising the glass chimney and the conical deflector, in order that access may be had to the wick, the same consisting of the frame *u*, the forked lever *a'*, and the connecting bars *z z*; the said frame *u* being provided with guides, as specified.

Also, the arrangement of the mariner's compass, viz: within the lantern body and with respect to the lamp and the window of the said body or on the lever *a'*, as specified.

Also, the combination and arrangement of the water-receiving and guard chamber *R* and chimney cap or dome *Q* with the opening *P* and the valve seat *S* and valve *T* applied or arranged with respect to the lamp, and the lantern body, substantially as specified.

Also, the combination of the cheek nut *W* with the handle *X*, the cap *V*, and the screws by which the latter is connected to the upper part of the lantern case.

No. 37,960.—FRED. T. GRANT, of Augusta, Maine.—*Lathe for Turning Irregular Forms*.—Patent dated March 24, 1863.—This invention consists in providing a hollow mandrel with a cutter or knife that shall expand or contract, so as to turn a stick of an irregular form, the knife travelling around the stick while the latter is held and fed endwise through the hollow mandrel, the knife being operated by a sliding collar and cam.

Claim.—The sliding collar *a*, or its equivalent, operated by a cam *j*, or its equivalent, to operate the knife *d* in any way or manner that it may be attached to sliding roller *a*, as specified and set forth.

Also, the whole principle of the sliding collar *a* in any manner that it may be moved, as specified, and in any way or manner that it may be attached to the expanding knife *d*, as is set forth, and for the purpose specified.

Also, the V-shaped feed rolls *k k*, when combined with the double-acting lever *e*, as set forth, and for the purpose specified.

Also, the mode of fastening the knives *d b*, as set forth and specified.

No. 37,961.—ALBERT HALL, of Danville, Des Moines county, Iowa.—*Improvement in Revolving Fire-arm*.—Patent dated March 24, 1863.—The improvement in this fire-arm consists in the construction of the lock; the suspended sere; the stop dog, operated through connexions by the hammer; the rotating lever, operated by the rear downward extension of the hammer, and through a slot in the recoil shield; in the movable plate at the front of the cylinder, to admit of the chambers being loaded at that end, and confining the loads when there; and in a provision at the lower end of the recoil plate for the expulsion of the exploded percussion primers in the act of reloading the chambers.

Claim.—First, the suspended sere *I*, constructed and arranged in combination with the hammer and trigger, substantially as herein specified.

Second, the stop dog *y*, arranged in rear of the cylinder within the frame, and combined with the hammer by means of hooks *y2* and *z*, substantially as herein described.

Third, the lever *K*, constructed and applied in relation to the cylinder and combined with the pin *h* and with the extension *F2* of the hammer, substantially as and for the purpose herein specified.

Fourth, the combination with the so-constructed and applied lever *K* of the bevel *z*, at the bottom of the slot *u*, in the recoil shield or frame, through which the said lever works, substantially as and for the purpose herein specified.

Fifth, the plate *L*, constructed and applied in combination with the barrel and cylinder, substantially as and for the purpose herein specified.

Sixth, the hole *16* in the recoil shield below the frame, arranged in combination with the opening in the plate *L*, substantially as and for the purpose herein specified.

No. 37,962.—WILLET HICKS, of Trenton, N. J.—*Improved Fruit Jar*.—Patent dated March 24, 1863.—This invention consists in a suspended stopper within the neck of the jar. The cork has a washer above and below, and a hook by which it is suspended from a cross-bar on the top of the jar; above this cement is poured on, and the whole prevented, by the hook and cross-bar, from being driven into the jar under pressure of the atmosphere, resulting from the cooling of the contents.

Claim.—First, the use of the washers, centreport, or standard cross-bar, &c., for the purpose of preventing the cork and cement from being forced, by the pressure of the atmosphere, into the body of the jar, can, or jug.

Second, the use of the said washers, centreport, or standard, with eye, cross-bar, &c., for the purpose of more easily extracting the stopper from the mouth of the can or jar, substantially as described.

No. 37,963.—WARREN G. HOAG, of Hoosick, Rensselaer county, N. Y.—*Improvement in Grain Screens*.—Patent dated March 24, 1863.—The uncleaned seed falls from a hopper upon an inclined screen in a shaking shoe. This first screen has oblong meshes, and below it is a parallel screen with square meshes, and under this is a board, from the end of which it passes to another screen inclining in a different way, on which the seed is parted by diverging boards, and discharged at two spouts.

Claim.—The arrangement of the screens *A C E* and guiding boards *b d D* and delivery points *a c e* in a frame having a shake motion, for the purpose of cleaning and separating flax and other small seeds, substantially as herein described and represented.

No. 37,964.—HENRY HOLCROFT and C. S. SMITH, of Media, Delaware county, Pa.—*Improvement in Potato-Diggers*.—Patent dated March 24, 1863.—The potato forks or diggers are attached to a revolving drum, and so operated by cams as to strike into the ground and raise and retain the potatoes, which fall into the inside of the drum, the latter being divided by four perforated partitions, the dirt finding its way from the drum through the perforations and between the teeth to the ground, while the potatoes are discharged into a receiver under the double tree.

Claim.—First, the arrangement of the sifting drum *D* with the perforated partitions *c* and rotary digging teeth *g*, constructed and operating in the manner and for the purpose herein shown and described.

Second, the arrangement of the adjustable cam *E*, in combination with the stationary cam *G*, toes *h*, and digging teeth *g*, constructed and operating substantially as and for the purpose herein specified.

Third, the arrangement of the sifting drum *D* with perforated partitions *c* and self-adjusting rotary digging teeth *g*, in combination with the receiving box *H*, constructed and operating substantially as and for the purpose set forth.

No. 37,965.—GEORGE C. HOWARD and ISAAC N. WILFONG, of Philadelphia, Pa.—*Improvement in Hay-elevating Forks*.—Patent dated March 24, 1863.—This consists of a rake head furnished with teeth and an arm or handle. The rake is swung from a bail by eye bolts in the head, and maintained in its loading position by a catch on the sliding cap, which terminates the arm; the sliding of the cap by a rope releases the catch, and the load falls.

Claim.—The cap *E*, formed and adapted to the stem *A*, and arranged for being locked to and unlocked from the bail, substantially as described, in combination with a spiral spring *F*, contained in a recess formed in the said stem, the whole being arranged and operating substantially as and for the purpose herein set forth.

No. 37,966.—JAMES R. HYDE, of Troy, N. Y.—*Improvement in Stoves*.—Patent dated March 24, 1863.—A boiler is suspended by metallic straps inserted into openings in the projecting flanged top at the rear of the stove.

Claim.—A stove having a boiler *A* suspended, with one upright side against the upright rear end *B* of the stove, by means of hangers *e e* extended up rigidly from the boiler and loosely engaged with the ordinarily projecting part *c* of the top plate *D* of the stove at places *g g* above the top *f* of the boiler, and over the side or portica thereof nearest to the stove, substantially as and for the purpose herein described and set forth.

No. 37,967.—MOSES A. JOHNSON, of Lowell, Mass.—*Improvement in Covering for Steam Boilers*.—Patent dated March 24, 1863.—This improvement consists in impregnating and covering felt, whether made of hair or other material, with silicate of soda or soluble glass to render it incombustible and a better non-conductor.

Claim.—The impregnation and coating of felt with silicate of soda, substantially as and for the purpose herein specified.

No. 37,968.—GEORGE L. KING, of Philadelphia, Pa.—*Machine for Dovetailing and Relishing Sash*.—Patent dated March 24, 1863.—The invention consists in a machine for dovetailing and relishing sash at one operation by means of circular saws, arranged and

operated in the standing frame of the machine, two on one vertical shaft, one to cut the lower side of the female dovetail on the stiles, and the other to cut the relish, the saw on the other and inclined shaft cutting the upper side of the dovetail and taking out the superfluous wood left by the first-mentioned saw.

The stuff is presented to the saws on a sliding table with a guard, against which the stiles are placed, having adjustable gauges for regulating the length of the dovetails.

Claim.—First, cutting a perfect female dovetail and relish with saws at one operation, substantially in the manner described.

Second, cutting a perfect male dovetail with saws at one operation, substantially as set forth.

Third, arranging the frame G which supports the saw shafts F to turn on a centre, so as to bring the saw at an angle with the stuff to cut the bevel side of the female dovetail, substantially in the manner described.

Fourth, combining and arranging the transom plate H with the frame G when operating, substantially as and for the purpose set forth.

Fifth, the combination and arrangement of the reversible guard P and arms *t* and *t'* with the sliding table N, when arranged in the manner described, or in any equivalent manner to produce the same effect, for the purposes set forth.

No. 37,969.—PERIES LINCOLN, of Cold Water, Branch county, Mich.—*Improvement in Wheels for Harresters.*—Patent dated March 24, 1863.—The object is to obtain a revolving rim, which may admit of the passage of the finger-bar through it. It rotates upon rollers on stationary arms in the centre.

Claim.—The peculiar arrangement and combination of rollers D D D D D with the stationary arms B B B B B, and revolving rim with flange C and A, as set forth.

No. 37,970.—ALBERT MOORE, of San Francisco, Cal.—*Improvement in Picks or Axes.*—Patent dated March 24, 1863.—This pick has a stud, which projects into a socket on the end of the handle and is retained there by a pin.

Claim.—The pick *a*, with the projecting piece *b*, the socket *d*, and key *f*, constructed, combined, and arranged as herein set forth.

No. 37,971.—L. H. OLMSTEAD, of Yonkers, West Chester county, N. Y.—*Improved Ratchet Brace.*—Patent dated March 24, 1863.—This brace consists of a handle and pawl rotating a drill by means of a ratchet wheel on the drill stock.

A pintle for the upper bearing of the stock makes a bearing for a collar, to which is attached a stud which, passing through the shank of the lever, forms a pivot for the pawl.

Claim.—First, the arrangement and combination of the dog *b*, pivot *a*, stop *c*, handle F, and serrated wheel E, all constructed and operating substantially as and for the purpose shown and described.

Second, the arrangement of the clamp G in combination with the stud *d*, or its equivalent, and with the nut or screw D of a ratchet brace, constructed and operating substantially as and for the purpose specified.

No. 37,972.—JOHN C. PARK, of Buffalo, N. Y.—*Improvement in Welding and Repairing Railroad Bars.*—Patent dated March 24, 1863.—The portions to be welded, or the part to be straightened, is laid upon a bed-plate and against a die; a ram of the proper shape is then violently thrust against it by means of a piston from a steam cylinder.

Claim.—The machine for welding or repairing railway bars, composed principally of a block or bed-plate A, a die B, a ram C, a piston F, and a steam cylinder L, the whole combined to operate substantially as herein set forth.

No. 37,973.—ARTHUR PELL, of New York, N. Y.—*Improvement in Gimlet.*—Patent dated March 24, 1863.—This pocket gimlet has a ring on the end of its shank, by which it is fitted on a tube as a cross handle, which forms a case into which it is screwed when out of service.

Claim.—A pocket gimlet composed of the tube D, and a gimlet provided with a head or knob C at the end of its shank A, the knob having a hole or opening *a* made through it to receive the tube D when required, and provided at its inner end with a screw *b* to fit when required into an internal screw *c* in the open end of the tube D, all constructed and arranged as described.

No. 37,974.—JOHN G. PERRY, of South Kingstown, Washington county, N. Y.—*Improvement in Strain-Cutters.*—Patent dated March 24, 1863.—The spiral cutting blades are fixed to arms which rotate in connexion with the face of a smooth cylinder above them.

Claim.—The combination of the smooth cylinder C, with the cylinder E, having a knife or knives arranged as herein described and for the purposes set forth.

No. 37,975.—JULIUS G. POHLE, of Morrisania, West Chester county, N. Y., and JAMES N. CROW, of Mott Haven, West Chester county, N. Y.—*Improved Mode of Removing Stains*

from Glass.—Patent dated March 24, 1863.—The invention consists in applying hydrofluoric acid in a liquid state to glass to remove the iridescence or "stains," by removing the surface so far as to prevent the refraction of the rays.

Claim.—The application of the within-described solution for the purpose of removing or eradicating stains or burns from glass substantially in the manner set forth.

No. 37,976.—ULYSSES PRATT, of Deep River, Middlesex county, Conn.—*Machine for Planing and Dressing Lumber.*—Patent dated March 24, 1863.—The slabs are placed in a hopper, and fall one at a time into a recess on the upper side of a reciprocating bed, and being drawn out are exposed to the action of rotary cutters, which plane them to the required shape and roughen them for attachment to the keys.

Claim.—First, the combination of the rotary cutters D E, and reciprocating bed G, the latter being provided with a recess K, having an inclined bottom *a'*, all arranged to operate as and for the purpose herein set forth.

Second, the hopper M, in combination with the rotary cutters D E, reciprocating bed G, provided with the recess K, and the taper or wedge-shaped block O, all arranged substantially as and for the purpose herein specified.

No. 37,977.—HENRY PRESTON and JAMES MAHOOD, of Philadelphia, Pa.—*Improved Milk Can.*—Patent dated March 24, 1863.—The improvement consists in constructing each of the bands of a milk can in a solid single piece of thick tin plate, and securing the whole of its interior surface to the exterior of the vessel, with the ends riveted.

Claim.—As an improved article of manufacture, milk cans having the single, solid, tin plate bands *a*2, the said bands being constructed, applied, and secured to the vessel A in the manner described and set forth, for the purposes specified.

No. 37,978.—BARNARD REGAN, of Miamisburg, Ohio.—*Improvement in Seed Drills.*—Patent dated March 24, 1863.—The improvement is in the seed wheel, which consists of a pair of disks with oblique teeth and depressions and a collar between them. The seed is thrown over an oblique edge into the delivery tubes.

Claim.—First, the combination of the oblique grooves *d d* and ridges *e e* of feed-wheel D with the oblique sill *c* of delivery opening E substantially as and for the purpose described.

Second, separating the transverse sections of feed-wheel D by a washer *w* or washers; or what is equivalent thereto, forming notches *n n* in ridges *e e* of the same; substantially as and for the purpose set forth.

No. 37,979.—BENJAMIN S. ROBERTS, U. S. Army.—*Improvement in Projectiles for Rifled Ordnance.*—Patent dated March 24, 1863.—The projectile consists of two parts, the larger portion at the front, being of cast-iron, and at the rear, a cup-shaped portion of soft metal. A little forward of the centre of gravity of the shot, a shoulder is formed on the iron portion, from which point it is reduced toward the rear, assuming a paraboloid form and embraced by the cup of the rear portion. This rear portion is driven firmly upon the spindle by the act of firing, and has tongues which cause the embracing portion to expand into the rifles of the gun.

Claim.—In a projectile for rifled ordnance composed of a body of cast-iron, and a cup or band of soft metal and having upon its body a shoulder running transversely around the same and a spindle furnished with longitudinal tongues and grooves, first, constructing the projectile of such proportions that the soft metal shall so embrace the centre of gravity of the entire projectile as to furnish a bearing for the same, while passing through the cannon, substantially in the manner and for the purpose above described.

Second, in a projectile constructed as described in the preceding claim, further, forming the surface of the spindle in the shape of a paraboloid or such an approximation thereto that the soft metal may by the force of the explosion be crowded uniformly outwards on all sides and at all parts of its length whereby the axis of the projectile may be placed and held firmly in the axis of the cannon while passing through the same, thereby securing a steady motion of rotation to the shot through its flight, substantially as and for the purpose above described.

No. 37,980.—C. B. RICHARDS, of Hartford, Conn., assignor to C. E. PORTER, of New York, N. Y.—*Improvement in Steam Engine Indicator.*—Patent dated March 24, 1863.—The lever, which is pivoted to and actuated by the piston rod, is connected to a lever whose centre of vibration is on the indicator rod; this vibrating arm is again connected to another lever of the same length as the first, so that the attachment of the piston rod being nearer the point of permanent attachment than to the rocking lever, the latter is moved more than the piston, and in a straight line, as it is attached to levers of equal length by each end.

Claim.—The means substantially hereinbefore described for giving to the marking point a range of motion greater than that of the piston by which it is actuated, in combination with the described means or an equivalent therefor by which the marking point is caused to travel in a straight line; substantially as and for the purposes hereinbefore specified.

No. 37,981.—GEORGE ROSS, of Newport, Ky.—*Improvement in Patterns for Moulding Pipes.*—Patent dated March 24, 1863.—This invention is applied to the pattern used in moulding pipes so as to strengthen them in those places where they are to be tapped for

branch pipes. This is done by making a sectional ring which can be expanded at the point desired by means of a conical plunger, and drawn back again so as to permit the pattern to be withdrawn from the sand.

Claim.—First, the application to the pattern A of a movable sectional ring B, or its equivalent, capable of being pushed out and drawn in while the pattern is in the sand, in the manner and for the purpose substantially as specified.

Second, the arrangement of the rising and falling conical plunger D, and springs C, in combination with the studs *d* and sectional ring B, constructed and operating substantially as and for the purpose shown and described.

No. 37,982.—EDWARD SAUER, of New York, N. Y.—*Improved Press for Bending Ships' Armor Plates.*—Patent dated March 24, 1863.—This machine consists of a bed and platen, the latter sustained above the bed by supporting screws and steadied by guide rods. Projecting upwards from the bed are dies adjustable vertically by screws, and the platen also has suspended dies of the same character, so that by the proper disposition relatively of the series of upper and lower dies, any required contour may be given to the interposed plate. The platen is drawn down toward the bed by means of nuts on pin-jointed bolts hinged to the bed, which fit in slots on the edge of the platen, and are vibrated to a horizontal position to place the plate in the press or withdraw it therefrom.

Claim.—The combination with each other and with the bed A, and platen or follower B, of the two sets of dies F F and G G, constructed as described and separately adjustable both bodily and at either end, substantially as and for the purposes herein specified.

Also, combining the bed A, and platen or follower B, to which such dies F F and G G are attached, by means of hinged or pin-jointed bolts D D, substantially as and for the purpose herein specified.

No. 37,983.—JOHN W. SCHREIBER, of New York, N. Y.—*Improvement in Coal-oil Lamps without Chimneys.*—Patent dated March 24, 1863.—The improvement is in the wick tube and jacket. The former has a rounded top, and the latter is perforated, and its flame-slit narrowed in the middle.

Claim.—The combination of the rounded top wick tube *c*, and the perforated jacket *b*, when the latter is provided with a slot or opening *h* in its top, having its central part narrower than at its ends, as herein set forth.

No. 37,984.—GEORGE SMILLIE, of New York, N. Y.—*Improved Green Ink.*—Patent dated March 24, 1863.—Take one part, by weight, of asbestos, and two parts of chromium, as a basis, and mix with oil to form ink for steel plate printing; the color and consistency varying by the proportions of the materials and the unctuous character derived from the asbestos. The object is to obtain an impalpable and indestructible material that will not grind the face of the plate, nor be obliterated by re-agents.

Claim.—A printing ink having for its basis a compound of chromium and asbestos or other analogous and suitable material as herein described.

No. 37,985.—MERVIN R. SMITH, of Armonk, West Chester county, N. Y.—*Improvement in Sewing Machines.*—Patent dated March 24, 1863.—This machine is constructed to sew equally well whichever may be the direction of the revolution of the driving shaft, and to reverse the feed by the reversal of the movement of said shaft without any other changes of adjustment. The improved device consists in the construction of the needle-operating cam, the feed mechanism, and the shuttle-operating mechanism, which are clearly defined in the claim. Also, in isolating that portion of the bed which contains the raceway, so as to allow the work to pass around it; and in the construction of the shuttle, by which the thread is passed through an elastic spring slide on a guide bar in the shuttle, to bring a uniform strain upon the thread.

Claim.—First, the combination of the needle-operating cam G, constructed as described, the shuttle-driving eccentric J, and the feed lever H, having an elongated slot *n*, fitted with a slide *p*, and deriving a positive motion in both directions from a crank wrist *k*, the whole arranged and operating substantially as set forth to cause the machine to operate with the driving shaft or pulley rotating in either direction, and the feed to be reversed by reversing the direction of the said shaft or pulley.

Second, the combination with each other and with the isolated portion of the flat bed constituting a cylinder, or its equivalent, of the shuttle-driving eccentric J, rod M, rock shaft L, arm N, rod P, and feed-operating crank wrist *k*, the whole arranged and operating substantially as and for the purpose herein specified.

Third, the slide *y*, guide bar *z*, and spring *z*, combined with each other and the shuttle, substantially as and for the purpose herein specified.

No. 37,986.—CHARLES F. SPENCER, of Rochester, N. Y.—*Improvement in Coal-oil Lamps.*—Patent dated March 24, 1863.—The deflector is secured to the plate on which the chimney stands, the latter being attached to shanks which pass into guides on the wick tube. When down, the chimney gallery sets on the flanged support, but when raised so that the shanks traverse in the guides, it may be vibrated over to expose the wick for dressing and renewal.

Claim.—Connecting the deflector and chimney with the wick tube or cap, by means of the sliding shank *b*, secured to the guide G, or its equivalent, in such a manner that the shank is held firmly in place when lowered, but forms a joint when raised, so as to turn vertically the chimney and deflector back; the whole arranged, combined and operating substantially as herein set forth.

No. 37,987.—ABNER G. TISDEL and WILLIAM NASH, of Watertown, Jefferson county, N. Y.—*Improved Attachment for Converting Burning Fluid into Coal-oil Lamps.*—Patent dated March 24, 1863.—This consists of a clamp or collar to be attached to the wick tube of an oil or alcohol lamp having prongs rising from it terminating in perforated caps on each side of the flame.

Claim.—The two prongs A A, provided at their upper parts with perforated cap-shaped terminals and slotted at their lower parts to form arms *b*, which are connected to a suitable clamp, all arranged as and for the purpose herein set forth.

No. 37,988.—P. C. VAN BROCKLIN, of Buffalo, N. Y.—*Improvement in Cultivators.*—Patent dated March 24, 1863.—The triangular frame of this cultivator is supported upon a wheel at each corner; the forward wheels being pivoted in arms projecting downwardly from the frame, and the socket of the rear caster wheel pivoted so as to be vibrated back and forth by the lever, with connecting rods to lower the frame at all corners simultaneously.

Claim.—Cultivators having a triangular frame with a wheel at each corner, supporting a caster wheel at the apex of the frame, in a socket or journal box which is hung upon a bolt or pin, in such a manner that it may turn or swing freely upon said bolt, in combination with a swivel lever shaft which connects with the wheel and extends upwardly for a handle, and operates as a swivel upon which the wheel turns freely, and which is connected with the forward wheels by means of rods, taking hold of the arms *I* below the frame, so that all of the wheels may be raised or lowered simultaneously by the driver, substantially as and for the purposes described.

No. 37,989.—CHARLES VAN DE MARK, of Oaks Corner, Ontario county, N. Y.—*Improvement in Portable Fences.*—Patent dated March 24, 1863.—The adjacent ends of the worm fence panels are interlocked with each other by the protrusion of the three middle boards with a slot attached, through a gap made by the cutting away of the three middle boards between the two slats at the end of the other panel. The cleats on these ends lock against the contiguous surfaces, and the corners are braced by inclined slats.

Claim.—Interlocking the panels by means of the cleat *d*, or its equivalent, on one panel, abutting against the cleat *b* and the top and bottom rails of the other panel; either with or without the other abutting cleats *e a*, substantially as and for the purposes herein specified.

Also, the brace G, constructed and arranged substantially as specified, in combination with the construction and arrangement of the panels as described.

No. 37,990.—GUSTAV WEDEKIND, of Philadelphia, Pa.—*Improvement in Clasps for Paper Shade Holders.*—Patent dated March 24, 1863.—The upper edge of the paper shade is inserted within the ring or clasp and the clips punched down upon it.

Claim.—The making of the clips at the top and inside of the ring so as to clasp the shade inside of the ring, in the manner and for the purpose herein described and represented.

No. 37,991.—JOEL WHITNEY, of Winchester, Mass.—*Improved Machine for Rolling Green or Wet Leather.*—Patent dated March 24, 1863.—This invention consists in a rolling machine for expressing the liquor out of wet leather preparatory to splitting it, an elastic pressure being brought upon the leather by means of a yielding material beneath their journals, and the rollers themselves being covered with an elastic casing. The upward pressure of the elastic bearings of the lower rollers is increased by weights on the treadle communicated by levers, &c., to the box in which the cushion is placed, and the pressure of the upper rollers regulated by the geared screw arrangement on the top of the standards.

Claim.—First, the combination of the rollers B B P P, shaft *c*, and screws *a a*, with the devices *g i h j l k m p*, in the manner described for the purpose of producing the effect described upon wet leather.

Second, hanger *j*, cap *i*, box or cylinder *h*, and spring *g*, in combination with the roller B, in the manner and for the purpose described.

Third, the combination of the levers *k k*, links *m m*, and treadle *p*, with the hanger *j*, of the cap *i*, in the manner and for the purpose described.

Fourth, the combination in a wet leather rolling machine of the spring *g*, lever arrangement *k l m p*, and geared screw arrangement *c e b b a a*, in the manner and for the purpose described.

No. 37,992.—SAMUEL R. WILMOT, of Brooklyn, N. Y.—*Improvement in Apparatus for Claspings Skirts.*—Patent dated March 24, 1863.—The clasps are placed in the hopper and fed down the channel ready for insertion into the tape, which is performed by the descending hammer.

The percussion jolts the clasps in their reservoir so as to be ready for transmission into the channel, and the hammer is moved by means of a treadle.

Claim.—First, the interposition of a spring N between the shaker E e and the concussive portion of the machine as represented.

Second, the projections K K', and the recesses K' K', and spring P, arranged to operate relatively to the supporting piece I i, or its equivalent, substantially as and for the purpose herein set forth.

Third, the projections L L, and the recesses L' L', and spring P, arranged to operate relatively to the supporting piece L i, or its equivalent, substantially as and for the purpose herein set forth.

No. 37,993.—ROBERT T. WILDE and SAMUEL H. LYON, of Brooklyn, N. Y.—*Improvement in Dies for forming Hats.*—Patent dated March 24, 1863.—This invention is applied to form hats of a bell crown shape, and the die is made expansible by means of cams and crank so as to be made to assume the shape required while the hat is being formed upon it, and reduced again to a cylindrical form for withdrawal from the hat.

Claim.—First, the combination of a fixed bottom-piece A a fixed top-piece, C, and a series of interposed expanding pieces D D E E, the whole constructed and arranged to operate substantially as herein specified for the purpose set forth.

Second, so combining the several expanding pieces D D E E with each other and with a cam H attached to the die or block, that the said pieces may be operated simultaneously as herein described, to produce the contraction and expansion of the die or block without the removal and re-insertion of any portion of the die or block.

No. 37,994.—STEPHEN W. WOODWARD, of Buffalo, N. Y.—*Improved Clothes-Ironing Machine.*—Patent dated March 24, 1863.—This machine consists of a hollow metallic table heated by gas or otherwise, and a smoothing iron at the end of a reciprocating arm, which is worked by machinery.

Claim.—First, the hollow metallic table B, when heated by a flame of gas or spirit lamp, and constructed and used for the purpose of ironing clothes thereon, as described.

Second, operating the smoothing iron E, by means substantially as described, in combination with the hollow metallic table B, for the purposes set forth.

No. 37,995.—W. A. WOOD, of Hoosick Falls, Rensselaer county, N. Y.—*Improvement in Dividers for Harvesting Machines.*—Patent dated March 24, 1863.—The upper and under portion of the shoe are not united at the front, and have an enlarged space over and behind the finger bar to enable the sickle to carry out all matter that may lodge on the shoe, such as dead grass, mouse-nests, &c.

Claim.—An outside shoe or divider having an enlarged open space over and behind the finger bar, to which it is fastened, and the upper and under portions of whose front approach each other near enough for the cutter to pass through without being united, substantially as and for the purpose herein described.

No. 37,996.—NATHAN AMES, of Saugus Centre, Mass.—*Improvement in Needles.*—Patent dated March 24, 1863.—The eye of the needle is provided with a lateral slot so bevelled as to facilitate the entrance of the thread and prevent its escape, and also to offer no impediment to the use of the needle. The strength of the eye is preserved by making it thicker at the side opposite the slot.

Claim.—A needle made with a lateral bevelled opening into the eye, and an increased thickness of metal on the side of the needle opposite the opening, all as herein shown and described.

No. 37,997.—ALEXANDER BAIN, of New York, N. Y., assignor to Himself and WILLIAM H. ALLEN, of same place.—*Improvement in Electric Telegraphs.*—Patent dated March 24, 1863.—This invention consists in a rotary finger plate that makes and breaks the electrical circuit, and by means of an electro-magnet gives motion to a hand that indicates upon a dial the motion or signs transmitted; also, in movable indicating dials that can be varied in the order of the lettering or figuring, to render unintelligible the message, except by mutual agreement of the dials of the sender and receiver.

Claim.—First, the finger plate provided with the cavities or holes corresponding with the sign to be transmitted, said plate in its revolution making and breaking the electrical circuit, substantially as set forth.

Second, the stop C in combination with the said finger plate, for the purposes and as specified.

Third, the dial m and hand n, actuated substantially as shown, in combination with said finger plate, for receiving the message, as specified.

Fourth, the movable dials or rings applied to the transmitting and receiving instruments, whereby the telegraphic communication can only be understood by the sender and receiver, as set forth.

Fifth, the finger plate supported at or near its circumference, so that the interior of said finger plate may be open for exhibiting the dial m and hand n, as set forth.

No. 37,998.—WILLIAM B. BARNARD, of Waterbury, New Haven county, Conn., assignor to Himself and SAMUEL G. BLACKMAN, of the same place.—*Improvement in Coppering Iron Vessels.*—Patent dated March 24, 1863.—This improvement consists in the use of a varnish or other insulating material applied between the hull and the sheathing, when the latter is attached by rivets in enlarged cavities in the hull.

Claim.—The combination of Japan varnish, or any other suitable insulating substance or material, with the copper sheathing of an iron or iron-plated vessel, when said sheathing is attached to the vessel by means of metallic rivets, secured within enlarged cavities formed in the iron work of the hull of said vessels, substantially in the manner and for the purpose herein set forth.

No. 37,999.—ERASTUS W. BATES, of Waterville, Kennebec county, Maine, assignor to JOHN ELLIS, of North Bridgeport, Mass.—*Improvement in Wood-saw Frames.*—Patent dated March 24, 1863.—This improvement is a method of tightening the frame of a "buck" saw to strain the blade, and consists of a lever and cam, drawing upon a link attached to the lightning rod, and working in indentations on the shorter member of the saw frame.

Claim.—The combination of the strap E pivoted to the base D, the lever G, with its cam f pivoted to the strap, and the plate I, with its indentions i, applied to the head of the bar B, in the manner specified.

No. 38,000.—GEORGE W. BIGELOW, of New Haven, Conn., assignor to H. B. BIGELOW, of same place.—*Improvement in Rifling Machines.*—Patent dated March 24, 1863.—The invention consists in a combination of parts, whereby the mandrel is caused to rotate on its axis during the passage of the barrel; this is accomplished by means of a tripping lever and connecting rods, which actuate a vertical rack meshing into a pinion on the mandrel shaft.

Claim.—The combination of the cross-head trip i and lever d with the rack N and pinion O, when the same are combined to operate substantially as and for the purpose specified.

No. 38,001.—PETER BUDENBACH, of New York, N. Y., assignor to E. R. BENNETT, of same place.—*Improvement in Coal-oil Lamps for Locomotives.*—Patent dated March 24, 1863.—Below the outer tube of the lamp extends a cylindrical chamber with perforated sides and bottom, in which the guide-rod extension of the wick raiser projects. A space intervenes between the outer tube of the lamp and the wick tube, in which the wick raiser traverses, and which is connected with the oil supply; within this wick tube is a sliding tube, to which, by bridges, is attached permanently a rod, on the summit of which is a button to deflect the flame, so that, by the raising or lowering of this inner tube, the button is adjustable to the flame; over the oil chamber extends a circular cap or bridge with perforated sides and with a flame orifice. In the wick chamber above the pinion, which operates the wick raiser, is an annular diaphragm, which prevents the wick or other matters reaching the part of the tube occupied by the pinion.

Claim.—First, attaching the button I to a sliding tube G, which is fitted within the tube E, all arranged as shown, to support the bottom in proper position, and admit of the ready adjustment of the same as set forth.

Second, the perforated cylinder B, attached to the lower end of the outer tube A of the lamp, when said cylinder is made to project below said tube and form an extension of the same, as and for the purpose set forth.

Third, the bridge in the oil-chamber K, formed of the curved top plate c, and perforated sides d d, and provided with a perforated cylinder M, any one or all of the perforated parts being used as and for the purpose specified.

Fourth, the perforated partition plate J, in the wick chamber b', as and for the purpose set forth.

No. 38,002.—THOMAS D. BURRALL, of Geneva, Ontario county, N. Y., assignor to WILLIAM D. BURRALL, of same place.—*Improvement in Corn Shellers.*—Patent dated March 24, 1863.—The invention consists in providing the circular tube, through which the ear of corn is conveyed to the toothed disk, with a recess in which is fitted a spring to crowd the ear against the sheller.

Claim.—The circular hopper e, provided with a recess for receiving the curved spring o, in the manner and for the purposes specified.

No. 38,003.—S. W. KIRK, of Coatesville, Chester county, Pa., assignor to Self and E. C. STOTSENBERG, of Wilmington, Del.—*Improvement in Purifying Cast-iron.*—Patent dated March 24, 1863.—The invention consists in the use of binoxide or hyperoxide of manganese, applied to the iron while the latter is in a state of fusion.

Claim.—The use of the binoxide or hyperoxide of black manganese, with or without the addition of the sesquioxide of iron, introduced to the iron when the iron is perfectly fluid, for the purpose of washing out the impurities, substantially in the manner and for the purpose set forth.

No. 38,004.—C. W. THEO. KRAUSCH, of Chicago, Ill., assignor to Self and ROBERT MC-CANE, assignors to said KRAUSCH and DAVID HOWES, of same place.—*Improvement in Grain Elevator*.—Patent dated March 24, 1863.—This improvement consists of a series of elevating screws in suitable tubes by which the contents of the boat or car are raised and discharged into the warehouse, and thence transported to the upper floors. The swinging tube is connected to the second tube by means of a connecting arm, so that their relative distance is maintained, and the gearing on the end of each, which drives the screw, is caused to rotate simultaneously by a band connecting a pulley on each. The grain at the summit of the swinging tube is received by a bonnet, which discharges it into a spout, from whence it passes to the second elevator.

Claim.—First, providing the tube E with a receiving and discharging bonnet E', substantially as and for the purpose set forth.

Second, so connecting the receiving swinging tube E with the stationary tube B, that a revolution may be simultaneously imparted to the screws of both tubes, and such motion continued whether the tube E be elevated or depressed, or swung out from or swung in toward the wall A during the act of elevating the grain.

Third, connecting the swinging receiving tube E with the stationary tube B, by means substantially as and for the purpose described.

Fourth, the combination of the swinging receiving tube E, screw I, and cap E', and counter-balancing weights p3, for the purpose set forth.

Fifth, the combination of a series of tubes E B and B', and a series of elevating screws I and I', the whole being combined, arranged, and operating substantially in the manner and for the purpose set forth.

No. 38,005.—EDWIN L. SIMPSON, of Monroe, Fairfield county, Conn., assignor to Himself and JARED WILSON POST, of New Haven, Conn.—*Improved Composition for Water-proofing Fabrics*.—Patent dated March 24, 1863.—The object is to produce a water-proofing composition free from sulphur. Two parts of gutta percha and three parts of camphene or naphtha are melted together; a drying oil is then prepared, by boiling a vegetable oil to the consistency of jelly; when cool, to four gallons of concentrated oil add one of cleansed benzine, three gallons of camphene or naphtha, and three gallons of the above solution of gutta percha. Color to suit, and apply to the fabric.

Claim.—First, a water-proof compound composed, in the manner described, of gutta percha and camphene, or naphtha, for the purpose and substantially as herein set forth.

Second, the compound produced by combining with the liquid gutta percha, prepared as described, benzine, camphene, and boiled vegetable oil, in the manner and for the purpose substantially as herein set forth and described.

No. 38,006.—EDWIN L. SIMPSON, of Monroe, Springfield county, Conn., assignor to Himself and JARED WILSON POST, of New Haven, Conn.—*Improvement in the Manufacture of Flocked Water-proof Fabrics*.—Patent dated March 24, 1863.—The invention consists in applying to fabrics the water-proof compound which was the subject of letters patent No. 38,005, dated March 24, 1863, and adding thereto a coating of flocks.

Claim.—The coating water-proof fabrics, in the manner herein described, with flocks, or similar material, when the said fabrics are prepared in the manner substantially as herein set forth.

No. 38,007.—J. O. TABER, of Salem, Ohio, assignor to Himself, C. R. TABER, and W. S. STETSON, of same place.—*Improvement in Track-Clearers for Harvesters*.—Patent dated March 24, 1863.—The swath-board is secured to the shoe by means of a projecting pin on each side of the former, which fits in the curved grooves of the projection in the rear of the shoe. An additional swath-bar is pivoted to the inside of the swath-board, which has a vertical adjustment by a set screw.

Claim.—First, the method of attaching the swath-board C to the shoe B of the finger-bar, as herein shown and described, to wit, by means of the pin c, secured transversely in the swath-board, and the recesses b b in the sides of the slot a of the shoe B, the pin being fitted in the recesses, and the inner end of the swath-board bearing against the inner edge of the slot.

Second, attaching the arm D to the swath-board C by means of the socket E, which is provided with a plate e, having a curved slot f in it, through which a screw g passes, the socket being attached to the swath-board by a screw d, which is at the centre of a circle of which the curved slot f forms a part, as and for the purpose herein set forth.

No. 38,008.—JOHN UNDERWOOD and FREDERICK V. BURT, of London, England, assignors to WALDO MAYNARD and CHARLES R. THAYER, of Boston, Mass.—*Improvement in Composition for Printing and Copying-Ink*.—Patent dated March 24, 1863.—Patented in England, September 19, 1856.—The object is to produce an ink which shall be transferable from the printed impression to moist paper in a letter-press, so as to copy printed blanks which have been filled up with copying-ink. The preparation is as follows: Of nut-galls, fourteen pounds; sulphate of iron, six pounds; gum senegal, twelve pounds; treacle, six

pounds; soap, three pounds; lampblack, six pounds; Prussian blue, three pounds; and filtered rain-water, fifteen imperial gallons, properly compounded. Other formulas are given.

Claim.—Our new manufacture of printing and copying ink, as made of soap and other materials, and in manner substantially as herein before described.

No. 38,009.—EDWARD S. WINCHESTER, of Boston, Mass., assignor to Himself and JOSEPH GARDNER, jr., of same place.—*Improved Clasp for Shoes, Belts, &c.*—Patent dated March 24, 1863.—One end of the strap has a short plate with a stud, which is inserted into a hole in the double plate and passed along in a slot, being retained at the desired point by a ratch, whose teeth engage with the shank of the stud. The ratch is closed against the stud by a spring, and withdrawn by a thumb-piece sufficiently to admit the passage of the stud.

Claim.—The clasp constructed substantially as above described.

No. 38,010.—Mrs. HENRIETTA H. ADAMS, of New York, N. Y.—*Improvement in Hair Crimpers*.—Patent dated March 24, 1863.—This invention consists of two blocks hinged together, and each formed on its respective faces with grooves of different widths, so that, by turning the apparatus in either position, crimps of any desired size may be provided.

Claim.—First, a double hair-crimper adapted for use in reversed positions, substantially as herein described.

Second, in combination therewith a hinge or hinges applied substantially as set forth, to adapt the machine for use in either position.

Third, the hook D, or other suitable catch or fastening, in the described combination with the double hair-crimper.

No. 38,011.—J. HERRINGTON HENDEE, of Blackman, Jackson county, Michigan.—*Improvement in Stump Extractors*.—Patent dated March 24, 1863.—This machine is supported upon a sled. The lever vibrates upon the forward bench, and a chain having been attached by a hook to a prominent root, is fastened to the shorter end of the lever. The longer end is depressed by a rope passing over a system of pulleys in the draught-beam and the end of the lever, the former being attached by a staple to the round at the nose of the sled, and its heel end set into the forward bench.

Claim.—First, making the horizontal beam E serve the double purpose of a draught-beam for the sled and a purchase for the lever G, as herein described.

Second, the auxiliary beam H, arranged as described, in combination with the sled runners A A and lever G, as herein described.

Third, the fulcrum plates h h' and lips i i, or their equivalents, in combination with the lever G, and transverse bridge-tree C, substantially as described.

Fourth, combining with sled runners A A, spread out at their rear ends, the standards A A, bridge-tree C, lever G, draught-beam E, pulleys g g', s s', and rope k, substantially as described.

No. 38,012.—S. MCCLANATHAN, of Warren, Ill.—*Improvement in Beehives*.—Patent dated March 24, 1863.—The case is divided off into compartments, occupied by interchangeable boxes, or drawers, which are provided with a projecting entrance, or tube. Each drawer has a tray beneath it, which may be withdrawn to remove the refuse of the box, the latter having holes for communication, and dividing slides to partition off the family as may be desired.

Claim.—The combination and arrangement of the hive sections and interchangeable boxes, or drawers, substantially as and for the purposes herein specified.

Also, the projecting funnel-shaped entrance tubes, with their ventilating caps, substantially as specified.

No. 38,013.—ORAN W. SEELEY, of Syracuse, N. Y.—*Improvement in Device for Operating Churns*.—Patent dated March 24, 1863.—The churn is operated by a crank on the fly-wheel shaft, which, by pitman-balance, lever, and connecting rod working in a guide, gives a vertical reciprocating motion to the dasher and shaft.

Claim.—The employment of the vertical reciprocating connecting rod a, working in guide D', in combination with the dash churn and the balanced lever, arranged and operating in the manner and for the purposes substantially as described.

No. 38,014.—OTIS TUFTS, of Boston, Mass.—*Improvement in Construction and Defence of War Vessels*.—Patent dated March 24, 1863.—This invention consists of side-armor and backing secured to the hull. One feature of this improvement is in making the form of the armor to conform to the true lines of the vessel, and securing her symmetry as if no armor were incorporated in her structure. This is accomplished by making a recess in the hull and bending the plates inwards from the required distance below the water-line to the offset of the oblique roof. The defensive armor is composed of alternate layers of iron plates and timbers, with wrought-iron screw bolts passing vertically through them and securing them to the shelf of the recess; it is also secured by horizontal bolts, which pass from vertical straps to fixtures in the hull; said fixtures consisting of eyes with flanges, and countersunk riveted projections passing through the plates of the hull.

Claim.—In the construction of iron war ships, the recess in the sides substantially as and for the purpose described, such recesses being formed by bending inwards the frames and the plating thereon.

Also, forming the fixture *m*, which is secured to the hull, substantially as and for the purpose set forth.

Also, compressing an armor compounded of iron and of wood, or rather equivalent therefor, by means of screw bolts attached to the fixture *m*, substantially as shown.

Also, securing defensive armor to a hull by means of bolts jointed to fixture *m*, substantially as and for the purposes specified.

Also, the employment of the straps *g*, in connexion with the screw bolts *f* and the fixture *m*, for the purpose of securing the compound armor to the hull.

No. 38,015.—CHARLES N. TYLER, of Buffalo, N. Y.—*Improved Composition for Burning Fluid.*—Patent dated March 24, 1863.—The invention consists in the combination of fusil oil with the mineral and earthy oils, with naphtha and with alcohol, and in treating the combination of petroleum or kerosene and fusil oil with alcohol.

Claim.—First, the compound produced by the combination of the mineral or earthy oils with fusil oil, in the manner and for the purpose substantially as herein set forth, said compound constituting a new manufacture.

Second, the compound produced by the combination of naphtha with alcohol and fusil oil.

Third, the heavy liquid obtained by treating the combination of petroleum or kerosene and usil oil with alcohol.

No. 38,016.—THOMAS WISE, of Boston, Mass.—*Ore Washer.*—Patent dated March 24, 1863.—This machine consists of a series of two or more tight boxes, arranged one above another with suitable pipes for the introduction of air under pressure, whereby the solution which is received direct from the stamp mill is so acted upon as to separate the earthy matter from the mineral and deposit it in layers according to its comparative gravity.

Claim.—Taking the combined ore and water direct from the stamp heads, and separating the metal in various grades by means of forced currents of air injected beneath the water, within a series of tight boxes set upon pivots one above another, all as shown and explained.

No. 38,017.—WARREN A. SIMONDS and SETH WARNER, of Boston, Mass., assignors to SETH WARNER and OLIVER WARNER, of North Hampton, Mass., and ALBERT L. FERNALD, of Boston, Mass.—*Improvement in Treating Gas for Illumination.*—Patent dated March 24, 1863.—The gas obtained by passing air through a hydro-carbon liquid is treated with a mixture of alcohol and chloride of lime to purify it.

Claim.—We do not claim the manufacture of illuminating gas by forcing air over benzole, naphtha, or other liquids simply, as that is already known—but we claim, forcing the gas thus made through a mixture of alcohol and chloride of lime, thereby effecting such a change in said gas that it is not liable to refrigeration or condensation; and also so decarbonizing said gas as to prevent smoke while burning, and prepare it for any kind of burner.

No. 38,018.—JAMES M. DICK, of Buffalo, N. Y.—*Improvement in Broilers.*—Patent dated March 24, 1863.—The meat is placed upon a flexible apron or jointed gridiron so as to be wrapped around a skeleton reel and placed on bearings in a box over the fire, where it is rotated by a crank.

Claim.—First, the flexible apron *B*, when constructed and operating as and for the purposes described.

Second, the reel *A*, flexible apron *B*, and box *O*, when used in combination for the purposes as described.

No. 38,019.—STEPHEN M. ALLEN, of Woburn, Middlesex county, Mass.—*Improvement in the Manufacture of Paper for Collars.*—Patent dated March 31, 1863.—After separating the fibre of straw, the filaments thus obtained are steeped in water successively from lukewarm to boiling, when an alkaline solution may be added until the albumen nearest to the surface can be rinsed away. After each warm water bath the filaments are rinsed in warm or cold water. They are then allowed to dry, when the fabric is quite free from albumen and in proper condition to be resolved into its natural elements by mechanical means, whereby the fibre is drawn down longitudinally, dividing it into short filaments whose ends are stranded. The fibres so reduced are then put into the pulp, giving a greater strength to paper used for the manufacture of collars and other purposes.

Claim.—The production of paper adapted to the manufacture of collars, wristbands, and other similar articles of wear from flax, hemp, jute, or other long-stapled fibrous substance, by treating the said fibre in warm water at successively increased temperature, as described, in combination with the reduction thereof by mechanical means substantially as herein set forth.

No. 38,020.—STEPHEN M. ALLEN, of Woburn, Mass.—*Improvement in the Manufacture of Paper from Wood.*—Patent dated March 31, 1863.—Wood, cut and sawed into suitable length, is crushed longitudinally to preserve the fibres and steeped and washed alternately in

warm water of different temperatures. The mass is then boiled, bleached, and ground and is then ready to be manufactured into paper.

Claim.—The manufacture of paper pulp or paper from wood by performing the operations of cutting the wood in suitable lengths, crushing it in such a manner as to preserve the integrity of the fibre in its longitudinal direction, alternating, steeping, and washing the same at increased temperatures, and finally boiling, grinding, and bleaching the same; the whole in succession substantially as herein described.

No. 38,021.—BENJAMIN T. BABBITT, of New York, N. Y.—*Improved Method of Using Exhaust Steam for Heating Purposes.*—Patent dated March 31, 1863.—The invention consists in leading the exhaust pipe through the chimney or flue and thence to the apparatus to be heated.

Claim.—Conducting the exhaust pipe *D* into and for a certain distance through the chimney *C*, or other flue, and thence out to the vessel or apparatus to be heated, substantially as herein described.

No. 38,022.—YOUSOUFF BEY, of New York, N. Y.—*Improved Composition for Covering and Protecting Iron.*—Patent dated March 31, 1863.—The composition consists of rosin or rosin and copal, forty to seventy pounds; tallow, twenty to fifty pounds; beeswax, five pounds; oxide of iron, five pounds. Melt the rosin, then add the tallow in which the oxide of iron has been previously mixed, then add the beeswax, keep it below boiling heat; stir well.

Claim.—A compound for protecting iron from corrosion, composed of the ingredients above named, and in the proportions substantially as above described.

No. 38,023.—LORENZO BOMMER, of New York, N. Y.—*Improved Door and Shutter Spring.*—Patent dated March 31, 1863.—To the door post or window frame is attached a pintle with a transverse pin and a spring, and attached to the door is a plate, whose flange sets over the pintle so that in opening the door the stud on the flange presses against the spiral spring which shuts it when the pressure against the door is removed.

Claim.—The plate *H* with the projection *g* and plate *I*, in combination with the pintle *E* and pin *F*, constructed and applied substantially as and for the purpose specified.

No. 38,024.—JOSHUA W. BRADWAY, of Akron, Fulton county, Ind.—*Improvement in Animal Trap.*—Patent dated March 31, 1863.—This trap is so constructed that an animal pulling upon the bait releases the trigger, and the sectional floor is caused to rotate by the influence of the weight on the drum attached to the axis of rotation of each section, thus dropping the animal into the chamber of the trap, and the board continuing its rotation, is arrested by the spring which had returned to its original position, and the trap is ready for another victim.

Claim.—The arrangement of the box *A*, hinged bottom *a*, revolving sections of the top *g g*, flanged drums *i i*, T-shaped support *B*, pulleys *i j*, weighted cords *k k*, combined hook and trigger *u a*, support *m* and spring *D*, all in the manner and for the purposes herein described.

No. 38,025.—JACOB BRINKERHOFF, of Auburn, Cayuga county, N. Y.—*Improved Mode of Hanging Balance Wheels, &c.*—Patent dated March 31, 1863.—The object of this improvement is to hang a wheel in such a manner that it has no lateral strain or tendency to rock; and this is accomplished by attaching the wheel firmly to a central shaft which is made to run inside the true axle as in a sleeve, the latter not passing through the hub of the wheel, of course, but leaving sufficient space for the firm attachment of the wheel and central shaft.

Claim.—The manner herein described of hanging fly or balance wheels, gear-wheels and pulleys, so as to relieve the shaft to which they are attached from lateral strain, as and for the purpose specified.

No. 38,026.—JOHN BROOKS and JOS. H. SANFORD, of North Bridgewater, Mass.—*Improved Edge Plane for Trimming Soles of Boots, &c.*—Patent dated March 31, 1863.—This consists of a circular plane set to a convenient handle; the plate has an annular recess in one face for the reception of steel cutters, which are laid to each other in such a way that one forms a cutter and the other the throat, and are retained in position by a screw and plate, which laps their inner edges, and when down these pieces are interchangeable with each other.

Claim.—The combination of the knife and guard, so constructed and arranged, as set forth, that they may be reversed and transposed as described.

No. 38,027.—W. F. BROOKS, of New York, N. Y.—*Improved Method of Affixing Tubes in Steam Condensers.*—Patent dated March 31, 1863.—Between the tube sheet and an additional sheet is a perforated sheet of India-rubber, which being clamped tightly upon the elastic material makes a steam-tight joint. At one end this joint is formed in a ferrule, the elastic material fitting in a groove in its periphery, the said ferrule being, for a part of its length, of a conical shape, so as to admit of its being easily withdrawn after it is once started.

Claim.—The employment of a perforated sheet or sheets of rubber in combination with the tube sheets and ends of the tubes for securing said tubes in place and maintaining a tight

joint while allowing for the varying length of tubes due to expansion and contraction as described.

Also, the ferrule and groove thereon for the purpose described herein.

No. 38,028.—J. S. BROWN, of New York, N. Y.—*Infants' Exercising Machine*.—Patent dated March 31, 1863.—To a suitable base a pedestal is attached, and upon this is a vibrating lever pivoted thereto. To one end of this lever is a cord attached to a treadle on the floor, and near this is a spring connecting the lever and base, and adjustable nearer or further from the point of vibration, to increase or diminish its tension. At the other end of the lever is the cot or chair for the infant, and the machine being set in motion the action on the treadle forms the motive power; the spring and the weight of the cot nearly balancing each other, keep up a constant vibrating motion.

Claim.—First, the employment of a competent frame, consisting of the platform and pedestal, or their equivalent, sustaining a vibrating lever, as set forth, to one end of which lever is attached the chair or couch, and the other end of which is connected with a spring also attached to the aforesaid frame, the combination being substantially as described.

Second, in the above apparatus, the notches in the lever by which the active power or elasticity of the spring is varied at will, as and for the purpose specified, and the perforated strap N and pin 12, or their equivalent, to vary the height of the chair from the platform for the purpose set forth.

Third, the loop 2, bar 4, spindle 5, and bail or bow E, arranged and connected with the lever and with the chair or couch as and for the several purposes specified.

Fourth, the specific method of arranging the pedal with respect to, and of combining the same with, the lever and the spring so as to operate in connexion therewith for the purpose, in the manner and with the results specified.

No. 38,029.—OLIVER M. BROWN, of Toledo, Ohio.—*Improvement in Furnaces for Heating Tiles*.—Patent dated March 31, 1863.—This invention consists of an annular furnace provided with a number of draught holes and a chimney; in this furnace the kindling is laid, and upon it the tire, then the wood is piled on and the cover closed; fire is then applied at the different blast-holes to make an even heat.

Claim.—The above-described furnace as a new article of manufacture, the same being provided with a peculiar arrangement of flues with doors, in the manner and for the purposes set forth.

No. 38,030.—ROBERT BRYSON, of Schenectady, N. Y.—*Improvement in Harvesters*.—Patent dated March 31, 1863.—The invention consists in an apparatus for throwing the sickle in and out of gear by protruding or withdrawing slides which work in a fast hub on the secondary shaft and engage with an otherwise loose pinion which meshes into the larger wheel on the driving shaft; a weighted lever or counter-balance for the cutter bar; a friction roller in the stirrup bearing upon the head of the bracket to which the cutter bar is attached, and a method of raising the cutter by the intervention of a segment and a secondary lever as represented.

Claim.—First, the combination in a harvester of the driving wheels, large spur wheels C C, driving shaft, double bevelled or angular spring latches g g, hold-back pins d d, slots c c, hubs H H, depressions h h, and pinions a a, for the purpose of throwing into and out of action the sickle of the harvester, as herein described.

Second, the combination of spring latch boxes H H, constructed as herein described, fixed to a rotating shaft D, with loose spur wheels a a, driving spurs C C, bevelled spur E, its pinion b, longitudinal shaft F, crank wheel F', and connecting rod G, when the same are arranged in connexion with a harvester, and operate substantially as herein described.

Third, the employment of the loaded lever L, attached to the sliding stirrup I, and connected to the cutting apparatus, so as to enable me to nicely balance, and at the same time to allow of the vertical adjustments of the cutting apparatus, substantially as herein set forth.

Fourth, the friction roller k, in the stirrup I I, when placed in such a relation to the rounded head of the pivoted bracket J, as to serve as an anti-friction bearing for said bracket, essentially as herein set forth.

Fifth, attaching the short arm of the lifting lever M to the balancing lever L at a point which is between the extreme end of the short arm of this lever and its fulcrum, substantially as herein set forth.

No. 38,031.—MILLS L. CALLENDER, of New York, N. Y.—*Improvement in Hydro-carbon Burners*.—Patent dated March 31, 1863.—The object of this invention is to prevent the heat of the burner passing to the wick tube and oil receptacle, and to enable the hydro-carbon to be burnt clearly without the aid of a chimney. The deflector is formed with a base of metal and a cylinder of mica, surmounted by a dome of metal, with a flame slit in it. The mica and metal are attached by placing it outside of the base and dome, and then putting on rings which clamp it there; projectors are then punched through the rings into contact with the metal of the base and dome, and the mica is secure; the adjustable flame cone is constructed similarly.

Claim.—First, the improved lamp deflector, composed of a combination of mica and metal, consisting of a metallic base ring or flange f, the mica or similar non-conducting cylinder d, and insulated dome b, constructed as above set forth.

Second, the use of a mica, glass, or similar non-conducting cylinder when applied to a lamp top for the purposes above specified.

Third, the method of securing the mica to the metal as above specified.

Fourth, constructing the interior adjustable cone m, of a combination of mica and metal as above set forth.

No. 38,032.—JACOB O. CLUTE and PHILIP KIMMEY, of Albany, N. Y.—*Improvement in Fastening Covers to Axle Boxes*.—Patent dated March 31, 1863.—The object is to fasten down a flat lid, by a bolt passed through two lugs, without the liability of jarring out. This is effected by a flat-sided bolt, which being passed into its place is rotated until the ends of a spring leaf impinge upon its flatness and secure it from longitudinal or lateral motion; when forcibly rotated to bring its round side to the spring, it is in a condition to be withdrawn.

Claim.—The combination of a flat-sided bolt C, or its equivalent, with a spring B for fastening the covers or caps of car axle boxes, substantially as herein specified.

No. 38,033.—C. COLGATE, of Lancaster, Ohio.—*Improvement in the Manufacture of Flour*.—Patent dated March 31, 1863.—The improvement consists in the addition of kiln-dried starch to the wheat before grinding, by which means it is thoroughly incorporated with the flour.

Claim.—The admixture of kiln-dried starch with wheat, to be ground therewith in the manufacture of flour, substantially as and for the purposes herein specified.

No. 38,034.—THOMAS H. CURRIE, of Webster, Merrimack county, N. H.—*Improvement in Surgical Splints*.—Patent dated March 31, 1863.—The splint consists of a trough of suitable material made in two pieces, and extensible longitudinally with a screw and swivel nut to prolong it as necessary, and having a foot-piece, which, by means of a screw and angle iron, may be set at any required angle with the line of the direction of the leg, so as to vary its position for relief or according to the exigencies of the fracture, &c.

Claim.—First, the combination of the sides A B and A' B', each composed of two pieces, the sucking C, the screw E, and the swivel nut F, the whole to operate substantially as herein specified.

Second, combining the foot-piece D with the outer side of the splint by means of the slotted angle iron F, the screw a, pin j, and screw k, the whole applied substantially as and for the purposes herein set forth.

No. 38,035.—LOUIS DEROME, of San Francisco, Cal.—*Improved Bureau and Bedstead*.—Patent dated March 31, 1863.—The front of the bureau pulls out to form the foot-board of the bed, and the hinged mattress, which had been folded, is brought to a horizontal position. The hinges, by which the side rails of the mattress are fastened to the foot-board, have projections which slide in vertical grooves and allow the casters to reach and run upon the floor.

Claim.—First, the application to bureau bedsteads of a hinge D, with its arms or branches terminating in flanges e e, sliding up and down the guide plates h h, for the purpose of allowing the casters u u to traverse upon the floor in closing the bedstead substantially in the manner herein described.

Second, the combination of the hinged mattress with a bureau having a movable front when said front is attached to the mattress by means of the hinges D, substantially in the manner and for the purposes herein described.

No. 38,036.—PARKER DEXTER, of Clinton, Clinton county, Iowa.—*Improved Machine for Bunching and Pressing Shingles*.—Patent dated March 31, 1863.—The machine consists of a bed-piece and a pair of folding end boards which are raised for the butts of the shingles to be set against in bunching, and folded down for the removal of the bunch.

The motion of the boards is given by a lever and racks operating through toggles, and the clamping arrangement consists of a bent bar on each side, which is depressed by the downward retraction of the yoke to which it is attached, by the rotation of an eccentric on the lever shaft.

Claim.—The movable or adjustable end boards J J, in combination with the bars or yokes G G, bars H H, and eccentrics C C D D, on shaft B, all arranged and applied to the frame A, to operate substantially as and for the purposes herein set forth.

No. 38,037.—WILLIAM O. DREW, of Georgetown, D. C.—*Improved Machine for Making Bread*.—Patent dated March 31, 1863.—The invention consists of a fluted roller and convex plate, between which the dough, previously reduced to a thickness by a rolling pin, is rolled back and forth to knead it.

Claim.—The fluted roller A, the convex C, and the adjustable plates D, the whole arranged and combined substantially as set forth and described.

No. 38,038.—JAMES B. EADS, of St. Louis, Mo.—*Improvement in Operating Guns and Gun Towers*.—Patent dated March 31, 1863.—The improvements consist in making the gun tower in sections, the upper one sliding down telescopically within the lower, and in the method of levelling the gun in the tower in the act of raising it by the tripping-pin near the muzzle and the guide on the tower, so as to bring the gun in range with the porthole.

Claim.—First, making the gun-tower in sections so that the top section may be lowered into the hold of the vessel, for the purpose and in the manner substantially as described.

Second, levelling the gun in the tower, in the act of raising it, by means of the tripping pin near its point or muzzle, and the guide on the tower, so that a very small port may be used, as the gun must enter it fairly, without striking the sides of the port, substantially as described.

No. 38,039.—E. C. FROST, of Highland Nurseries, Schuylers county, N. Y.—*Improved Cooked Vegetable Food*.—Patent dated March 31, 1863.—The invention consists in the preparation of potatoes, by which the nutritive portion may be extracted, and decay prevented, by cooking, drying in thin sheets, and pulverizing.

Claim.—A new article of manufacture and commerce, the condensed product of the *Solanum tuberosum* in a cooked state for food; prepared substantially in the manner and for the purpose herein set forth.

No. 38,040.—L. D. GALE, of Washington, D. C.—*Improvement in Treating Phosphatic Guanos*.—Patent dated March 31, 1863.—The invention consists in mixing animal matter, previously treated with acid, with the guano; in the use of sulphate of lime in this connexion, and the use of the acids, for separating the nitrogenous material from the oily in the preparation of the animal matter.

Claim.—Making a concentrated manure by mixing animal matter, previously treated with acid or its equivalent with the guano, substantially in the manner and for the purpose set forth.

Also, the use of sulphate of lime, in combination with the animal matter treated previously, substantially in the manner and for the purpose set forth.

Also, the use of the acids, substantially as set forth, for separating the nitrogenous material from the oil, whereby both products are "rendered" quicker and in a purer state than when so separated by boiling or steaming with water only.

No. 38,041.—D. W. GOULD, of Independence, Buchanan county, Iowa.—*Brick Machine*.—Patent dated March 31, 1863.—The improvements are in an inclined plate, which rotates with the central shaft near the bottom of the cylinder, to press the clay through an opening into the moulds; a sliding plate, worked by a cam, which opens and closes the said opening at the appropriate times, and an arrangement of the moulds by which the soft brick are discharged by the movable bottoms, acting as pistons in the moulds, and operating simultaneously to discharge all the bricks at once by the movement of the lever.

Claim.—First, the pressure plate G, operating as and for the purpose specified.

Second, the sliding plate M and cam N, in combination with the openings O and P, for the purposes set forth.

Third, the moulds, (figures 4 and 5,) when constructed substantially as herein described, and operating as specified.

No. 38,042.—ISAAC HARTSHORN, of Providence, R. I.—*Improvement in Breech-loading Fire-arms*.—Patent dated March 31, 1863.—These improvements are designed to assist in the retraction of the cartridge, and consist in pivoting the cartridge block upon an arm, which itself is pivoted to the stock so as to give the block a double movement, one away from the barrel, and the other to elevate it so as to expose the orifice of the cartridge chamber upwards; a further appliance, by which the conical cartridge case is loosened so as to be readily withdrawn, consists of a sliding breech-pin, which, as the cartridge block is withdrawn, is forced into the rear of the cartridge chamber and starts the capsule of the exploded cartridge.

Claim.—The link C and joints a and b, whereby the cartridge block is first withdrawn from the barrel, and the mouth of the cartridge chamber is then elevated as described.

Also, the bolt r, arranged and operating as described for the purpose set forth.

No. 38,043.—SAMUEL J. HOGGSON, of New Haven, Conn.—*Self-inking Hand-stamp*.—Patent dated March 31, 1863.—The inking roller is caused to pass across the face of the stamp by a horizontally sliding rod attached to the tail end of the vibrating lever, which, at its upper end, forms the hammer shaft.

Claim.—The horizontal motion imparted to the inking-roll by the use of a lever, springs and pressure, operating substantially as and for the purpose herein set forth.

No. 38,044.—ELBRIDGE G. HOWE, of Millbury, Worcester county, Mass.—*Improvement in Plastering Trowels*.—Patent dated March 31, 1863.—The blade and shank of the trowel are formed in one piece.

Claim.—As a new and improved article of manufacture, a plastering trowel having its blade and shank formed in one piece, as herein shown and described.

No. 38,045.—FRANCIS M. HUBBARD, of Protection, Erie county, N. Y.—*Improvement in Dampers*.—Patent dated March 31, 1863.—This invention is intended to radiate back the heat which is passing up the pipe by presenting a polished convex surface in the line of its passage, while the smoke is allowed to follow the tortuous track to its final exit.

Claim.—The tube C, the convexo-concaves a a, the rim B, when combined with the pipe A, the whole constructed and operating in the manner and for the purpose substantially as herein set forth.

No. 38,046.—JAMES KENNELLY, of Hartford, Conn.—*Improved Metal for Horseshoes, &c.*—Patent dated March 31, 1863.

American charcoal iron.....	30 pounds.
Bone dust.....	4 ounces.
Manganese.....	2 "
Ferriid cyanide.....	1 "
Hematite.....	6 "
Wolfram.....	7 "

melted together, and run into moulds of the required shape.

Claim.—The within-described composition, made of the ingredients herein specified, and mixed together about in the proportion and in the manner substantially as set forth.

No. 38,047.—JAMES KENNELLY, of Hartford, Conn.—*Improvement in Mould for Casting Horseshoes*.—Patent dated March 31, 1863.—The mould is provided with a plate having pins which carry cones to make the nail holes. By the motion of the lever these pins are simultaneously projected into the mould or withdrawn.

Claim.—As a new and improved article of manufacture, a mould for casting horseshoes, provided with a plate C, carrying the cores e for the nail holes, and adjustable by cams D D, as and for the purpose shown and described.

No. 38,048.—C. W. THEODORE KRAUSCH, of Chicago, Ill.—*Improvement in Grain Drying Apparatus*.—Patent dated March 31, 1863.—A plate heated to redness is placed above the flame of a furnace, and air from a blast-fan is blown upon it from a pipe with a flaring funnel-shaped opening. This air is conducted away around the edges of and through holes in the funnel, and by the same fan is driven to the drying chamber.

Claim.—First, facilitating the heating of air for drying purposes on the surface of a red-hot plate, through the agency of a fan and a pipe with a flaring discharge, or by the equivalents thereof, substantially as described.

Second, the combination of means, substantially as herein described, for facilitating the heating of air, for drying purposes, on the surface of a red-hot plate, and discharging and distributing it into a drying chamber, as set forth.

No. 38,049.—SAMUEL MACFERRAS, of Philadelphia, Pa.—*Improvement in Mode of securing Iron Railings to their Posts*.—Patent dated March 31, 1863.—A thread is cut upon each end of the panel rod, and a nut with a flange attached is screwed on to them; these are then dropped into openings on the lugs attached to the posts.

Claim.—The combined pin and nut, constructed, arranged and operating substantially in the manner and for the purposes set forth.

No. 38,050.—ROBERT LANGWORTHY, of Brooklyn, N. Y.—*Improvement in Hernial Trusses*.—Patent dated March 31, 1863.—The pan which is pivoted upon the end of the main spring has an upward oblique pressure given to it by an additional spring which acts upon the rear prolongation of the plate to which it is attached.

Claim.—The arrangement of the two springs A C, and pad B, as set forth, so as to give the pad upward and oblique pressure, in the manner and for the purposes set forth.

No. 38,051.—JAMES LOUGHRIDGE, of Pittsburg, Pa.—*Improved Whitewash Brush*.—Patent dated March 31, 1863.—This consists of a sheet-metal frame of a truncated wedge-shape and braced by thin strips of the same material to prevent the springing or opening of the frame, and also dividing it into compartments into which the bristles are inserted with their points downward from the upper and wider part of the frame. The handle of the brush is made of sockets of different presentations cast in one piece.

Claim.—The use, in the manufacture of brushes, of a prismoidal wedge-shaped frame made of thin sheet metal, and divided into compartments by partitions or traces for the purpose of securing the bristles in a compact body, substantially as described.

Also, in combination therewith, the use of a socket for the handle of brushes consisting of two or more short cylinders cast in one piece, substantially as described.

No. 38,052.—EDWARD J. MALLETT, of New York, N. Y.—*Improvement in Putting up Smoking Tobacco*.—Patent dated March 31, 1863.—The invention consists in putting up a charge of tobacco in a capsule to fit a pipe, the said charge being perforated for draught and for its ignition from the centre.

Claim.—A tobacco cartridge consisting of a charge of tobacco of proper quantity for a pipe, put up in a paper capsule and perforated centrally, either entirely or partly through, substantially as herein specified.

No. 38,053.—JOHN P. MANNY, of Rockford, Ill.—*Improvement in Harvester.*—Patent dated March 31, 1863.—The wheel is constructed with a plate or flange running around the rim of the wheel on the side next the gearing, and the main gear wheel is placed within this projecting flange on the driving wheel in order to prevent dirt being carried up by the rim and dropped upon the gearing.

Claim.—The combination of the rim or tread and a plate or a series of arms, arranged in, or nearly in, a plane passing through the centre of said rim, with a flange connecting the two, and flush with the edge of the rim next the gearing, when constructed substantially as described, and for the purpose set forth.

No. 38,054.—JOHN P. MANNY, of Rockford, Ill.—*Improvement in Harvesters.*—Patent dated March 31, 1863.—The bevel wheel is mounted upon the frame, and its projecting hub with the pinion engages with the teeth in the inside of the rim wheel, which is boned to the driving wheel.

Claim.—Mounting the bevel wheel and spur pinion upon a projecting bearing so that the bevel wheel shall be between the gear frame and driving wheel, but outside of the plane of the latter, as set forth, in combination with the crank shaft having its bearing upon the gear frame, substantially as described.

No. 38,055.—RUFUS NUTTING, of Randolph, Orange county, Vt.—*Improvement in Vegetable Cutters.*—Patent dated March 31, 1863.—In the frame of this machine, and forming one side of the hopper, is a rotary cone having cutters affixed to it and holes through which the pieces of cut root may pass; the greater part being discharged through the notches in the hopper bottom against which the cone rotates. A slat cylinder above is used to remove dirt, &c., from the roots previous to grinding.

Claim.—First, the conical-shaped hollow cylinder in combination with the semi-conical-shaped knives or cutters and elliptical or egg-shaped holes, constructed substantially as and for the purposes herein set forth.

Second, the cylinder C, or its equivalent, for removing from vegetables, before cutting, the dirt and gravel which otherwise would dull the cutters and injure the teeth, stomach and intestines of animals, in combination with the conical cylinder I, or other device, for cutting vegetables, substantially as set forth.

No. 38,056.—ISRAEL MOSHER and WALDEN EDDY, of Mosherville and Union Village, Saratoga and Washington counties, N. Y.—*Improvement in Shovel Ploughs.*—Patent dated March 31, 1863.—Behind and beneath the shovel plough standard, with its sole resting upon the ground, is a triangular frame for regulating the depth of the furrow. On the edges of the wings of the shovel are curved extension pieces to distribute the earth evenly. The sole of the shoe or lower side is dovetailed into the latter so as to be readily withdrawn and replaced.

Claim.—The combination of the right-angle triangle *d*, or its equivalent, with the beam standard *a'*, having thereto attached the mould-board *b b*, substantially as herein described and set forth.

Also, the curved extension pieces *i i*, in combination with the wings of the mould-board *b b*, substantially as and for the purposes herein described and set forth.

Also, the employment and combination of the shoe *e* with the right-angle triangle *d*, substantially as and for the purposes herein described and set forth.

No. 38,057.—EZRA MILLER, of Janesville, Rock county, Wis.—*Improvement in Car Coupling.*—Patent dated March 31, 1863.—The device consists of two horizontal coupling hooks, having double bevelled ends and vertical sides, one being arranged on the end of each car to interlock with one on any other car on contact under the influence of the springs which impinge upon the back of each of the hooked coupling bars. There is a spring gate which yields and allows the bar to couple, and then forms an abutment or stop to prevent the casual displacement of the hooks. The rear end of the coupling rods is recessed to admit of the insertion of a spring to moderate the force of concussion.

Claim.—First, the combination of the double bevelled coupling hooks, the stirrups *E E*, and the springs *N N*, all constructed and arranged so as to operate in the manner and for the purposes described.

Second, the spring gate *F*, constructed, arranged, and operating substantially as and for the purposes described.

Third, the combination of the laterally located spring gates *F F*, with wings *f f*, stop pin *h*, and coupling hooks *C C'*, substantially as and for the purposes described.

Fourth, the double bevelled hooks *C C'*, disconnected from any coupling or bumper box, constructed, arranged, and operating in the manner described.

Fifth, the combination of the hooks *C C'*, vertical spring gates *F F*, the draw chain *i j*, and windlass rods *i i*, substantially as described.

Sixth, forming in the rear ends of the coupling hooks a longitudinal slot *D*, adapted to receive a spring or its equivalent, and to allow of the pivoting of the hooks at their rear ends, substantially as and for the purposes herein described.

Seventh, the combination of the pivoted, slotted, shanked coupling hooks with the forward support *E*, and spring gates *F F*, arranged substantially as herein described.

No. 38,058.—HENRY PEASE, of Brockport, Monroe county, N. Y.—*Improvement in Rotary Pumps.*—Patent dated March 31, 1863.—The improvements consist in a washer for preserving the valve stem from wear, in the method of packing the central shaft, the bearing on which the driving pulley is centred, and the clutch box for putting it in or out of gear on the shaft, and the water chamber which is designed to keep a pressure of water upon the points for the purpose of excluding air.

Claim.—First, the sleeve *s*, in combination with the piston stem *e*, substantially as described, for the purpose set forth.

Second, the adjustable stuffing-box *B*, with the perforated waste chamber *n*, substantially as and for the purpose set forth.

Third, the combination of the bearing arm *2*, pulley *F*, and clutch couplings *25* and *6*, substantially as and for the purpose set forth.

Fourth, the combination of the support *a*, water chamber *17*, stuffing nut *b*, and waste chamber *n*, substantially as and for the purpose set forth.

No. 38,059.—HENRY PEMBERTON, of East Tarentum, Alleghany county, Pa.—*Improvement in the Manufacture of Paper from Sorghum.*—Patent issued March 31, 1863.—Antedated October 1, 1852.—The crushed stalks are washed to remove the saccharine and soluble matter, and then boiled in a solution of caustic alkali to extract the silica, oil and coloring matter, and to open the fibre, and are again washed. They are next steeped in acidulated liquor, washed, and steeped in a solution of chloride of lime, washed, acidulated, and again washed. These operations reduce the stalks to a homogeneous white pulp to be worked up by the usual mechanical means.

Claim.—The manufacture of pulp from the stalks of the sorgho sucre or Chinese sugar cane, as a substitute for linen and cotton rags in the manufacture of white or the better qualities of paper, in the manner substantially as hereinbefore described.

No. 38,060.—WALTER S. PHELPS, of Detroit, Mich.—*Improvement in Turning Cross Heads, Wrists, or Pins, &c.*—Patent dated March 31, 1863.—This invention consists of a geared rotating ring having a cutter attached to it, used in connexion with an adjustable bed-plate.

Claim.—First, the ring *D*, provided with a cutter *L* arranged as shown, or in an equivalent way, to be operated or fed automatically by the rotation of the ring, for the purpose herein set forth.

Second, providing the ring *D* with teeth on its periphery, and fitting the same within a proper bearing formed by a stationary projection *B* and a cap *C*, substantially as shown, for the purpose of operating or rotating the ring directly from the driving shaft *F*, as herein set forth.

Third, the inclined plate *S*, in combination with the plate *A* and screws *Q T*, for the purpose of adjusting the work concentrically within the ring *D*, or in a proper relative position with the cutter *L*, as herein described.

Fourth, the nut or cutter stock *H*, in combination with the screw *I*, tappet wheel *K*, adjustable slides *N N*, provided with the pins *d d* and the catch or pin *h*, or its equivalent, for the purpose of feeding the cutter *L* to its work, as set forth.

No. 38,061.—WM. R. RICHARDSON, of San Francisco, Cal.—*Improved Washing Machine.*—Patent dated March 31, 1863.—Revolving in bearings in the sides of a suds box is a fluted cylinder having above it a concave segment of rollers between which and the cylinder the clothes are passed. On the central cylinder shaft is an eccentric which gives a reciprocating motion to a plunger, which sliding in guides presses the clothes between the follower and a stationary board at the end of the tub.

Claim.—The combination of the eccentric die *E*, with the cylinder *B*, the plunger *F*, sliding in guides *J*, and revolving in opening *G*, and the roller frame *D*, all arranged substantially as and for the purpose set forth.

No. 38,062.—GEO. RUESECK, of Pittsburg, Pa.—*Improvement in Slide Valves of Steam Engines.*—Patent dated March 31, 1863.—The invention consists in arranging the slide and bonnet and a flexible diaphragm so that the valve and bonnet can expand and contract, the steam pressing upon both sides of the valve to diminish its friction, leaving a sufficient preponderance above to maintain it to its seat, and on the contact surface of the bonnet to keep its joints steam-tight.

Claim.—Constructing and arranging the valve *A*, bonnet *B*, and diaphragm *E*, substantially as herein described and for the purpose set forth.

No. 38,063.—ELIZABETH T. SHANK, administratrix of the estate of ISAAC R. SHANK, deceased, Buffalo, Putnam county, Va.—*Improvement in Fences*.—Patent dated March 31, 1863.—The rails are square and pass through round mortises in the posts and are secured by keys. The lines of mortises in the posts are on each side of the central vertical line on the faces of the same, and the rails preserve their horizontal line and relative vertical distance, but pass from the outer line of mortise holes in one post to the other side in the next post, and are braced by upright slats with mortise holes through which they pass at points on each side of their central intersection.

Claim.—The arrangement of the braces C C', provided with round holes and fitting on the square rails B B1 B2 B3 B4 B5, which are fastened in the posts A A' by means of keys b b', in different planes, substantially as and for the purpose shown and described.

No. 38,064.—W. HORACE SOPER, of Baltimore, Md.—*Improved School Desk*.—Patent dated March 31, 1863.—The seat is pivoted by a metallic rod to the forward projecting sides of the desk behind it, and may be folded back against the said desk for convenience.

Claim.—The metallic rod by which the seat is hinged and operated, substantially as and for the purpose specified.

No. 38,065.—ABRAHAM STRAUB, of Milton, Northumberland county, Pa.—*Improvement in Cement Roofs*.—Patent dated March 31, 1863.—The roof is covered with wooden sheathing of narrow boards tongued and grooved together, and nailed down with spaces between them on their upper edges, and grooves ploughed in their upper faces for the cement to fill, so that any shrinking cracks shall come in the cement-filled grooves and the continuity of the roof be preserved.

Claim.—Dispensing with the use of the felt or cloth heretofore required in cement roofs, by the employment of the wooden sheathing herein described, the said sheathing being constructed and applied substantially in the manner described and set forth, for the purpose specified.

No. 38,066.—WILLIAM G. STROWGER, of Oswego, N. Y.—*Improvement in Subsoiling Implements*.—Patent dated March 31, 1863.—This machine has two rows of chisel teeth diverging from the forward end and set in a metal plate with handles for the operator.

Claim.—An implement for subsoiling, ditching, &c., composed of a solid metal plate A and teeth B, the latter being fitted in the former, substantially as shown, and the plate provided with handles C C and a clevis B, all being constructed and arranged as herein set forth.

No. 38,067.—HENRY L. SWEET, of Foxboro', Norfolk county, Mass.—*Improvement in Apparatus for Pressing Hats*.—Patent dated March 31, 1863.—The apparatus consists of arrangements for bringing a pressure upon all parts of the hat, which is set in an adjustable socket which impinges upon all the exterior surface of the crown and side and the upper part (as worn) of the rim, and an annular block with a suitably curved lower surface, which presses upon the lower side of the rim, together with a laterally expanding sectional pressure block with an elastic cover which occupies the interior of the hat and is pressed down against the crown of the hat by an annulus with adjusting screws above it. The apparatus is provided with heating chambers in the interior.

Claim.—The combination and arrangement of the crown and side pressers F F', the rim pressers G G', and the expansive block I, the whole being constructed and operating together substantially as specified.

Also, the arrangement of the heating chambers D E E with respect to the crown, rim, and side pressers, when the latter are constructed and arranged as specified.

Also, the expansive block I, as formed of separate sections and surrounded by an elastic cover, as described, in combination with its expansive mechanism, and with a mechanism for forcing the block and its expansive mechanism downward into the mould or a hat when in the latter.

Also, the combination of the elastic plate or cushion P, with the rim, crown, and side pressers and the expansive block, as described.

Also, the adjustable crown and side pressers as made in manner and combined with the lower rim pressers, and provided with adjustments, substantially as described, whereby they may be adjusted with reference to the rim pressers and for hats of different heights, as may be desirable.

Also, the combination of the annulus h and its adjusting screws, with the presser L and the expansive block I, constructed and combined with side and crown pressers F F' G G', substantially in manner and so as to operate as specified.

No. 38,068.—DANIEL E. TEEL, of Norwich, Chenango county, N. Y.—*Improvement in Flour Elevators*.—Patent dated March 31, 1863.—This is so arranged that by turning the crank one way the projection of the cupse will catch into the ratchet and cause the drum to rotate, and, by its rotation in the other direction, the projection strikes the pawl and throws it out of gear with the ratchet, allowing the bucket to descend under the pressure of the cupse, which serves as a brake.

Claim.—The combination of the ratchet C and flanch b, pawl E', ellipse F, provided with the projection c and attached to the crank D, the oval F encompassing the flanch b, and all arranged substantially as and for the purpose set forth.

No. 38,069.—JOHN W. W. TINDALL, of Liverpool, England.—*Improvement in Deodorizing Petroleum, &c.*—Patent dated March 31, 1863.—Where the oil contains paraffine, it is treated with sulphuric acid and stirred, at a temperature of 115° Fahrenheit, for a certain time, after which a portion of nitric or nitrous acid is added, and it is again agitated. Urine is then added and commercial hydrochloric acid, the stirring and a temperature of 105° being maintained. It may then be bleached and distilled. The proportions and operation vary according to the chemical character of the oil, and the temperature is reduced at the latter stages of the process.

Claim.—The employment of urine in combination with mineral acids as described, for the purpose set forth.

No. 38,070.—EMIL TRITTIN, of Philadelphia, Pa.—*Improved Coal Oil Burner*.—Patent dated March 31, 1863.—The plate to which the wick tube is attached is suspended from the collar which screws into the lamp, and the plate (by projections) gives support to the dome, so that the screw is nearly isolated from the parts exposed to the flame.

Claim.—Isolating or partially isolating the screw E from the wick tube and from the dome A by connecting the said screw to the dome, through the medium of arms or projections e e, the plate D attached to the wick tube, and projections d d on the said plate, substantially as set forth.

No. 38,071.—M. LEBRUN VIRLOY, of Paris, France.—*Improvement in Carbonizing Wood*.—Patent dated March 31, 1863.—In this apparatus the wood is introduced at one end of a furnace and withdrawn dried at the other, the doors being hermetically sealed during the operations; the openings in the furnace for the admission and exit of air are regulated by valves, the temperature being gradually increased and the waste heat utilized.

Claim.—First, so constructing and operating a furnace for drying or carbonizing wood, peat, and other fuel, as that the said fuel is introduced at one side or end of the furnace and withdrawn (suitably dried or carbonized) from the other side, substantially as shown and described.

Second, in combination with a furnace constructed and operated as shown and described, the employment of doors and other openings when so arranged as to allow of their being hermetically closed during the operation, in the manner and for the purposes set forth.

Third, in furnaces for drying or carbonizing wood, peat, or other fuel, constructed and operated as described, the use of taps, valves, and registers in the orifices and covers, to increase or diminish, according to circumstances, the activity of the fuel and the operation, and for regulating the admission and exit of air, gas, and other volatile products, substantially as shown and described.

Fourth, the manner (herein described) of collecting and removing from a furnace for carbonizing wood, peat, &c., a portion of the volatile products after the whole or part of their caloric has been utilized, substantially as and for the purposes set forth.

Fifth, the manner (herein described) of utilizing the waste heat, which, in the ordinary processes of drying and carbonizing, is carried away by the vapors and gas escaping at a high temperature.

Sixth, the method (herein described) of submitting the wood, peat, or other material to be treated first to a low temperature and gradually increasing it to a high temperature.

No. 38,072.—SAMUEL S. WHITE, of Philadelphia, Pa.—*Improvement in Artificial Teeth*.—Patent dated March 31, 1863.—The improvement consists in making horizontal mortises and vertical holes in the rear portions of the teeth, so that the vulcanite base may project into and fill these recesses, and thereby become firmly attached to the teeth or blocks.

Claim.—The combination in a tooth or block of teeth of one or more mortises a, and one or more holes e e, substantially as herein specified.

No. 38,073.—SAMUEL S. WHITE, of Philadelphia, Pa.—*Improvement in Artificial Teeth*.—Patent dated March 31, 1863.—The grooves and projections which are described in the claim, as also the converging holes, are intended to enable the vulcanite base to embrace the tooth or block.

Claim.—First, the combination of the groove a, and ridges b c, extending the whole width of the block or tooth, the ridge c, furthest from the lingual surface, being made more prominent than the ridge b, next the lingual surface, substantially as and for the purpose herein specified.

Second, the arrangement of the holes e e, in the base of the tooth or block, converging toward each other, substantially as and for the purpose herein described.

No. 38,074.—WILLIAM WHITING, of Roxbury, Mass.—*Improvement in Electro-Magnetic Fire-Alarms*.—Patent dated March 31, 1863.—The invention consists in the employment of a series of pyrometers, each one of which is made spiral, and of two different metals, which

twists or changes its form by the different expansibilities of the two metals. These are to be placed one in each room in connexion with a magnetic battery, an indicator, a series of magnetic circuits and an alarm apparatus, so that the increase of heat in any apartment will, by its action on the pyrometer, close the circuit and give notice of the fire and of its locality.

Claim.—The within described combination and arrangement of an indicator to designate the room from whence the alarm proceeds, a series of pyrometers, a magnetic battery, a series of circuit wires and an alarm apparatus, whereby the occurrence and locality of a fire in any part of the building is made known, as set forth.

No. 38,075.—MARTIN WILCOX, of Middleburg, Summit county, Ohio.—*Spattling Machine.*—Patent dated March 31, 1863.—The liquid glaze contained in a trough is pumped up into an upper chamber, from which it is drawn by a faucet and falls through sieves, which divide so as to fall in spray upon the ware which is passed underneath. This is performed in a bonnet to save waste, and the superfluous liquor is collected by a trough in the bonnet and returned to the reservoir.

Claim.—First, the application of sieves or screens for dividing the substance of the glaze and distributing it upon the ware.

Second in combination with the sieves thus used, the bonnet G, trough H, pump B, chamber D, all constructed substantially in the manner and for the purpose set forth.

No. 38,076.—JOHN A. WILKINS, of Chicago, Illinois.—*Improvement in Seizing Machine.*—Patent dated March 31, 1863.—To retain the loop after it has been cast over the spool, a projection is placed upon the front face of the rotating hook of the sewing machine.

Claim.—Combining with, and having upon, the front face of the rotating hook of a sewing machine, and a short distance back of the point of the said hook, a projection or shoulder, substantially as described, to hold back the loop after it has been carried around and cast over the spool, as set forth.

No. 38,077.—RALPH CARKHUFF, of Lewisburg, Union county, Pa., assignor to Himself and LYMAN S. PAINE.—*Improvement in Strain Cutters.*—Patent dated March 31, 1863.—This machine consists of a cutter-box and a knife vibrating on a centre, the lever and guide being cast in one piece and pivoted to an axle on the piece, which, constituting the throat fulcrum and segment guide, is made fast to the cutting-box. The crosshead on the end of the lever is adjusted to the segment guide by set screws, and the apron or fodder guide is made adjustable relative to the jaw opening by a set screw.

Claim.—First, the throat piece A, of a cutting-box provided with a fulcrum B, and segment C, when constructed as and for the purpose set forth.

Second, the lever F, provided with the arm L, crosshead E, set screws P P and R, and stud N, as and for the purpose set forth.

Third making the apron K, adjustable by means of the stud N, and set screw Q, as and for the purpose set forth.

No. 38,078.—JOSEPH T. COMMOSS, New York, N. Y., assignor to TRUMAN W. PEPPER, of same place.—*Improvement in Fire Escapes.*—Patent dated March 31, 1863.—A block with hawser attached is hooked to the parapet of a house. On this hawser a block traverses, having a car suspended from it; from the traversing hawser pass two ropes, one to the ground and the other over the sheave in the upper block, and then to the ground, so that the car may be raised or lowered by men upon the ground, it running upon the hawser.

Claim.—The combination and arrangement of the car c, block d, ropes g and f, hawser e, and hook block a b, the whole constructed and operating substantially as described and for the purpose specified.

No. 38,079.—HIRAM W. HAYDEN, of Waterbury, Conn., assignor to HOLMES, BROTHER & HAYDEN, of same place.—*Improvement in Wick Tubes for Lamps.*—Patent dated March 31, 1863.—The shut on which the wick-raising wheels are mounted is supported upon a portion of the plate between the two slots through which the wheels project. This portion of the plate is pressed or swaged out so that the shaft is held between it and the straight portion of the wick tube.

Claim.—Forming the bearing or support for the shaft of the wick wheels to turn in, by stretching and bending out the metal of the tube between the slots in which the wick wheels work, so as to embrace the shaft between such bent and stretched portion and the outer flat surface of the wick tube outside of the slots, substantially as and for the purpose specified.

No. 38,080.—A. M. HILL, of Branford, New Haven county, Conn., assignor to CHARLES A. MILLER, of Philadelphia, Pa.—*Improvement in Locks.*—Patent dated March 31, 1863.—This latch is hung to the lock by means of a stirrup embracing the hub on the pintle, and by two springs, one of which gives the latch an outward and the other an upward movement.

The action of the cross-bar on the lugs at the ends of the stirrup is such as to give a rocking movement, and attach the latch to or detach it from the keeper by partial rotation of the handle.

Claim.—The latch D, hung to the lock, connected to the springs H and H', or their equivalents,

alents, and arranged in respect to the hub B, substantially as described, so that a horizontal as well as a vertical movement may be imparted to the outer end of said latch, the whole being combined with a keeper having two inclined planes.

No. 38,081.—OLIVER LUND, of Philadelphia, Pa., assignor to Himself and FREDERICK N. JOHNSON, of the same place.—*Improvement in Securing Artificial Teeth to Bases.*—Patent dated March 31, 1863.—In the posterior upper part of the artificial tooth is a recess extending into the tooth, and this is crossed by a wire which is imbedded into the material of the tooth.

Claim.—Forming, in artificial teeth, recesses with pins arranged across the same and imbedded in the material of which the tooth is composed, substantially as and for the purpose herein set forth.

No. 38,082.—HELEM MERRILL, of New York, N. Y., assignor to Himself and D. D. BADGER, of Brooklyn, N. Y.—*Improvement in Iron Railroad Cars.*—Patent dated March 31, 1863.—The improvement consists in the manner of securing the longitudinal sleepers; the sheet-metal siding and the wooden filling between the ribs of the car, and the ribs of the car to the side sleepers; also in the construction of the roof.

Claim.—First, the longitudinal sleepers A, in combination with the transverse pieces B, the latter being constructed of sheet-metal bent so as to form a rectangular box, or three sides of the same, and secured between the sleepers in proper position by means of the plates a and the rods C, all arranged substantially as shown, to form a platform or bed for the support of the flooring and body of the car, as set forth.

Second, connecting the vertical ribs E to the sleepers A at the side of the car by means of the angle brackets F, provided with oblong vertical openings d, with pieces of India-rubber f f fitted therein, between which pins c, which pass transversely through the ribs E are substantially as and for the purpose specified.

Third, the vertical ribs E, rolled or otherwise formed with three longitudinal grooves b b' b'' in their sides, in combination with the rods H, sheet-metal siding C', and wooden filling G, all arranged to form the body of the car, substantially as shown and described.

Fourth, the bars or rafters I, rolled or otherwise formed with a groove i at each side, in combination with the rods K and plates J, all arranged substantially as shown, to form the roof of the car.

Fifth, the angle or corner ribs E, formed in one piece or of two pieces connected together at their ends at or about at right angles to each other, in connexion with the plates h inserted in the grooves b of said ribs, to form the rounded or flat corners of the car, as specified.

Sixth, the bars l at the ends of the car, fitted on the back parts of the upper ends of the ribs E, and secured in position by the bolts n, when said bars, thus arranged, are used in connexion with the roofing of the car composed of the bars I and plates J, as set forth.

No. 38,083.—THEODORE H. SNYDER, of Camden, N. J., assignor to Himself and WILLIAM VAN DYKE, of Philadelphia, Pa.—*Improvement in Regulating the Flow of Gas in Soldering Apparatus.*—Patent dated March 31, 1863.—The flow of gas is regulated by a pivoted valve in the gas pipe, which is operated by a cord connected to a rod which is depressed by a treadle, the range being limited by the contact of a pin on the rod with a notched bolt which moves in and out in a slide attached to the frame.

Claim.—The adjustable notched bolt M, or its equivalent, in combination with the rod H, its projecting pin N and the treadle I, or its equivalent, the whole being arranged for regulating the flow of gas through the pipe B to the burner, substantially as and for the purpose herein set forth.

No. 38,084.—A. A. WILDER, of Detroit, Mich., assignor to RUFUS BROWN, of the same place.—*Improved Machine for Making Hoops.*—Patent dated March 31, 1863.—The timber is sawed of a uniform width by being passed between two circular saws placed on one mandrel, and led by fluted pressure rollers to a curved plate and racking roller, where it is racked or split into hoops, the operation being continuous.

Claim.—First, the two saws C C and guides G G, in combination with the fluted feed rollers j j' k k', all arranged as and for the purpose specified.

Second, the fluted racking roller l and curved plate M, or its equivalent, for the purpose set forth.

Third, the saws C C, in combination with the fluted feed rollers j j' k k', racking roller l, and curved plate M, all arranged substantially as and for the purpose specified.

Fourth, sawing, or otherwise bringing to a uniform width, hoops, or timber for the same, and racking or dividing it at one operation.

No. 38,085.—A. A. WILDER, of Detroit, Mich., assignor to RUFUS BROWN, of the same place.—*Machine for Pointing and Checking Hoop Bolts.*—Patent dated March 31, 1863.—This machine points the ends of bolts of timber from which the hoops are to be racked or split, and also for starting the split at the end preparatory to being racked. The former operation is performed by a double bevelled rotary cutter wheel, between the inclined faces

of which the bolt is brought to a point, and the latter operation performed by a checking knife upon the bolt, which lies upon a feed table.

Claim.—First, the cutter wheel D formed of two parts *a a*, bevelled at their inner sides and provided with the cutters *b b*, in connexion with a bolt support or projection *h* fitted in the V-shaped recess between the parts *a a*, all arranged substantially as and for the purpose specified.

Second, the feed table E, with the bar F attached, provided with a half nut *k*, in combination with the screw H, knife *f*, on the cutter wheel D, and the bevelled bar *m*, and button G, or their equivalents, as and for the purpose specified.

Third, the combination of the cutter wheel D with the cutters *b b*, and knife *f* attached, feed table E, screw H, bar F, provided with the half nut *k*, the button G, and bevelled bar *m*, all arranged for joint operation, as and for the purpose herein set forth.

No. 38,086.—JOHN UNDERWOOD, of London, England, assignor to WALDO MAYNARD and CHARLES R. THAYER, of Boston, Mass.—*Improved Process of Copying Writings, Maps, &c.*—Patent dated March 31, 1863.—Patented in England April 20, 1857.—The original's being written or printed with a prepared ink, are brought into contact with prepared paper under pressure, the chemical characters of the ink and paper being such that a chemical action takes place and the characters are copied.

The paper may be written upon with a solution of an extract of logwood, and the copying paper may be treated with a solution of a neutral chromate of potash.

Other preparation are cited as appropriate.

Claim.—First, the method of printing or obtaining copies of documents, forms, maps, plans, designs, or any other characters or marks which may be produced upon paper, parchment, or other similar material, by forming these characters or marks of a prepared ink and bringing them in contact with prepared paper under pressure, the ink and paper being prepared in such manner that when the two are brought together a chemical action takes place, whereby copies of the said characters or marks are produced, as hereinbefore described.

Second, preparing copying ink and copying paper, in the manner and for the purposes hereinbefore described.

No. 38,087.—JAMES S. ATTERBURY and THOMAS B. ATTERBURY, of Pittsburg, Alleghany county, Pa.—*Improvement in Lamps.*—Patent dated April 7, 1863.—This invention consists in attaching a metallic hoop or collar to the neck of a lamp, or other article, while it is in the act of being blown or moulded.

Claim.—First, as a new article of manufacture, a glass lamp, or other article of like material, having a metallic hoop or collar *d* applied thereto, substantially in the manner and for the purpose set forth.

Second, attaching a metal hoop to the collar of a lamp, while the lamp is in the act of being moulded or blown, the lamp, so formed, when withdrawn from the mould, being a complete merchantable commodity in a single piece, substantially as and for the purpose set forth.

Third, making in one piece a glass lamp and collar, substantially as set forth.

No. 38,088.—B. H. BARTOL, of Philadelphia, Pa.—*Improved Shutters for the Port-holes of Iron-clad Vessels.*—Patent dated April 7, 1863.—The object of this invention is to provide a port shutter, which should be an effective bar against the enemy's shot into the port when the gun is withdrawn, and expose but a small portion of the port when the gun is run out. This is accomplished by hanging the half-shutters, independently of each other, to the side of the vessel or battery on shafts passing through the same.

Claim.—The two shutters E and E', hung independently of each other to the side of the vessel or battery, on shafts passing through the same, the said shutters being arranged in respect to each other and to the port, substantially as and for the purpose herein set forth.

No. 38,089.—B. H. BARTOL, of Philadelphia, Pa.—*Improvement in Mounting Ordnance.*—Patent dated April 7, 1863.—The object of this invention is to attain such a ready and variable lateral adjustment of the gun as to admit of its use in connexion with a fixed battery, and obtain the advantages and avoid the disadvantages of a rotating battery; this is accomplished by mounting the ordinary gun carriage on a supplementary gun carriage, which traverses segmental tracks on a turn-table.

Claim.—Mounting the carriage of the gun on a supplementary carriage G, arranged to traverse segmental tracks on a turn-table D, substantially as and for the purpose herein set forth.

No. 38,090.—WILLIAM BEACH, of Philadelphia, Pa.—*Improvement in Drawing or Forging Metal Bars.*—Patent dated April 7, 1863.—This invention consists of a balanced revolving hammer, acting upon an adjustable anvil in a suitable supporting frame, for the purpose of producing a combined rolling and pounding effect in drawing and forging.

Claim.—The combination consisting of the balanced revolving hammer A and the adjustable anvil B, the same being constructed, arranged, and supported, so as to operate together, substantially in the manner described and for the purpose specified.

No. 38,091.—JULIES A. BIDWELL, of Sturges, St. Joseph county, Mich.—*Improvement in Bases for Artificial Teeth.*—Patent dated April 7, 1863.—The invention consists in the employment of a flexible air-chamber upon, and made a part of, the base of the set of artificial teeth to attach it to the palate.

Claim.—The employment, upon the bases of artificial teeth, being a part of the base itself, of a flexible air-chamber or intervening medium, for the purposes and uses expressed, and in the manner substantially as set forth.

No. 38,092.—A. E. BOYNTON, of Hartford, Washington county, Wis., and G. R. BOYNTON, of Chicago, Cook county, Ill.—*Improved Stump Pulling Machine.*—Patent dated April 7, 1863.—This improvement consists of a powerful lever, which is adapted to be attached to stumps by chain or otherwise, and then being depressed by ropes to raise them. The various arrangements claimed are for adapting the lever to varying requirements of power by setting its fulcrum nearer or further from the end; the arrangement of the ropes for operating the lever and the means used in loading for transportation.

Claim.—First, the fulcrum *g*, or its equivalent, when used substantially as and for the purpose above described.

Second, the mode of operating the lever E by means of the ropes *t* and *r*, when used substantially as described.

Third, the combination of the several parts, when used as and for the purposes hereinbefore described.

Fourth, the manner of loading said machine for transportation, when done in the manner substantially as herein described.

No. 38,093.—ROBERT D. BROWN, of Covington, Fountain county, Ind.—*Improvement in Automatic Grain-binders.*—Patent dated April 7, 1863.—This machine has devices for applying the band around the gavel; for insuring the correct position of the twisting mechanism, to receive the end of the band; for holding and twisting the ends of the band; for imparting motion to the twisting mechanism, so as to secure its hold upon the band; for tucking the knot; for casting the finished sheaves into a common receptacle; for depositing the finished sheaves into heaps upon the ground; and for counting the sheaves and depositing them in heaps of any required number. But the various devices involved in these complicated movements do not admit of a brief description.

Claim.—First, in combination of a cradle B, of any suitable construction, the arms C C' attached to shafts *c c*, geared together by the wheels *c'*, and rotated at proper intervals by a cogged segment *e5*, to elevate the arms C C', and carry the band around the compressed gavel.

Second, the combination of the cam-wheel *e2* with the arms C C', for securing the band in the jaws *e4*.

Third, in combination with the arms C C', constructed and operating substantially as herein described, the employment or use of two pairs of gripping or twisting jaws D D, attached by separate pivots *d d* to a common journal D', and operating substantially as and for the purpose set forth.

Fourth, driving the jaws D by the shaft E, working within the hollow journal D', in the manner explained, to compress the said jaws with force corresponding with that required to rotate them.

Fifth, the combination of the spring-stop *k2*, cam *e2*, and wheels I and *k*, when the said parts are constructed, arranged, and operate in the manner and for the purposes herein specified.

Sixth, the tucking band *f*, advanced and rotated simultaneously in any manner, substantially as described, for the purpose of tucking the twisted ends under the band.

Seventh, the claw *f'*, employed to hold the band against the pressure of the tucker *f*, as explained.

Eighth, the combination and arrangement of the shafts F F', yokes *f2*, pinions *f3 f4*, guides H, and segment racks *h*, to impart the required motion to the tucker *f*, and claw *f'*, substantially as set forth.

Ninth, the arm G, provided with a cogged segment *g'*, and employed to advance the shafts F F' intermittently, in the manner and for the purposes explained.

Tenth, the segment cog wheel I I', constructed as described, in combination with the twisting jaws D, and tucker *f*, or their equivalents.

Eleventh, the arm L, or its described equivalent, for casting the finished sheaf, substantially as explained, when used in the described combination with the pivoted table N or N2, or other suitable receptacle for carrying the sheaves and depositing them in heaps.

Twelfth, the pivoted table N or N2, fixed in slanting position and adapted to tilt automatically, in the manner described, for depositing the finished sheaves in heaps upon the ground.

Thirteenth, the curtain P or P2, operated by the falling and rising of the table N or N2, in manner substantially as and for the purposes set forth.

Fourteenth, the mode of combining the worm *s2*, and slotted disk O, or any substantially equivalent devices for counting the number of sheaves to be deposited in each heap, with an automatic binding machine, substantially as herein described.

No. 38,094.—ROBERT D. BROWN, of Covington, Fountain county, Ind.—*Improvement in Self-rakers for Harresters*.—Patent dated April 7, 1863.—The grain as it falls upon the platform is allowed to collect, until it is thrust by a continually revolving rake into a cradle, which grasps and deposits it on the ground under the platform. This rake is attached to a number of endless bands suitably driven and passing over and around the platform, and the fingers are elevated and depressed by crank-arms, attached to the journaled rake-heads, projections on said crank-arms working in slots on the inside of the framing of the machine; thus the rake teeth are vertical while pushing the gavel to the cradle and lie back as they pass in their return motion underneath the platform. The cradle consists of a couple of revolving shafts with fingers upon them which form a cradle, into which the gavel is pushed by the rake, and being rotated towards each other it is grasped, carried down between them, and dropped under the platform.

Claim.—First, the continuously revolving rake B, carried forward over the platform and back beneath the same by means of driving-chains, belts, or their equivalent, and elevated to its working position during its forward motion, and retracted in passing beneath the platform by means of the crank-arm D, working in the eccentric or irregular slot *d*, as herein described, and for the purposes specified.

Second, the intermittent cradle F *f*, operated as described, in combination with the continuously revolving rake B, for the purposes set forth.

No. 38,095.—HUGH M. COCHRAN, of McConnellsville, Morgan county, Ohio.—*Improvement in the Manufacture of Chewing Tobacco*.—Patent dated April 7, 1863.—The objects of the process are to impart flavor and a glossy appearance to the tobacco, and to prevent its moulding. These are accomplished by processes so fully explained in the claim as to require no further explanation.

Claim.—First, curing or sweating tobacco previous to its being put "in case," by exposing the same to a free circulation of heated air, substantially as set forth.

Second, combining with the curing of tobacco, previous to being put "in case," the preparing of the moulds with a flavoring liquid, whereby the appearance and taste of the product is greatly improved, while its easy delivery from the mould is thereby secured, substantially as set forth.

Third, combining with the curing and sweating of tobacco, previous to being put "in case," and the pressing the same into moulds coated with a flavoring liquid, the submitting of the tobacco to a second press previous to its being packed ready for market, substantially as set forth.

No. 38,096.—JAMES R. DEV, of Hudson City, N. J.—*Improvement in Friction Matches*.—Patent dated April 7, 1863.—The invention consists in pointing the ends of match-splints so as to reduce the amount and bulk of the inflammable composition covering them. The point of the splint is previously burred or upset, so as to form a better surface for attachment of the composition.

Claim.—The pointed friction match, substantially as described, the point being of a conical, pyramidal, three-sided, or bayonet form, or other analogous form, as set forth.

Also, burring the point of the pointed match-splint, substantially as and for the purposes described.

No. 38,097.—SAMUEL F. DICKINSON, of New York, N. Y.—*Improvement in Ruffles*.—Patent dated April 7, 1863.—The strip is ruffled and stitched, and then fastened to a band by another series of stitches.

Claim.—As a new and useful article of manufacture, a machine-made ruffle in which a strip of cloth is first ruffled and the gathers or plaits secured by stitching, and the ruffled piece then fastened to a band by one or more additional independent series of stitches.

No. 38,098.—GEORGE DOUGLASS, Scranton, Luzerne county, Pa.—*Improvement in Railroad Frogs*.—Patent dated April 7, 1863.—The movable side rails are attached by a bolt with springs and an intermediate collar. The point of the frog is supported by an underhanging lip on a flat chair, and the side rails are adjustable laterally independently of the point.

Claim.—First, combining the movable side rails of a railroad frog with each other (independently of its point) by means of a connecting bolt H and intermediate stay or collar G, substantially in the manner and for the purpose herein set forth.

Second, the combination and arrangement of the lateral springs O O, or their equivalents, with the side rails R R' of a railroad frog, substantially in the manner and for the purpose herein set forth.

Third, fastening and securing in its proper position the tapering end of the point K of a railroad frog, by means of an underhanging lipped projection *l* and receiving chair M, substantially as set forth.

Fourth, combining the vibrating rails R and R' with the point K of the improved railroad frog, substantially in the manner and for the purpose herein set forth.

No. 38,099.—JAMES K. DUGDALE, of Richmond, Ind.—*Improved Method of Actuating the Feeding Apparatus of Seed Planters*.—Patent dated April 7, 1863.—The sliding piece, which is connected by a rod with the feeding apparatus, consists of an anchor-shaped yoke which slides on guides, and is moved by the contact of pins on a revolving disk connected with the driving wheel.

Claim.—The sliding device D, in combination with the frame C and wheel B, when used in connexion with the feeding mechanism of a seed planter, as and for the purpose set forth.

No. 38,100.—CAPTAIN R. N. EAGLE, of Washington, D. C.—*Improved Hopples for Horses and other Animals*.—Patent dated April 7, 1863.—The improvement consists in the attachment of horizontal bars to adjacent sides of the leg bands as worn, so as to admit of a limited play of the connecting strap without rotating the leg bands.

Claim.—Constructing hopples for fettering animals with bars B B, adapted to permit a limited motion of the attached ends of the strap or cord D, independently of the leg band, and without turning or slipping the latter.

No. 38,101.—D. EARLE, of Palmyra, Portage county, Ohio.—*Improved Magnetic Razor-straps*.—Patent dated April 7, 1863.—The opposite sides of the strap are occupied by an elastic and a non-elastic bone, respectively, with a spiral coil between the two. The latter is made of spring-tempered steel, with an amalgam of emery and oil and the flexible side of a thin plate of steel with a surface of oil and peroxide of iron. The steel in each case is rendered permanently magnetic, by which the blade is held more firmly to the face of the strap.

Claim.—The herein-described permanently magnetic bone, when the same is constructed substantially in the manner and for the purpose herein specified.

No. 38,102.—WILLARD T. EDDY, of West Hoboken, Hudson county, N. J.—*Improved Lamp-heater*.—Patent dated April 7, 1863.—The invention consists of a lamp chimney with holes at the bottom to fit several burners, and with holes on the top of the bulb to set vessels on, or a chimney to convey away the volatile products of combustion.

Claim.—First, a lamp chimney having two or more openings in its bottom to fit simultaneously to two or more burners, substantially as and for the purpose herein specified.

Second, the arrangement of two or more holes *e e'* in the top of the bulb E of a lamp chimney, substantially as and for the purpose described.

No. 38,103.—EDWARD P. FARNUM, Ijamsville, Frederick county, Md.—*Improvement in Slate Roofing*.—Patent dated April 7, 1863.—Upon and in line with the rafters of the roof are laid bearings with grooves on their upper side. The slates rest with their edges on these rafters, and are tied to the roof by staples, which project through the slate roofing and keys which rest upon the slate; the slates are supported in the middle by wedges upon the lath.

Claim.—First, the combination of the rafters A, bearings D, and slates E, all arranged in the manner substantially as and for the purposes herein specified.

Second, the described combination of the longitudinally grooved bearings D *d d* with slates laid and arranged as above set forth.

Third, The staple H and key I applied in the manner explained, in combination with slates E and bearings D *d d*.

Fourth, the transverse bars J and wedges K, employed in combination with the slates E and staples A, in a manner and for the purposes explained.

No. 38,104.—JOHN FONDA, of Albany, N. Y.—*Improved Harness Saddle-tree*.—Patent dated April 7, 1863.—The check-hook is bolted underneath the front bow in a recess of the metallic tree, and the cantle is socketed in a recess behind the head of the bolt which fastens the check-hook to the tree.

Claim.—Forming an elevated recess *a* above the arch of the front bow, and attaching the cantle piece in a socket or cavity behind the bolt hole or the front bow above said elevated recess, substantially as and for the purpose herein specified.

No. 38,105.—HEMAN GARDINER, of New York, N. Y.—*Improvement in Railroad Car Springs*.—Patent issued April 7, 1863. Antedated November 20, 1862.—The spiral springs in the box are surrounded by a packing of fibrous material, and the plates above and below them have projections which enter the cylindrical springs; the spring-box is imposed upon a semi-elliptical spring, whose ends rest upon the truck frame.

Claim.—First, the use of the semi-elliptic spring supported on a bed-plate between the flanges B, in combination with the box D, arranged and operating substantially as hereinbefore set forth.

Second, the use of the plates E and H, having short studs or pins F I in their opposing faces, as hereinbefore set forth, in combination with the spiral springs G and box D, arranged and operating in combination with the semi-elliptic spring, substantially as hereinbefore set forth.

Third, the use of wool, or other fibrous material of a similar nature, packed in a cylinder or box, in combination with the spiral steel springs, for the purposes hereinbefore set forth.

Fourth, the use of the semi-cylindrical bearings K on the truck plate, in combination with

the cap plate E working in the cylindrical box D and resting upon the spiral springs, for the purposes hereinbefore set forth.

No. 38,106.—JOHN S. GILBERT, of New York, N. Y.—*Improvement in Submarine Harbor Defences*.—Patent dated April 7, 1863.—A frame-work of wood, containing a tank capable of containing air for buoyancy or ballast for sinking the same, is connected by chains with similar structures across the entrance of a harbor, or in the channel to be obstructed.

Claim.—The construction of two or more sections, in the manner herein described, in combination with tanks, for the purposes of either imparting buoyancy or ballasting the same while being raised or sunken; and also connecting the said sections together with a series of chains, as and for the purpose herein set forth.

No. 38,107.—ABRAHAM W. HARRIS, of Providence, R. I.—*Improvement in Treadle Motion*.—Patent dated April 7, 1863.—The object of this improvement is to move the crank of the driving shaft of the sewing machine off the centres and prevent its being turned in the wrong direction. This is accomplished by attaching a vibrating arm to the straight part of the crank shaft, having a pawl within it that binds upon the shaft. The arm is connected to an independent treadle by a pitman which is located on the same axis rod as the crank treadle. The auxiliary treadle is provided with a toe-stop to hold it in position.

Claim.—A pawl or pawls acting by means of an independent treadle, in combination with the crank and crank treadle of sewing machine tables, as herein set forth.

No. 38,108.—R. HAYNES, of Oberlin, Ohio.—*Improvement in Portable Fences*.—Patent dated April 7, 1863.—Each panel has two rails, to which are nailed slats in lattice form or otherwise. At one end these rails project beyond a post, to which they are attached, so as to give support to the rails of the next panel, which are pivoted to them by a common pintle passing through a vertical hole in each, and at the other end they have a post set between them to brace them and preserve their distance. Thus each panel is hinged to the post of its neighbor, and the fence is set up with sufficient "worm" to prevent upsetting.

Claim.—The herein-described construction of the panels of a portable fence, in combination with the uniting the same by means of the pins H H, passing through the holes in the rails B B', substantially as herein set forth.

No. 38,109.—SILAS HEWITT, of Seneca Falls, N. Y.—*Improvement in Clod Crusher*.—Patent dated April 7, 1863.—This machine consists of a rotating toothed cylinder journaled in a frame, and having clearers attached to the rear transverse bar, which project forward between the teeth to remove the soil which may have been collected in the intervals between them.

Claim.—The adjustable clearers E, arranged as shown, in combination with the toothed cylinder D, for the purpose specified.

No. 38,110.—JAMES C. C. HOLENSHADE.—Cincinnati, Ohio.—*Improvement in Ordnance*.—Patent dated April 7, 1863.—The invention consists in constructing the tapering-breech piece with helical bearing plates at each end to bear against corresponding helical faces on the sides of the chamber or breech cylinder which contains the coned or faucet breech-piece, so that in turning the breech-piece to receive the charge, the helical faces draw it laterally to relieve it from adhesion, and in turning it to bring the charge opposite the bore of the gun, the breech-piece is forced laterally, and tightened against the gun to prevent the escape of gas.

Claim.—The two plates, one on each side of the breech cylinder which surrounds the faucet breech containing the charge, provided with oblique faces or sections of metal in one or more pieces around the breech, and securely connected to it, and working against counter plates in the sides of the breech cylinder, so as to release and tighten-up the faucet breech, and bring the chamber containing the charge opposite the bore of the gun in firing, as described.

No. 38,111.—JACOB HOVEY, of Cleveland, Ohio.—*Improvement in Spark Arresters*.—Patent dated April 7, 1863.—The smoke box is divided into two compartments by means of a horizontal partition of wire-gauze, placed immediately above the flues; part of the said diaphragm, consisting of a plate which deflects the sparks so that they fall to the bottom of the chamber.

Claim.—First, the screen or diaphragm H, in the smoke-box A, arranged as and for the purpose specified.

Second, the deflector H', when arranged as and for the purpose set forth.

No. 38,112.—HENRY KNIGHT, of Brooklyn, N. Y.—*Improvement in Combination, Cement, and Metallic Pipes*.—Patent dated April 7, 1863.—The sections of wrought-iron tube are frustums of cones so as to enter and embrace the tubes at their respective ends. They are cased and lined with cement and have iron-champing rings, through which holes may be made for branch pipes.

Claim.—The application and use of wrought-iron frames or tubes of the form of a trun-

cated cone at one end or along their whole length, to pipes lined or coated with hydraulic-cement mortar, or both lined and coated, for the convenient joining of the same in their several lengths, and at the same time retaining the cylindrical form and finish.

Also, the application and use of metallic tapping rings, bosses, or thimbles, to pipes of wrought iron, lined or coated with cement mortar, or both lined and coated, substantially in the manner and for the purpose described.

No. 38,113.—GEORGE LITTLETON, of Cleveland, Ohio.—*Improvement in Printer's Ink Rollers*.—Patent dated April 7, 1863.—The roller is made in two parts, one end being a collar on the other. Each end has an annular flange, and between them are bearings to support the covering which is stretched from one flange to the other. There are also wires under the covering to preserve the rotundity of the roller; the tension of the covering is adjustable by a taper screw at the end of the collar.

Claim.—The construction and arrangement of the roller A and collar C, with the flanges B and D, the screw and nut E, pin f, counterbalance g, bearers H H H H, wires I I, cushions K, and the prepared rubber surface L, in the manner herein described and for the purpose set forth.

No. 38,114.—L. MANCY and C. BRANZER, of St. Morgan, Madison county, Ill.—*Improvement in Crushing and Stripping Sugar Cane*.—Patent dated April 7, 1863.—The stalks are laid on notched bars, where they are exposed to rotating knives which strip off the leaves preparatory to the stalks being fed between the rollers which are arranged in standards on each side of the machine. The feed table and the inclined discharging apron which carries away the bagasse are suspended by arms from the central standard, so as to slope towards the crushing rollers.

Claim.—First, the pressure rollers C D D', two or more, in combination with the endless inclined discharging apron j, rotary knives j, guide bars G H, and inclined table E, all arranged for joint operation, as and for the purpose herein set forth.

Second, the manner of holding or sustaining the table E and inclined endless apron I in inclined positions, to wit, by means of the arms k h i t, connected to the uprights B B, as set forth, in combination with the guide bars G H, notched as shown; rotary knives j, table E, and the pressure rollers C D D', all arranged for joint operation, substantially as and for the purpose herein set forth.

No. 38,115.—JOHN F. MORGAN, of Boston, Mass., assignor to Self and GEORGE W. WALKER.—*Improvement in Turning Edges of Plates or Metal Sheets*.—Patent dated April 7, 1863.—This machine consists of a folder and movable table, so that the sheet of metal may be withdrawn after the edge is bent up without moving it back over the folder as is necessary where the table is stationary.

Claim.—The combination of the movable folder B and the platform C with the gears D D and racks E E, or equivalent machinery for moving the said platform, in manner and by movement of the folder, substantially as specified.

Also the application of the folder on the platform-moving mechanism by means which will admit of the folder being moved or turned without creating, in the mean time, any movement of the platform.

No. 38,116.—JOHN MARSDEN, of Orrell, England.—*Improvement in Manufacturing Nuts, Bolts, &c.*—Patent dated April 7, 1863.—The rod of heated iron is passed through the vice and into the nut die, and there gripped; the punch is then brought into action, driving the central piece out of the nut and leaving it on the end of the bar; the punch is then withdrawn and the nut released. When the machine is used for making bolt-heads, the parallel punch is withdrawn and a plug placed in the end of the hollow ram.

Claim.—First, the making, forging, and punching nuts and washers, without waste of metal, from round rod or bar-iron, or other metal, by the combination of mechanical parts put together and working essentially as hereinbefore described and shown.

Second, the making of bolts or spikes by and with the combination of mechanical parts, the modification herein directed being previously made, put together, and working essentially as hereinbefore described.

No. 38,117.—J. M. H. P. MÉTIVIER, of Paris, France.—*Improvement in Pumps*.—Patent dated April 7, 1863.—This invention consists of a horizontal disk, to which are suspended, by elastic diaphragms, two or more pump cylinders. The disk is rotated by a vertical shaft from above, and at the point of its attachment to the disk is connected by a universal joint to an inclined shaft, which is stepped into the bed plate of the frame. On this shaft is a cross-head at right angles to the shaft, and to it are attached piston-rods carrying pistons, which project up into the pump cylinders depending from the disk. The pistons are provided with valves opening upwards, as are also the upper ends of the pump cylinders, and by the revolution of the two shafts, the disk, and the cross-head, the pistons discharge the contents of the cylinders as they approach the upper portion of their revolution, the cylinders filling again as the pistons are again receded.

Claim.—The employment in pumps of two shafts jointed together, and of inclined pump barrels and pistons, all being fitted and caused to act substantially as hereinbefore described and illustrated in the accompanying drawings.

No. 38,118.—WARREN P. MILLER, of Marysville, Yuba county, Cal.—*Improvement in Operating Ordnance in War Vessels.*—Patent dated April 7, 1863.—The gun carriage is mounted upon screws which traverse sockets in the bed plate of the carriage and extend from the bottom of the hold to the requisite elevation for the gun to be ranged with the port-hole. This permits the gun to be upon the lower, intermediate, or gun deck, for ballast, loading, or firing. The details are fully explained in the claim.

Claim.—First, the combination of the movable hatches *r r* and boxes *s s* with the screws *i i*, gearing *j k l*, and nuts *t t*, the whole being constructed, arranged, and employed in the manner herein set forth, to raise the gun above the upper deck for firing, lower it to the intermediate deck for loading, and, when not in use, deposit it in the lower part of the hold as ballast, the hatches, when in position, serving also to preserve the screws from deflection, as explained.

Second, the sliding hatches or gates *P' P''*, formed respectively with a concavity 1 and a projection 2, in the described combination with the curb *d* of the turn-table, for the purposes specified.

Third, the combination with the turn-table *c* of the removable shaft *g* and sliding capstan *h*, as herein shown and described, for the purpose of training the gun when elevated and permitting its descent either on, to, or below the intermediate deck, as described.

No. 38,119.—STEPHEN A. MORSE, of East Bridgewater, Plymouth county, Mass.—*Improvement in Drill Bits.*—Patent dated April 7, 1863.—The side of the spiral groove in the bit stock which makes the cutting edge has an acute angle, and the other side of the groove is radial to the axis of rotation. The groove has an increase twist towards the point.

Claim.—A twist drill in which the spiral grooves are so cut or formed that the curvature of that side of the groove which makes the cutting edge is very nearly in the direction of the radius, and, when the drill is ground at the ordinary angle, presents a straight and acute angled edge or lip to the metal or other substance which is to be drilled.

Also, in combination with the form of the drill as above set forth, the increasing twist, to facilitate the discharge of the borings or chips.

No. 38,120.—ELI ODELL, of Winterset, Madison county, Iowa.—*Improvement in Straw Cutters.*—Patent dated April 7, 1863.—The V-shaped cutters are arranged at the bottom of the hopper, and the cutters, arranged on a revolving cylinder, impinge upon them to divide the straw.

Claim.—The arrangement of a series of knives in a spiral form, mounted on a cylinder in a horizontal position, and said knives so reversed as to work in combination and match with the stationary cutters *V* on the bottom of the hopper, for the purpose herein set forth and described.

No. 38,121.—WILLIAM G. OLIVER, of Buffalo, Erie county, N. Y.—*Improved Propeller Blades.*—Patent dated April 7, 1863.—The improvement is in the shape of the blade, the shank of which is socketed to the hub, and consists of a raised screw curve on the face of the blade, extending across the shank.

Claim.—Making a raised screw curve or projection upon the face of the blade, and extending on, to, and crossing the shank and terminating outwardly and upwardly in an angle as represented in the drawings at *A2*, for the purposes set forth.

No. 38,122.—JULIUS A. PEASE, of New York, N. Y.—*Improvement in Caoutchouc Shirt Collars.*—Patent dated April 7, 1863.—Explained by the claim.

Claim.—A shirt collar made of rubber, that will resume its position when bent or forced out of place, substantially as before and for the purpose described.

No. 38,123.—JANEZ J. PIGGOTT, of St. Clair county, Ill., and C. L. CROWELL, of Peoria county, Ill.—*Improvement in Harvesters.*—Patent dated April 7, 1863.—This machine is suspended from two wheels which are coupled to a fore carriage. The reciprocating motion of the cutters is given by a revolving shaft, which has cam-shaped grooves in which the heels of the cutter stocks slide. The platform of the machine is suspended outside of the wheels by chains operated by levers, and the motion of the cutters derived from a spur on the main driving wheel communicated through pinions to the cutter shaft. There are a number of minor points of construction and adjustment set forth in the claim.

Claim.—First, a shaft *I* adapted to the location shown, and provided with converse-acting cams *T U*, in combination with converse-acting cutters, in the manner and for the purpose described.

Second, the combination of the revolving shaft *I T U*, radial arms *K*, and gearing of the draught frame with the upper and under cutters, all constructed, arranged, and operating substantially in the manner and for the purpose described.

Third, so fitting the reel supports to guides *f f* in the draught frame, that they are both

guided and stayed above the points where they are fastened in the finger beam, substantially as described.

Fourth, the draught frame, constructed substantially as described, so that it may be increased or decreased in width, for the purpose set forth.

Fifth, the swinging radial arms *M* on the hind axle, substantially as and for the purposes set forth.

Sixth, the back beam *L*, in connexion with the swinging radial arms *M*, suspending and adjusting lever *P'*, and grain end of the finger beam, substantially as and for the purposes set forth.

Seventh, the arrangement of the back beam *L* and the finger beam *H* on the side draught frame, so that they may be adjusted from the one driver's seat, either separately or together, substantially as and for the purposes set forth.

No. 38,124.—W. F. QUIMBY and G. G. LOBDELL, of Stanton and Wilmington, Del.—*Improvement in Cultivating Machines.*—Patent dated April 7, 1863.—The cultivating toothed roller is mounted on a frame on wheels, and is succeeded by a pulverizer; the digger teeth are presented to the ground by an arrangement of a central cam, a rope, and a windlass, and are vibrated so as to cast off the raised soil as they ascend from contact with the surface.

Claim.—The arrangement and combination of the windlass *l*, levers *G*, digging cylinders *D* with teeth *A*, attached to fixed or oscillating bars, pendent arms *k*, pulverizing cylinder *J*, and windlass *p*, all constructed and operating in the manner and for the purpose set forth.

No. 38,125.—EDWARD S. RITCHIE, of Brookline, Mass.—*Improvement in Mariners' Compasses.*—Patent dated April 7, 1863.—The invention is applicable to liquid mariners' compasses provided with an air vessel combined with the magnet or its card, to insulate it and buoy it up to lessen the weight on the supporting pivot or bearing. It consists in the combination of an auxiliary air vessel or indicator, and a connecting rod with the magnet and its air vessel, the whole arranged within a case. The air vessels are connected with their shaft by gimbals, and there are other points of adjustment which are sufficiently explained by the claims.

Claim.—The combination of the auxiliary air vessel or indicator *E*, and the connecting rod *B*, or mechanical equivalents therefor, with the magnet or magnets *g*, or the same, and its or their air-tight or buoyant case *D*, the whole being arranged within the vessel or case *A*, to contain water or other proper fluid, and so as to operate together substantially as above specified.

Also, the combination of either or both the buoyant air vessels *D E*, with their shaft or rod *B*, by means of gimbals *h*, or their mechanical equivalents, the shaft or rod *B* being arranged and supported within a case *A*, substantially in manner and so as to operate as described.

Also, the combination of an auxiliary buoyant vessel *e*, or its equivalent, with the rod or connector *B*, the magnet or the same and its buoyant case *D*, and the auxiliary case or indicator *E*, as arranged within a case or vessel *A*, containing water or other suitable fluid, and so as to operate therein substantially as hereinbefore specified.

Also, the improvement of arranging the cardinal divisions on the external periphery of the circular indicator *E*, substantially as specified.

Also, the combination and arrangement of a hollow globe *b2*, open at top and bottom, and its supporting gimbals with the water case or vessel *a*, and the magnet buoyant vessel therein.

Also, the magnet air vessel as made of an elongated form, and as having its magnet or magnets arranged lengthwise within it, substantially as represented in Figs. 6, 7, and 8 of sheet 1, and as hereinbefore specified.

Also, the combination of two or more buoyant radial floats or arms *a2 a2* with the elongated magnet vessel, the said arms being for the purpose hereinbefore stated.

Also, the combination of a graduation ring *f* with the radially-armed float *E*, its connecting rod *B*, and the magnet float *D*, when arranged and combined within a water vessel *A*, in manner and so as to operate substantially as described.

No. 38,126.—EDWARD S. RITCHIE, of Brookline, Mass.—*Improvement in Mariners' Compasses.*—Patent dated April 7, 1863.—The bowl in which the floating magnet is contained is provided with division plates to keep the magnet from contact with the sides of the bowl, which is connected with an auxiliary elastic chamber containing water. The magnet is attached to the cross-bar or radial arm of an open ring which has the cardinal points and divisions on the cross-bars and the inner face of the ring.

Claim.—The combination and arrangement of a series of divisional plates *E E*, or their mechanical equivalent or equivalents, with the bowl or liquid case *A*, and the magnet, or with it and its supporting card or float *B*, the purpose of the said plates being as described.

Also, the combination of one or more either flexible or elastic-expansion chambers or vessels *C* with the bowl or water case *A*, containing a magnet and float or card, as specified.

Also, the combination and arrangement of an open divisional ring *c* with the magnet *M*, its float *B*, or with the same and the radial arms *b b*, the whole being substantially as specified.

Also, the arrangement of the cardinal divisions, viz., on the inner face of the divisional ring *c*, or on the same, and the magnet case *B*, or the latter and the radial arms *b b*, as specified.

No. 38,127.—ALMON ROFF, of Bridgeport, Conn.—*Improvement in Fortifications*.—Patent dated April 7, 1863.—The invention consists in the form and arrangement of cast-iron blocks made with corresponding tongues and grooves in the adjacent faces, so as to interlock and form a structure to resist projectiles.

Claim.—The arrangement of the cast-iron grooved and tongued blocks to be used in the construction of fortifications in the manner substantially as herein set forth and described.

No. 38,128.—JEREMIAH BOUTH, of Grayville, White county, Ill.—*Improvement in Combined Smut Machine and Separator*.—Patent dated April 7, 1863.—The grain is exposed on a vibrating shoe which contains two inclined screens, from whence it is passed by a spout into a chamber where it is exposed to a revolving armed cylinder and a blast of air from a fan.

Claim.—The shoe J, provided with screws K L, which divide it into compartments M N O, terminating at their lower end into discharge spouts g h i, respectively, and vibrating on hinge R, in combination with the case A, scouring cylinder E, shaft G, and crank wheel I; when the whole are arranged in the manner and for the purpose specified.

No. 38,129.—L. RUNDALL, of Coxsackie, N. Y.—*Improvement in Horse Elevating Fork*.—Patent dated April 7, 1863.—The arm by which the fork is suspended from the hoisting rope is retained by a catch from which a cord depends to the operator, who in withdrawing the catch causes the tines to vibrate and discharge the load.

Claim.—The combination of the bail E, arm F, or its equivalent, and the catch I, when arranged relatively with each other and the fork, or the head A, thereof to operate as and for the purpose herein set forth.

No. 38,130.—JOHN RUSSELL, of Boston, Mass.—*Improved Portable Dressing Case*.—Patent dated April 7, 1863.—This consists of an assemblage of useful articles in a case with a spring-jacket and clasp around the case in which they are enclosed or to which they are attached.

Claim.—The socketed spring-jacket D, and the vessel, cup or case A, constructed in manner and so as to contain or have combined with it articles substantially as specified.

No. 38,131.—JOSEPH B. TILLINGHAST, of Racine, Meigs county, Ohio.—*Improvement in Portable Fences*.—Patent dated April 7, 1863.—These panels are constructed with the posts all on one side, and with the second and fourth boards prolonged at one end and shortened at the other, so that, in setting up the fence in a zigzag, the prolonged boards of one panel are introduced through the spaces in the next panel, and are there locked by the engaging of the posts on the respective panels.

Claim.—The panels having the posts all one side provided with the extension rails L fitting into the spaces K, with the post E interlocking with the post H, all constructed in the manner and for the purpose set forth.

No. 38,132.—E. W. VAILL, of Worcester, Mass.—*Improved Folding Chair*.—Patent dated April 7, 1863.—The back is hinged at the junction of the seat so as to fall forward, and the X-shaped legs collapse.

Claim.—First, the application of the folding back D' H to a camp stool or chair, such as described in letters patent granted to me on the sixth day of January, 1863.

Second, in combination with a camp stool or chair substantially as herein described, the hinges J J, applied to the front edges of the back pieces D' and legs D, and secured by flanges or plates j j let into the wood and bolts, pins, or screws passing transversely through the same as specified.

No. 38,133.—GEORGE WEBER, of Newark, N. J.—*Improved Skate Fastening*.—Patent dated April 7, 1863.—The skate is provided with catches in front to embrace the toe of the boot, and an adjustable socket behind to clasp the heel. By the vibration of the lever the heel is brought forward against the points which impinge against its front and the toe firmly pressed against the clasp in front.

Claim.—The cramps and catches constructed and arranged in the manner and for the purpose specified when the same are used in combination with the lever c.

No. 38,134.—J. N. C. SAYELS, of Stoughton, Norfolk county, Mass., assignor to BENJAMIN D. GODFREY, of Milford, Mass.—*Improved Stocking-Heel Protector*.—Patent dated April 7, 1863.—This consists of a semi-spherical bag to be worn over the heel, with an elastic strap which passes around the foot to retain it in position.

Claim.—As a new article of manufacture, a heel protector made to fit upon and be worn over the heel of a stocking as above described.

No. 38,135.—DAVID SHATTUCK and JOHN SHATTUCK, assignors to the WHIPPLE FILE MANUFACTURING COMPANY, of Cambridge and Malden, Mass.—*Improved Machine for Cutting Rasps*.—Patent dated April 7, 1863.—The file blank is placed in a vertically sliding stock and the cutter caused to traverse across the face of it by the revolution of a cam.

Claim.—Arranging the cutter upon a traversing carriage and moving the same across the

face of the rasp with a changing motion for the purpose of placing the teeth in rows, as set forth.

Also, in combination with the above cams H4, operating as set forth, for the purpose described.

No. 38,136.—CHARLES H. STONE and CHARLES W. LIVINGSTON, of South Groton, Middlesex county, Mass.—*Improved Burglar Alarm*.—Patent dated April 7, 1863.—This alarm, which consists of a combination of ratchet wheels, pawls, &c., detailed in the claim, is intended to be sprung by a burglar opening the door of a room provided with the necessary attachments.

Claim.—The combination of the spring a and wheel c, the pawl k, the wheel d, and the double pawl e, with the hammer f; also, the combination of the lever i with the stop h, and crank g with the start f, constructed and operating substantially as described and for the purposes set forth.

No. 38,137.—LEVI L. HILL, of New York, N. Y., assignor to WYMAN R. BARRETT, of the same place.—*Improvement in Producing Light and Heat, and applying the same*.—Patent dated April 7, 1863.—The invention consists in the explosion under pressure of a combination of a hydro-carbon, atmospheric air, and steam for mechanical and chemical purposes. Also in placing a cap of perforated platina or platina sponge over a burner supplied with a mixture of hydro-carbon and air, with or without steam.

Claim.—First, the combination of the vapors of a hydro-carbon, atmospheric air, and steam, or the vapor of water, under pressure, substantially as described, for producing by ignition an intensely heated jet of flame for generating steam, and for metallurgic and other similar purposes.

Second, the use of a platinum cap or chimney constructed and operating as described in combination with a jet of the mixed vapors of a hydro-carbon and air, with or without steam or the vapor of water, for the production of light.

No. 38,138.—THOMAS D. BOND, of Howard county, Md.—*Improvement in Apparatus for preventing Obstructions in Water-Pipes*.—Patent dated April 7, 1863.—The invention consists of an enlarged chamber in the pipe, which may be isolated by means of a valve in the pipe at each end, and which is provided with a strainer and exit port, so as to arrest and discharge fish, eels, or foreign matter which may have entered the water main.

Claim.—The combination with a water-pipe of the trap E, the strainer B, the port A, and the adjustable valves F and G, or the equivalents thereof, substantially as described.

No. 38,139.—J. L. ALBERGER, of Buffalo, N. Y.—*Improvement in Metallic Hoops*.—Patent dated April 14, 1863.—Metallic hoops are corrugated or creased in the line of their length, and when applied in the usual manner to casks, barrels, or other vessels, protect the wood of the latter from wear and injury by preventing its contact with the ground in rolling.

Claim.—A hoop for barrels, casks, tierces, or other vessels made of staves, having one or more corrugations or creases in it, for the purpose herein described.

No. 38,140.—CHARLES ATWOOD, of Durham, England.—*Improvement in the Manufacture of Steel*.—Patent issued April 14, 1863.—Patented in England May 15, 1862.—This process consists in melting together in one mass certain proportions of non-malleable metal of certain quality with certain proportions of malleable iron—the proportions varying with the quality in respect to the amount of carbon.

Claim.—The production or manufacture of steel and iron of a steely quality, substantially as hereinbefore described and set forth.

No. 38,141.—J. A. AYRES, of Hartford, Conn.—*Improvement in Screws*.—Patent dated April 14, 1863.—The slip in the head is made of a dovetailed form, to afford a firmer hold for the screw-driver.

Claim.—A screw A, with a dovetailed slot a, as and for the purpose set forth.

No. 38,142.—JOSEPH W. BARTLETT, of New York, N. Y.—*Improved Provision Cooler*.—Patent dated April 14, 1863.—This improvement is designed to combine the provision-cooler or cold-air chamber with an ice-box and water chambers in an efficient and convenient arrangement founded upon the necessities of the case, and the natural currents generated under these conditions. Three cold-air chambers are super-imposed, one over the other, and surmounted by an ice-box and filter. They are also surrounded by a cylindrical casing (except the doorway) containing cold water—the product of the thawing of the ice.

Claim.—A cooler or refrigerator consisting of the provision chamber J J, air and water chamber S S, ice-box H, hollow tubes O O, when arranged substantially as and for the purposes specified.

No. 38,143.—ALEXANDER BERTIER, of Hannibal, Marion county, Missouri.—*Improvement in Station and Street Indicators for Railroad Cars*.—Patent dated April 14, 1863.—This invention consists in an endless band, having the names of stations or streets marked upon it and placed in sight within the car, to be rotated as each locality indicated is reached, in combination with a bell-hammer alarm to direct attention to it.

Claim.—The endless band with a star or pointed wheel attached to one of its rollers or the shaft thereof, and a projection at the side of the track or road to actuate said wheel, in combination with a bell, combined spring-hammer and stop, and the pins or rods *b*, the latter being attached to the roller aforesaid, and all arranged to operate substantially as and for the purpose herein set forth.

Also, the weight *I*, applied to one of the rollers of the endless band, when used in combination with the other parts of the band-moving mechanism, for the purpose specified.

No. 38,144.—JAMES F. BODTKER, of Madison, Wis.—*Mode of Coloring Photographs.*—Patent dated April 14, 1863.—The object of this invention is to prepare albumenized paper to receive dry colors, for which purpose, by this invention, collodion is flowed over it with the addition, if desired to increase its adhesive quality, of balsam of fir.

Claim.—The use of collodion as a medium for receiving dry colors on photographic pictures on albumenized grounds, substantially as herein described.

No. 38,145.—A. C. BROWN, of Sycamore, De Kalb county, Ill.—*Improvement in Churn Dashers.*—Patent dated April 14, 1863.—This dasher consists of two parts, the lower one of a section of a hollow cone with its base downwards, and the upper part of a cone and a segment of a sphere joined together at their bases, the point of the cone being over the orifice in the lower section of the dasher, and the two sections being firmly attached by standards; the cream, by the shape of the lower plunger, is dashed violently against the inverted cone and by it deflected against the sides of the churn.

Claim.—The churn dash, constructed and operating substantially as and for the purposes set forth.

No. 38,146.—CHARLES T. CHESTER, of New York, N. Y.—*Improved Carbon Plates for Galvanic Batteries.*—Patent dated April 14, 1863.—The invention consists in imbedding a gold or platinum connexion in the body of the carbon element for galvanic batteries.

Claim.—In combination with a carbon element of a galvanic battery, a gold or platinum connexion imbedded in the carbon during the process of manufacture of the carbon element, substantially as described.

No. 38,147.—CHARLES CHINNOCK, of Brooklyn, N. Y.—*Improved Cork-Drauer.*—Patent dated April 14, 1863.—Upon the central stem of the corkscrew are two cams or screws of equal pitch, and one fitting the recess of the other, so as to form a cylindrical casing; upon the top of the most elevated one are ratched teeth, into which meshes a similarly furnished disk on the lower side of the handle. The rotation of the whole appliance will drive the screw into the cork, but when the bottle cover comes in contact with the cork the rotation of the handle will cause one thread to climb on the other, and raise the screw vertically.

Claim.—The combination of the ratchet cap *a*, the loose snail-like cam or screw *b*, and the corresponding cam or screw *c*, with the independent worm and pillar *d*, all operating together for the purpose set forth.

No. 38,148.—J. CHRISTMAN and WM. GILFILLAN, of Syracuse, N. Y.—*Improved Chuck for Lathes.*—Patent dated April 14, 1863.—The face plate of this chuck has radial dovetailed slots, in which work dogs with projections in front beyond the face of the plate, to grasp the work to be centred, and with projections behind, which enter eccentric slots in a disk, which is rotated inside of the back projecting flanged rim of the face wheel. The disk is rotated by a tangential screw operating on a worm cut on its grooved periphery, drawing the projecting studs at the back of the dogs in an eccentric groove, gradually approaching the centre.

Claim.—A chuck constructed, arranged and operated as described, that is to say, having the sliding pins or dogs *L* working in the radial dovetail grooves in the outer casement wheel, in combination with projections *O* working in the eccentric grooves in the face of the inner wheel or disk *J*, when said wheel or disk *J* is operated by means of the tangential screw *H*, the several parts being constructed, arranged, and operated in the manner described, for the purpose specified.

No. 38,149.—GEORGE F. J. COLBURN, of Newark, N. J.—*Improvement in Lamps.*—Patent dated April 14, 1863.—The reservoir is constructed so as to supply two or more burners simultaneously by the introduction of oil at an opening located between them.

Claim.—The reservoir *A* having the arms or projections *a* and *b*, so formed and combined with it as to support and supply with oil more than one burner, simultaneously as specified.

Also, the application of the cap between the burners for the object specified.

No. 38,150.—GEORGE F. J. COLBURN, of Newark, N. J.—*Improvement in Lamp Chimneys.*—Patent dated April 14, 1863.—The improvement consists in hinging a metallic tube over the globe of a lamp, so that it may be removed at pleasure by being thrown back; being hinged to the collar of the lamp by means of a high projecting post and a leaf or rod attached to the base of the tube or chimney.

Claim.—The method of connecting a tube with a lamp or gas-burner by means of a fixture

made and attached as described, so that it may be combined with or removed from a glass globe or other transparent device protecting the flame, substantially in the manner and for the purpose specified.

No. 38,151.—COWPER PHIPPS COLES, of Southsea, Hampshire, England.—*Improved Masts for Navigable Vessels.*—Patent dated April 14, 1863.—Patented in England April 10, 1852.—The invention consists in constructing masts of a central and two side tubes of iron or steel. The tubes pass through and are keyed to the decks, the central tube being carried in a direct line perpendicular to the transverse axis of the ship while the two side tubes are stepped in the hold in positions equidistant from the foot of the central tube, and are from thence carried up converging to a point above the deck, where they unite with the central tube.

Claim.—The construction of masts for vessels of tubes of steel or iron, in the manner and for the purposes substantially as set forth herein.

No. 38,152.—D. M. COOK, of Mansfield, Richland county, Ohio.—*Improvement in Evaporating Pans for Sugar Juices.*—Patent dated April 14, 1863.—This heating arrangement of the pan consists of a zigzag coil of steam pipes traversing the zigzag channels formed by the scum-arresting partitions of the circulating channel. The metallic pan has partitions from alternate sides extending part of the distance across the width of the pan, and the coils of steam pipes follow this course, the pipes being suspended above the metallic bottom from the partitions. The metallic pan is set in a wooden tray.

Claim.—First, the arrangement of a zigzag steam coil, constructed substantially as described, within the ledges of an evaporator pan which allows the juice to flow continuously in an indirect course, arrests the impurities and also keeps the juice comparatively cool outside of the steam coil, substantially as and for the purposes described.

Second, the combination of the steam coil, metal bottom, partitions, wooden ends and wooden bottom, in the manner and for the purpose described.

Third, the manner of suspending the coil.

No. 38,153.—GEORGE COWING, of Seneca Falls, Seneca county, N. Y.—*Improvement in Cylinder Polisher.*—Patent dated April 14, 1863.—It consists of a shank with arms and springs on the end of them, which carry semi-cylindrical polishing blocks. These springs are so expanded as to bring the blocks in contact with opposite sides of the cylinder bore.

Claim.—A cylinder polisher composed of the stem *D*, springs *A A*, and rubbers *B*, constructed substantially as set forth.

No. 38,154.—RICHARD T. CRANE, of Chicago, Ill.—*Improvement in Steam Radiators.*—Patent dated April 14, 1863.—The hollow base of this radiator is constructed with two or more compartments connected by U-shaped pipes which rise vertically and bridge the open space between the chambers forming the base; an opening in the partition between the chambers affords the means of egress for condensed water, and a stop-cock allows the discharge of air while the radiator is being charged with steam.

Claim.—First, constructing the base *A* of a steam radiator of two or more chambers and connecting the said chambers by the vertical U-shaped pipes *B*, when arranged and operating substantially as and for the purposes delineated and set forth.

Second, the opening *C* between the compartments of the base of the steam radiator for the purposes herein described and set forth.

Third, the opening *c* or its equivalent, for the purposes shown and specified herein.

No. 38,155.—H. M. CREAMER, of Brooklyn, N. Y.—*Improved Holding Frame for Corkscrews.*—Patent dated April 14, 1863.—This apparatus consists of a tubular cap of adjustable diameter to fit over the neck of a bottle, and a plunger adjustable vertically, through which the corkscrew descends to be driven into the cork. When the latter is withdrawn, the cork is drawn against points on the lower edge of the plunger which hold the cork while the corkscrew is removed.

Claim.—A corkscrew holder having the capacity, substantially as described, of being varied in width to suit different sized bottles, substantially as specified.

Also, a holder having the capacity, substantially as herein described, of being varied in length to suit various lengths of corkscrews, as set forth.

Also, the mode, substantially as specified, of holding the cork when withdrawn, while being freed from the corkscrew, consisting in the use of a series of points arranged and employed in combination with the holder, substantially as described.

No. 38,156.—BENJAMIN A. EARL, of Philadelphia, Pa.—*Improved Composition for Lubricating Wool.*—Patent dated April 14, 1863.—This consists of a solution of borax, say three and a half ounces to the gallon of water, to be mixed with an equal quantity of oil for washed wool, or with borax water for wool having the natural animal oil contained in it.

Claim.—The use of borax water for purposes of lubrication in the manufacture of wool, as above specified.

No. 38,157.—E. ELLIOTT, of Petaluma, Sonoma county, Cal.—*Improvement in Pumps.*—Patent dated April 14, 1863.—The induction and eduction tubes are made of wooden piping

and connect with the side of the pump cylinder which is secured thereto. The plunger spans the cylinder by a yoke, and is attached to the piston rod, which lifts a column of water and discharges it into the eduction pipe above, the chamber being filled again through the induction opening as the piston descends.

Claim.—The forming of the induction and eduction tubes A B, of a series of wooden pieces *a*, bored longitudinally and connected together, substantially as shown, in combination with the pump cylinder D, attached to one of said pieces *a*, and communicating with the tubes A B, as shown and provided with the piston F, all arranged to operate as described, the above parts being used with or without the air vessel C.

No. 38,158.—GEORGE C. FERRIS, of Sharon, Walworth county, Wis.—*Improvement in Device for Operating Churns.*—Patent dated April 14, 1863.—The invention consists in operating the plunger of a vertical churn by attaching it to a crank pin on a disk, revolved by a winch, by which it receives a compound lateral and vertical motion.

Claim.—The combination and arrangement of the dasher handle *e*, the lever E, the wheel B, the hole *o*, and the support and guide D, constructed and operating substantially as and for the purposes set forth and described.

No. 38,159.—BENJAMIN F. GOSSIN, of Cincinnati, Ohio.—*Improvement in Railroad Chairs.*—Patent dated April 14, 1863.—The rail is set upon a longitudinal sill plate and supported on each side by braces which underlie the upper flange, and passing round the edge of the sill are hooked under it. The parts are secured together by transverse bolts which pass through the braces and rail, and below by bolts passing through the braces and under the rail.

Claim.—First, the adaptation of the base plate C, side plates B, bolts *b' b'*, and rails A A, for use together in such manner that the base plate C is supported and confined against lateral, longitudinal, and vertical movement, in the manner substantially as described.

Second, the combination of the side plates B *b b* through bolts *b' b' c c* and plate C, with the rails A A, in the manner substantially as described.

Third, the side plates B *b b*, constructed as described, for the purpose set forth.

Fourth, the arrangement at the ends of the plate C of the key bolts *b' b'*, in the manner and for the purpose described.

Fifth, preventing lateral play of the base plate C by means of the jaws *b b*, which underhang the plate C, in the manner described.

No. 38,160.—SOLOMAN S. GRAY, of Boston, Mass.—*Improvement in Paper Shirt Collars.*—Patent dated April 14, 1863.—The collar is cut out of a flat strip of paper with suitable dies, and the upper part then pressed or rolled out, so as to give it the required flaring shape.

Claim.—As a new article of manufacture, a paper shirt collar strick up or pressed from a flat piece into any desirable form, substantially as described and for the objects specified.

No. 38,161.—JACOB HAIGE, of Shiloh, St. Clair county, Ill.—*Improvement in Gang Plough.*—Patent dated April 14, 1863.—The invention consists in arrangements for adjusting the points of draught so as to throw the plough in or out of land, which is accomplished by the mode of attachment of the pole to the frame beneath which the ploughs are suspended. In the forward transverse beam of the frame are holes corresponding with one in the pole, so as to give it a slightly angular position relatively to the frame and vary the line of draught of the ploughs, which are attached by draught rods to the vertical rod which supports the front end of the plough beam.

Claim.—First, the combination and arrangement of the pole G, axle E, vertical rod H', and draught rod J, substantially as shown, to admit of the lateral adjustment of the draught relatively with a gang plough, as set forth.

Second, the particular manner of attaching the pole G to the axle E, to wit, by means of the socket *b* fitted on the axle E, and arranged in such a manner as to receive the pole G, and having a screw *e* passing vertically through it, and through the oblong slots *f g* in the axle and pole, whereby the pole G is firmly secured to the axle E, and the former permitted to be readily adjusted when desired.

No. 38,162.—HIRAM W. HAYDEN, of Waterbury, Conn.—*Improvement in Lamps.*—Patent dated April 14, 1863.—In this lamp a round wick is used with a deflector so constructed as to spread the flame into a flat sheet within the chimney, extending the slot down for draught below the space occupied by the flame. The air is admitted by orifices in the floor of the burner into a distributing chamber, from which it passes to the flame.

Claim.—The circular wick and tube *e*, in combination with the deflector *h*, slotted as specified, and with the glass chimney *g*, having a draught space between the base of said chimney and the deflector, for the purposes and as specified.

Also, the perforated air-distributor *e*, in combination with the said circular wick *e*, slotted deflector *h*, and glass chimney *g*, for the purpose of regulating the action of the air, as set forth.

No. 38,163.—HIRAM W. HAYDEN, of Waterbury, Conn.—*Improved Reflector for Lamps.*—Patent dated April 14, 1863.—A spring ring is placed upon the chimney of the lamp, and

from this a pivoted reflector is suspended, which surrounds the chimney, and may be vibrated to an inclined position if desired.

Claim.—A reflector or shade surrounding the lamp chimney, in combination with the spring ring and hinges, as set forth, so as to allow of the inclination of said shade or reflector, as specified.

No. 38,164.—JAMES HILL, of Providence, R. I.—*Improved Tagged Braid for Shoestrings.*—Patent dated April 14, 1863.—The braid is made with double tags at suitable distances in its length, which are to be severed in the middle of the tags to make shoestrings.

Claim.—The described improved manufacture of double-tagged braid, capable of being made into tagged shoestrings by severing each double-tag blank at its middle, as specified.

No. 38,165.—JONAS HINKLEY, of Norwalk, Ohio.—*Improvement in Friction Wheels for Driving Machinery.*—Patent dated April 14, 1863.—A driving wheel having a square groove in its periphery in which two wheels run, one being fast on its shaft, and the other loose, and with springs between them, by which they are caused to bind against the sides of the groove and be rotated by their impact against the driving wheel.

Claim.—The wheel A, having a grooved periphery *a*, in combination with the wheel B, formed of a fixed part *b* and a sliding part *b'*, provided, respectively, with the springs F F and screws G, and arranged to operate in connexion with the wheel A, as and for the purpose herein set forth.

No. 38,166.—JOSEPH HOUGH, of Buckingham, Bucks county, Pa.—*Improvement in Railroad Car Brakes.*—Patent dated April 14, 1863.—The object of this invention is to construct a brake to be operated simultaneously by the engineer or the brakeman; the devices are detailed at length in the claim.

Claim.—First, the manner of winding up the chain X, to operate the bars U, to wit, by having the shaft Y, fitted in swinging pendants Z, attached to the locomotive and provided with wheels A', which are brought in contact with the treads of the wheels B', or with the axle thereof, by any suitable mechanism under the hand of the engineer or an assistant.

Second, the bars U, provided with a spiral spring V, when arranged in connexion with the chains W W and buffer-head bars P, to operate substantially as and for the purpose herein set forth.

Third, the sliding bar M, in connexion with the arm L, shaft K, provided with the arms J J and the chains I, connected to the arms J J and the rods H' H' of the brake mechanism, arranged substantially as and for the purpose herein set forth.

Fourth, the arrangement of the chains W W, fixed pulleys S, and the pulleys R on the buffer-head bars P, and the pivoted bars Q', to operate as shown, and keeping the chains W W at a proper state of tension during the movement of the bars P, as specified.

Fifth, the combination of the buffer-head bars P, bars U, chains W W, pulleys R S, slide bars M, arm L, shaft K, with arms J J, attached chains I I, and rods H' H', the latter being connected with the brake mechanism, and all arranged to operate as and for the same purpose herein set forth.

No. 38,167.—HENRY HUNGERFORD, of New York, N. Y.—*Improved Apparatus for Stirring and Mixing Soaps, Colors, &c.*—Patent dated April 14, 1863.—The vessel itself is of a semi-cylindrical or analogous form, and has a shaft with obliquely set radial arms extending from it by which the contents of the vessel are stirred. An upward extension of the walls provides against loss by foaming or splashing, and a sliding valve and valve seat at the bottom admit of the convenient discharge of the contents.

Claim.—The form and construction of the vessel A for mixing soaps, colors, and substances made up of different ingredients, substantially as and for the purposes set forth.

Also, the arrangement, substantially as described, of the arms C C', &c., on the shaft B, or their equivalent, so as to give a lifting or upward, and at the same time a lateral motion to the article being mixed, substantially as and for the purposes set forth.

Also, the combination of the shaft B, with its arm C, or their equivalent, with the mixing vessel A, or with a mixing vessel of other shape, for the purposes set forth.

Also, the application of the valve D, in combination with a mixing kettle A, substantially as and for the purposes set forth.

No. 38,168.—J. MORRISON HUNTER, of New York, N. Y.—*Improved Device for Inserting the Gores of Shoes.*—Patent dated April 14, 1863.—The gore of elastic material and the edges of the boot to which it is to be attached are clamped together by riveted eyelets, or otherwise, between metallic plates, which are hinged at the lower end of the gore so as to open for the insertion of the foot into the boot.

Claim.—Affixing the elastic gore by means of a clamp of metal, or equivalent device, whereby the said gore may be taken out and replaced, substantially as set forth.

No. 38,169.—FRANKLIN LA REW, of Hamilton, Ohio.—*Improvement in Hog Cholera Medicines.*—Patent dated April 14, 1863.—This medicine consists of—

Spanish brown, half pound; nitre, half pound; alum, half pound; copperas, half pound; salt, two pounds; fish brine, half gallon; hickory ashes, three pints; red peppers, one do en

Pods; charcoal, two pounds; polkroot, one pound; sulphur, one pound; properly compounded and boiled in three gallons of water, and afterwards mixed with forty gallons of soapsuds.

Claim.—The combined use of the above-named ingredients, when prepared and used in the manner and for the purpose specified.

No. 38,170.—CONRAD B. LASHER, of New York, N. Y.—*Improvement in Lamps.*—Patent dated April 14, 1863.—The wick tube extends down into the reservoir, being gradually enlarged so as to hold the folds of the wick, and is supplied with oil through a small hole in the bottom, which supply is limited by a pointed plug which acts as a valve to regulate the passage of the oil to the wick case.

Claim.—First, the wick case *g* extending from the wick tube and gradually supplied with oil or fluid from the reservoir through a small hole 2, or its equivalent, as set forth and for the purposes specified.

Second, the cap *d* attached directly to the surface of the reservoir itself in combination with the vent 1, for the purposes set forth.

Third, the screw rod *k* and hole 3, in combination with the wick case *g* for regulating the supply of oil to said case, as set forth.

No. 38,171.—ALFRED LEIGH, of Clinton Station, Hunterdon county, N. J.—*Improvement in Cultivators.*—Patent dated April 14, 1863.—This machine consists of a frame on four wheels, from the rear of which depend two shares for furrowing out corn ground, with hinged cultivator teeth in the intervals and an arm extending out on the side of the machine to mark out the distance for the next row.

Claim.—The arrangement of the frame *A* with wheels *B B'*, adjusting levers *C*, furrowing shares *E*, hinged cultivator teeth *F*, and swivel bar *G*, with marker *H*, all constructed and operating in the manner and for the purpose herein shown and described.

No. 38,172.—HENRY LUMLEY, of Chancery lane, London, Eng.—*Improved Rudder.*—Patent dated April 14, 1863.—The rudder is divided vertically, and the parts (the body and the tail) hinged together. They are likewise so connected by chains attached to the tail and the stern post, and running through holes in the body, that the motion of the body causes a still further deflection of the tail in the same direction, and presents a surface to the water which is more directly transverse to the direction of the boat than the oblique line of the unjointed rudder.

Claim.—The attachment of the tail *B* to the stern-post *C*, by means of chains *D1 D2*, or equivalent fastenings, which pass obliquely through the body *A*, the several parts being constructed and operating substantially in the manner and for the purpose herein shown and described.

No. 38,173.—CHARLES H. MARVIN, of New York, N. Y.—*Improvement in Skates.*—Patent dated April 14, 1863.—The heel of the skate has a screw which projects up into a nut in the heel of the boot into which it is inserted by the rotation of the screw head within a slot in the runner, and projects beyond the sides of the latter so as to be worked by a wrench.

Claim.—Having the heel part of the skate provided with a rotating screw, the point and thread of which project above the surface of the skate foot-piece and enter a nut in the boot-heel, while the head of said screw is placed below the foot-piece and projects beyond the sides of the runner, as herein shown and described; so that by turning the head of said screw the skate may be quickly fastened to or removed from the foot, all as set forth.

No. 38,174.—JAMES MORRISON, jr., of Troy, N. Y.—*Improvement in Stoves.*—Patent dated April 14, 1863.—The improvements consist: First, in a plate extending down from the front end of the stove between which and the latter an upward stream of air from the outside is admitted, passing through a hole in the front and down between it and the fire chamber through the oven and eventually into the back flue. Second, in projections from the lower oven plate which extend into the lower flues to gather and retain the heat of the passing air; and, third, in placing chambers in the place of the usual reverting flue plates of the back and bottom, so as to retain the heat.

Claim.—Supplying the oven *f* with a continued current of hot air by means of the cold-air chamber *u* outside of the front plate *y*, with openings *o* in the bottom thereof, and the hot-air chamber *e* between the said cold air chamber and the fire chamber *a*, substantially as herein described and set forth.

Also, the downward projection *s*, in combination with the bottom oven plate *u*, substantially as and for the purpose herein described and set forth.

Also, the combination of the hollow walls or tubes *m m* and the vertical hollow walls or tubes *z z* with the oven *f*, substantially as and for the purpose herein described and set forth.

No. 38,175.—MARCUS P. NORTON, of Troy, N. Y.—*Improvement in Post Office Stamps.*—Patent dated April 14, 1863.—This cancelling stamp has two devices on the face, made of suitable material, one to obliterate the postage stamp, and the other to impress the post-mark upon the letter.

Claim.—First, the cancelling device *C*, with wood, cork, or rubber type or blotter *G* therein, or any device substantially the same, so as to cancel the postage stamps, with indelible ink, substantially as herein described and set forth.

Second, the cancelling device *C*, with wood, cork, or similar material forming the type or blotter *G* therein, in combination with the cross-piece *B* and with the post-marking device *D*, substantially as herein described and set forth.

No. 38,176.—ELIAS NOLT, of Earl Township, Lancaster county, Penn.—*Improvement in Combined Lever and Crank Motion.*—Patent dated April 14, 1863.—A crank rotated by a wheel is caused to vibrate a rocking arm, to whose arms are attached wire which are supported at intervals by vibrating links suspended from posts, and are eventually connected to another vibrating arm which works the plunger of a pump.

Claim.—The combined arrangement of the vibrating arms *D N*, connected by the wires *L1 L2*, supported in vibrating links *M1 M2*, substantially in the manner set forth, in connexion with the arms *C F*, (on arm or beam *D*,) for working the pump and other appliances, at one and the same time, as herein specified, for the purposes mentioned.

No. 38,177.—CHARLES L. OSBORN, of Brooklyn, N. Y.—*Improved Bird Cage.*—Patent dated April 14, 1863.—This cage is constructed with a base containing a pan, and the upper part has a wire floor and tubular uprights with horizontal wires fastened thereto. The door is made to match the frame-work.

Claim.—First, the door *P*, constructed and operating substantially as set forth. Second, the combination in a cage of base *A*, portable pan *L*, wire bottom *K*, and tubular frames *B* and *C*, &c., or their equivalents, constructed and arranged substantially as specified.

No. 38,178.—JAMES H. OSGOOD, jr., of Boston, Mass.—*Improvement in Car Coupling.*—Patent dated April 14, 1863.—The invention consists in an annular link with a bolt hole in its projecting socket, and a prong extending upwardly and downwardly, respectively, on the adjacent links to be shackled, so that as the coupling heads of the cars come in collision the prong of one link slides automatically over the other link, and falling becomes interlocked therewith, and becomes detached when one car tips to a certain angle, in which case the prongs are turned so as to free them from the links.

Claim.—The link *C*, provided with the prong *d*, and hole *e*, constructed and operating substantially as described.

No. 38,179.—JESSE REED, of Marshfield, Mass.—*Improvement in Threshing Machine.*—Patent dated April 14, 1863.—The threshing machine is a four-armed revolving shaft, and the grain is fed in at a side opening, so that it is beaten out of the straw while supported upon a yielding leather which forms the extension of the feeding board.

Claim.—The combination of the yielding lip *E*, with the revolving beater *B*, and the feeding board *D*, or its equivalent: the arrangement of the revolving beater *B*, or the driving shaft thereof, the feeding board *D*, and its opening *i*, being as and for the purpose substantially as described.

No. 38,180.—TIMOTHY ROSE, of Cortlandville, Cortland county, N. Y.—*Improved Scroll for Water Wheels.*—Patent dated April 14, 1863.—The scroll has a movable inner side, by which its capacity is limited in sectional area, and gates by which its length is diminished to make a more effective use of a diminished supply of water.

Claim.—The movable gauge piece or false side *D* to the scroll, in combination with one or more trap or stop gates *C*, as above described and for the purposes set forth.

No. 38,181.—JACOB RUTH, of Philadelphia, Pa.—*Improvement in City Railroad Cars.*—Patent dated April 14, 1863.—The invention refers to devices for clearing the track of the wheels of a city railroad car and for operating the brakes, and consists of shields or guards secured to a frame on the axles, independent of the car body, and descending nearly to the level of the track. The brakes consist of bevelled shields of a shape to fit the wheel, and are operated by levers to bring all the rubbers to work simultaneously.

Claim.—First, shields or guards of appropriate form, arranged adjacent to the wheels of city railroad cars, and secured to a frame resting on and supported by the axles, and independent, as regards vertical position, of the frame which supports the body of the car, substantially as set forth for the purpose specified.

Second, the rocking frames *N N*, hung to the within described inner or independent frame, furnished with guards *h h*, and bevelled shields *M M*, the whole being arranged and operating substantially as and for the purpose herein set forth.

Third, the combination of rocking frames *N*, sleeve *W*, with its arms *n n n n* and *p p*, and springs *X X*, or their equivalents.

Fourth, the brake levers *P*, hung to the inner or independent frame, joined to each other and operating substantially as set forth.

No. 38,182.—JOSHUA J. SHERMAN, of Albany, N. Y.—*Improvement in Car and Truck Connections.*—Patent dated April 14, 1863.—The under side of the car and the upper side of

the truck are provided with corresponding hemi-spherical recesses in which are balls, rounded blocks, or rubbers: and the sockets on the trucks which support the balls are likewise provided with annular springs with bearings on flanges around them.

Claim.—First, the employment or use of balls E, or rubbers F, interposed between the trucks and the car body in suitable boxes, when the said parts are constructed and combined in the manner herein specified, so as to permit free motion of the car body laterally in either direction, and afterwards restore it automatically to its normal position.

Second, the combination of the annular springs g, with the bearings e f h i j, or any of them, when arranged to operate in the manner and for the purposes herein specified.

No. 38,183.—GEORGE H. SMITH, of Des Moines, Iowa.—*Improvement in Combined Bag Holder and Elevator.*—Patent dated April 14, 1863.—The bag is suspended by hooks from a frame which holds it to be filled with grain, the bottom of the bag lying upon a platform; the latter is attached to a vertically sliding frame, which is raised by a winch and rope, so as to elevate the bag of grain to a convenient height for the person to receive it on his back to carry it off.

Claim.—The combination of the adjustable arms D, and hooks g, with the movable frame A, rising and falling platform C, rope h, windlass E, ratchet wheel n, and pawl o, all constructed and operating in the manner and for the purpose set forth.

No. 38,184.—SAMUEL J. SMITH, of New York, N. Y.—*Setting in Jewelry.*—Patent dated April 14, 1863.—This jewelry setting consists of two circular or polygonal open disks or plates which are fitted respectively with clamps and strips and fitted the one over the other and soldered in position, the projections serving by being turned over to secure the sets in their places.

Claim.—The setting composed of the two frames or plates A B, combined by means of the pieces b b, and spurs d d, the back frame A, being furnished with clamps c c, and the front one B, with projecting strips e e, or their equivalents, substantially as herein set forth.

No. 38,185.—ANDREW STEVELY, of Fond du Lac, Wis.—*Improvement in Automatic Grain Scales.*—Patent dated April 14, 1863.—The invention consists of a revolving cylindrical scale arranged below a hopper through which the grain passes into the scale, and so arranged on a pivoted yoke that on receiving a given weight the scale will revolve and discharge the grain. The eduction pipe through which the grain is received into the scale is closed simultaneously with the revolution of the latter until the bar on the scale strikes against the pin of the valve and again starts the flow of grain, which falls into the other side of the cylindrical scale, which is divided longitudinally by a partition.

Claim.—First the arrangement of the chutes E and F in the hopper, substantially as and for the purposes herein specified.

Second, the arrangement of the valve V, provided with the pin d, or its equivalent, and the bar m, when used in connexion with a revolving scale and constructed and operating substantially as and for the purposes delineated and set forth.

Third, the employment (for the purposes herein specified) of a revolving scale M, constructed and operating substantially as herein set forth and described.

No. 38,186.—GEORGE W. SWETT, of Troy, N. Y.—*Improved Furnace for Smelting Ores and for other Purposes.*—Patent dated April 14, 1863.—The object is to smelt the metal in close proximity to the combustible material, but so that their solid particles are separated, and also to provide a reservoir where a mass of metal may be kept in a molten state by the heat from the smelting portion of the furnace. The metal is laid upon an inclined hearth, where it is exposed to the blast of heat, and runs down into a basin, from whence it may be used for smaller castings or collected in a reservoir and exposed to the reverberatory fire for use when a large quantity of evenly-heated metal is required.

Claim.—The construction of a furnace combined of the parts described or their equivalents, in the manner and for the purposes above specified.

No. 38,187.—JAMES TANGYE, of Birmingham, England.—*Improvement in Hydraulic Lifting Jacks.*—Patent dated April 14, 1863.—This jack consists of two parts, the upper chamber containing the reservoir and pump and having a hollow cylindrical termination, and the lower part consisting of a foot and a ram which occupies the hollow cylinder, being ground therein. By the motion of the lever the fluid in the upper chamber is pumped into the cylinder, where it impinges on the head of the ram and causes the cylinder to rise. It is lowered by an extra depression of the lever, which opens a valve and restores it to its former place in the reservoir.

Claim.—First, the arrangement and combination of the parts of hydraulic lifting jacks hereinbefore described and illustrated in Figures 1, 2, and 3, of the accompanying drawing.

Second, the arrangement and combination of the parts of the pumps of hydraulic lifting jacks hereinbefore described and illustrated in Figures 1, 2, and 3, of the accompanying drawing.

Third, the arrangements and combinations of the parts of the pumps of hydraulic lifting

jacks by which the lowering of the said jacks is effected, as hereinbefore described and illustrated in Figures 2, 4, and 5, of the accompanying drawing.

No. 38,188.—W. B. TREADWELL, of Albany, N. Y.—*Improvement in Coal Scuttles.*—Patent dated April 14, 1863.—This coal scuttle has a shield occupying a part of the upper opening and narrowing the orifice to a spout, while the coal is further retained by a strap and rod.

Claim.—The convexo-concave shield B, in combination with the straps a and the rods e, operating in the manner herein set forth.

No. 38,189.—F. G. TUCKER and A. CRAWFORD, of Albany, N. Y.—*Improvement in Lanterns.*—Patent dated April 14, 1863.—The arrangements of this lamp are intended to facilitate the moving of the wick without detaching the lower cylinder, and by annular plates to so deflect the air which enters at the orifices as to prevent its direct forcible impingement on the flame. The claims give a detailed description of the devices.

Claim.—First, the cells s s with the shelf m in cylinder E, and the cells t t with the shelf n in the cylinder B, for the purposes set forth.

Second, the partition p, with the openings y in cylinder B, to shield the heat from the cap of the lantern.

Third, the cylinder D, with its orifice k and slot e arranged to slide within the cylinder E, so as to accommodate the shaft k of the wheel wick-trimmer, in combination with the cells, shelves, and partition aforesaid.

Fourth, the springs e e as arranged to secure the cylinder D and E to each other in combination with said cylinders and with the cells, shelves, and partition aforesaid.

Fifth, the combination of the whole lantern as represented and set forth, embracing the said cells, shelves, partition, cylinders, orifice, and slot and springs, as applied to any of the lamps and burners now in common use, the whole to be made as represented and for the purposes herein set forth.

No. 38,190.—JOHN TURNER, of Norwich, Conn., and ISAAC E. PALMER, of Montville, Conn.—*Improvement in Machinery for Making Covered Twist and Cord.*—Patent dated April 14, 1863.—Around a central revolving spindle are a set of planetary disks carrying bobbins, the threads from which pass into and up through their common spindle of rotation, and passing out at the end are covered with thread from bobbins on disks which rotate on the same spindle as the lower ones, but at a more rapid rate. The covered threads from this point pass through the central revolving spindle and are there twisted into a three-fold cord of covered threads.

Claim.—The combination, with the elongated spindles F and the bobbins H and their disks H', of the hollow spindles G, the bobbins I, and the bobbin disks I', the latter revolving independently of and at greater velocity than the disks H; all in the manner and for the purpose herein shown and described.

No. 38,191.—JESSE B. WHEELER, of Bolton, Worcester county, Mass.—*Improvement in Grain Dryers.*—Patent dated April 14, 1863.—The machine consists of a heated air chamber below, with an inclined board for the dust to fall upon and be discharged, and a chamber above with a perforated floor, on which the grain is stirred by a succession of moving arms traversing on endless belts which feed the grain along from the place where it enters from the hopper to the exit, where it falls upon an inclined screen to the desired point. The heated air is drawn up through the perforated floor and driven out of the machine by a revolving fan on the summit of the case.

Claim.—First, in arranging the walls for forming the dust space I, as above described, in combination with the guiding plates J, substantially as herein described, and for the purpose set forth.

Also, in combination with the hot-air chamber E, perforated bottom C, and the stirring and moving arms traversing over it, the exhaust fan D for drawing the heated air up through the grain and through the machine substantially as described.

Also, in combination with the hinged apron K overlying the cool-air chamber L, the raising and lowering rods o o and hinged valve s, so that said apron may be raised or adjusted without opening the chamber L, substantially as described.

Also, as a stirring and moving mechanism or device, the arms h b, hinged, made adjustable, and moved by endless chains, substantially as herein described and represented.

No. 38,192.—WILLIAM W. WILCOX, of Middletown, Middlesex county, Conn.—*Improved Clew Thimble.*—Patent dated April 14, 1863.—The middle thimble supports the clew line block, and the guards on the outer thimbles protect the lines which pass to the sails from chafing against the block in the swaying too and fro with the motion of the vessel and sail.

Claim.—The application to a clew thimble B of a guard a, constructed and operating in the manner and for the purposes substantially as shown and described.

No. 38,193.—LOUIS WINTERBAUER, of New York, N. Y.—*Improvement in Direct-acting Engines.*—Patent dated April 14, 1863.—The object is to admit a full head of steam to the

end of the piston as soon as it arrives at the end of its stroke, so as to enable the crank to pass the dead points more readily. A secondary cylinder is provided with a slide-valve to suddenly throw the main valve to the other side of the steam chest, and start the piston on its back motion immediately.

Claim.—First, so combining the secondary cylinder C, with the slide valve D, tappet *m*, and cam F, that by the motion of the secondary cylinder at the end of each stroke the tappet *m* is carried back to its central position ready to be acted upon by the cam F, substantially in the manner and for the purpose shown and described.

Second, the exhaust port *e* of the secondary cylinder in combination with the exhaust port *e* of the main cylinder, substantially as described, when so arranged that the secondary cylinder exhausts through the same port with the main cylinder.

No. 38,194.—CHARLES J. WOOLSON, of Cleveland, Ohio.—*Improvement in Grates.*—Patent dated April 14, 1863.—The invention consists of an air chamber receiving air from the space between the grate and the hearth, passing back of the fire and into the fire chamber in a heated state, and uniting with the smoke and gas to promote combustion.

Claim.—The construction and arrangement of the air chambers, sections A and B, with the opening C, beneath the grate G, the deflecting plate B', and opening or openings E, substantially as and for the purpose herein set forth.

No. 38,195.—WILLIAM BREITENSTEIN, of New York, N. Y., assignor to M. FISCHER & Co., of same place.—*Improvement in Looms.*—Patent dated April 14, 1863.—The invention consists in making the take-up movement depend upon the motion of the jacquard mechanism, and its advantage lies in the uniformity and certainty of the action at the proper time.

Claim.—Operating and controlling the operation of a divided take-up by jacquard mechanism, so that the action of the several sections of the take-up shall be determined thereby, for the purpose herein set forth.

No. 38,196.—ERNST G. CHORMANN, of Philadelphia, Pa., assignor to Himself and THOMAS COCHRANE, assignor to ERNST G. CHORMANN, of the same place.—*Stereoscopic Instrument.*—Patent dated April 14, 1863.—This instrument consists of an outer casing, an inner one, sliding out telescopically, and a frame capable of extension, contained within the latter; to the end of the frame are hinged two arms, each provided with a ring containing a lens. The stereoscopic picture is confined between the spring and the end of the box. When folded away the lenses are closed together within the frame, to which they are hinged, and that is passed into the casing B, and the latter into the casing A.

Claim.—First, the frame C, having lenses adjustable in the manner described, or any equivalent to the same, and the casing B, in combination with the box A, or its equivalent, the whole being constructed and arranged substantially as and for the purpose herein set forth.

Second, the arms E and E', with their rings and lenses, when hung to the frame C, and arranged for ready adjustment, and for folding together substantially as set forth for the purpose specified.

Third, the spring *a*, when combined with the box A, casing B, and frame C, as set forth.

No. 38,197.—ERNST G. CHORMANN, of Philadelphia, Pa., assignor to Himself and THOMAS COCHRANE, assignors to ERNST G. CHORMANN.—*Stereoscopic Instrument.*—Patent dated April 14, 1863.—This invention consists of an extension frame, carrying at the end hinged arms with lenses, so arranged as to be readily set to suit the requirements of the person using, and folding away compactly when done with.

Claim.—The frame B, with its elastic legs *d* and *d'*, or their equivalents, and arms E and E', carrying appropriate lenses, in combination with the case A, of any suitable material, the whole being constructed and arranged substantially as and for the purpose herein set forth.

No. 38,198.—EDWARD LEITENBERGER, of Reichstadt, kingdom of Bohemia, assignor to AUGUSTUS G. SCHELLER, of New York, N. Y.—*Mode of producing Designs on Textile Fabrics, &c.*—Patent dated April 14, 1863.—The invention consists in imparting a watered appearance to the fabric by means of a lateral motion more or less rapid during the operation of printing, which is accomplished by vibration of a roller over which the fabric passes to the printing and pressing roller, the motion of the vibrating roller being governed by means of cranks, pattern, or eccentric wheels, the even tension of the fabric being secured by the arrangement of two hinged angular levers in connexion with the let-off roller on which the unprinted fabric is wound, and a weighted roller rotating in connexion therewith.

Claim.—First, imparting to the material to be printed a lateral vibrating motion during the operation of printing, substantially as and for the purpose specified.

Second, the combination with the printing roller C and pressing roller B of the laterally vibrating roller I, constructed and operating substantially as and for the purpose shown and described.

Third, the arrangement of the angular levers G and weighted cylinder H, in combination with the gudgeons of the let-off roller F of a printing machine, constructed and operating substantially as and for the purpose set forth.

No. 38,199.—P. J. CLARK, of West Meriden, New Haven county, Conn., assignor to S. S. CLARK, of the same place.—*Improvement in Coal-Oil Lanterns.*—Patent dated April 14, 1863.—The lamp is set into the foot of the lantern, and has around it, within the outer cylindrical casing, a jacket, through which the air is admitted in a gradually decreasing space, so that at the orifice above the oil chamber it issues in a sheet of air which impinges with force upon the flame, and permits a draught chimney to be dispensed with.

Claim.—The peculiar construction and arrangement, herein shown and described, of the jacket H, in combination with the lamp E and burner G, so that while the lower part of the air-duct is open and free, the upper part or space *d* will be narrow, and thus compress the air into a thin sheet and cause it to shoot with increased velocity into the interior of the burner, all as set forth.

No. 38,200.—WILLIAM BULLOCK, of Pittsburg, Pa., assignor to Himself, CALVIN ADAMS, and GEORGE D. SELDEN, of the same place.—*Printing Machine.*—Patent dated April 14, 1863.—The complicated mechanism of this machine does not admit of a brief description.

Claim.—First, the feeding of the paper into the printing machine from a continuous roll or web, by means of a feed roller revolving in contact with the paper roll, which rests against it.

Second, hanging the shaft of the spool, or axis of the roll of paper, in bearings at one extremity of two arms, which are rigidly attached at their other extremity to a shaft which is left free to turn on its axis in a fixed bearing, whereby the roll of paper is kept in an accurately horizontal position, at right angles to the path of the paper through the machine.

Third, placing the bearings of the arms which carry the spool of paper below, but not directly under, the feed roller, so that, being slightly inclined toward the feed roller, the roll of paper will press with a portion only of its weight thereon, in order that the angle of inclination may be gradually increased by the diminution in size of the roll of paper as it is unwound from the spool, and thus, although its weight is continually decreasing, the relative degree of pressure upon the feed roller may be correspondingly increased, and thereby a uniform actual pressure be maintained.

Fourth, the use of a counterpoise, so connected with the shaft and arms which carry the spool of paper as that, by adjusting the counterpoise, the degree of pressure on the feed roller of the roll of paper can be so regulated as to cause the paper to unwind on to the feed roller, without the roll of paper on the spool becoming loosened, as it would do were the whole or too great a proportion of the weight of a large roll of paper allowed to press upon the feed roller.

Fifth, combining in one the feed roller and one of the cutting cylinders, substantially as hereinbefore described.

Sixth, the use of grippers, or other equivalent device, for seizing the sheets of paper on the feed roller, and thereby causing it to carry the sheets of paper directly to the first impression cylinder, substantially as described.

Seventh, transferring the sheets of paper from a feed roller, moving at a slower speed, to the impression cylinder, or that device which carries the sheets forward from the cutters to the type cylinder, moving at a higher speed, by means of a pair of grippers on the feed roller and on the impression cylinder, without the use of tapes or other similar device for the purpose, and thus leaving a space between the sheets of paper as they pass through the machine without checking or intermitting the feed.

Eighth, the use of a set of grippers on one of the cutting cylinders, which are opened and closed by a stationary cam, or other equivalent device, by means of which such cutting cylinder also performs the work of a "layer-on," seizing the end of the paper before it is severed from the web, and carrying it round to the point of contact of such cutting cylinder with the first impression cylinder, which latter takes the sheet as the cutting cylinder yields it up; the cutter on the male cutting cylinder severing the paper when a sheet of sufficient length has passed between the cutting cylinders.

Ninth, the employment of a yielding sheath, consisting of two strips, placed one on each side of a serrated cutter, for the purpose of holding the paper firmly against the edges of the slot in the female cutting cylinder, while the cutter is severing a sheet of paper from the web; and also for the purpose of pressing the loose ends of the web or uncut sheet as it passes between the cutting cylinder immediately after the sheet which had just been severed therefrom, towards the opposite cutting cylinder, until the grippers on the cutting cylinders seize hold of it, and thus preventing the paper from passing down out of the reach of the grippers.

Tenth, permitting the escape from the machine of any piece of paper which the grippers on the large cutting cylinder fail to take hold of, or of any part of a sheet which may be torn from the web, by leaving a free passage between the large cutting cylinder and the first impression cylinder, so that such scrap will fall away when severed from the web by the cutter, without being seized by the grippers on the first impression cylinder, or being carried any further through the machine, thus preventing the clogging of the machine, and removing a fruitful source of annoyance and delay in the operation and damage to the machine.

Eleventh, transferring the sheet of paper, after it is printed in white, immediately from the first to the second impression cylinders, by means of the grippers placed on the second impression cylinder, which seize the sheet of paper just as the grippers on the first impression cylinder release it, without the use of tapes, cylinders, or other mechanical devices not contained in the impression cylinder, for the purpose substantially as described.

Twelfth, the use of a scrap blanket or apron interposed between the cutting apparatus and the type cylinder and inking apparatus, to prevent any dust or scraps of paper from falling on the type or inking cylinders.

Thirteenth, the delivering apparatus, consisting of short fly-rods, having a rapid stroke in a small arc up and down, so as to strike the rear end of the printed sheets as they pass from the machine, in combination with the curved fingers for holding the rear end of the sheets during the up-stroke of the fly-rods and until their down-strokes, and of a roller to receive the stroke of the fly-rods and the pressure of the curved fingers, and by an intermitting rotation to pass the sheets forward when released by both fly-rods and curved fingers, or other equivalent device, by which the paper is arrested at its rear end on its passage from the machine, whereby a very rapid delivery of the sheets is effected.

Fourteenth, the use of a delivering table for the reception of the printed sheets, beneath and in the rear of the delivering apparatus, which table remains stationary during the delivery of the printed sheets, until a certain number, say fifty or one hundred, have been deposited upon it, when it suddenly moves an inch or two to one side, and is again stationary, until an equal number of sheets are delivered, when it moves back again; and so on, alternating from side to side, for the purpose of counting and separating the sheets into files of any required number, substantially in the manner hereinbefore described.

Fifteenth, communicating an alternating lateral movement to the small ink-distributing rollers on the face of the large ink-distributing cylinder by giving a simultaneous reciprocating motion to one end of their bearings, for the purpose of securing a more perfect and uniform distribution of the ink.

No. 38,201.—R. A. DOUGLAS, of Orange, Essex county, N. J., assignor to EDWARD ROBINSON, of New York, N. Y.—*Improvement in the Manufacture of Gun Barrels*.—Patent dated April 14, 1863.—The operation is as follows: Take a round bar of wrought or malleable iron, of two and a quarter inches diameter and eleven inches long, and drill a hole through the axis of the same of seven-eighths of an inch bore, then draw this tube out under the rolls to the length of a gun barrel.

Claim.—The method herein described of making gun barrels, by drawing the same from a cylinder of malleable iron previously drilled, substantially as herein set forth.

No. 38,202.—DAVID MANUEL, of Lancaster, Pa., assignor to Himself and JOHN M. KELLY, of same place.—*Improved Bedstead*.—Patent dated April 14, 1863.—The improvements consist in the spring-slat bottom and the rail fastening. The rails are connected by two transverse sills whose ends set in sockets in the rails; upon the sills are bearings which are supported upon a conical coil of wire, and likewise by bent springs of double-hooked form, (as represented,) which fasten at their ends into the sills, their loop being passed through the bearing piece; upon the latter are placed the slats which support the mattress. The rail-fastening joint consists of a tongue with a receding face on the rail, and a corresponding slot in the fastening on the post, which, by being driven down, draws the end of the rail firmly against the post.

Claim.—First, the conically-coiled spring D, for the support of the bearing E, with its additional spring-rod and hinge G, shouldered for the loops or bracelets *f* on the slats F, in combination with the supporting and wedging cross-bar B and boxes C, all arranged and applied in the manner and for the purpose specified.

Second, the slotted and tongued bed-rail fasteners H K. constructed, operated and applied substantially in the manner specified.

No. 38,203.—JAMES E. TERRY, of Philadelphia, Pa., assignor to the Russell and Erwin Manufacturing Co., New York, N. Y.—*Improved Strike for Door Locks*.—Patent dated April 14, 1863.—This strike, on which the bolt impinges and rises to latch in the box, is made with an opening on each side and a projection between, and an inclined plane below each latch opening so as to be applicable to either a right or a left hand lock, without being inverted or reversed.

Claim.—A strike provided with two latch openings *b b*, side by side, an inclined projection *f*, and a central partition plate *c*, all arranged substantially as and for the purpose herein set forth.

No. 38,204.—FRANK P. SLOCUM, of Brooklyn, N. Y., assignor to SAMUEL W. SLOCUM, of same place.—*Improvement in Revolving Fire-arms*.—Patent dated April 14, 1863.—This invention consists in constructing a number of independently moving chambers which are admitted in recesses in a revolving cylinder, and which are slipped forward against a stationary piston to retract the exploded capsule, and are loaded by placing the cartridge in the lateral recess of the cylinder and retracting the chamber upon it.

Claim.—First, the construction of a revolving fire-arm with independent, longitudinally movable chambers, in combination with openings in the sides of the cylinder of sufficient size to permit the lateral insertion of metallic cartridges, without removing the chambers entirely from the cylinder.

Second, the stationary piston, applied in combination with the revolving cylinder and its independently movable chambers, substantially as and for the purpose herein described.

No. 38,205.—WILLIAM WHEELER, of Morrisania, West Chester county, N. Y., assignor to CHARLES GOODYEAR, jr.—*Improved Shade Rack*.—Patent dated April 14, 1863.—The curtain cord by which the window shade is raised and lowered is passed around a roller in the rack which is made elastic so as to increase its traction thereon, and an elastic spring pressure brought upon the roller carriage to maintain the tension of the cord.

Claim.—First, the employment and use of an elastic or flexible roller in racks, substantially as herein set forth and described.

Second, the employment and use of an adjustable spring in racks, substantially as herein set forth and described.

No. 38,206.—CHARLES W. S. HEATON, of Belleville, St. Clair county, Ill.—*Improved Defensive Armor for Ships and other Batteries*.—Patent dated April 14, 1863.—The invention consists in covering the armor plating of a vessel with wood.

Claim.—The employment of wood, or its equivalent, when used in the manner and for the purpose substantially as described.

No. 38,207.—MAYHEW ADAMS, of Chilmark, Massachusetts.—*Improved Harpoon*.—Patent dated April 21, 1863.—This harpoon is constructed with a semi-revolving head having a spiral groove, which works over suitable pins on a segment of a screw upon the body of the harpoon.—The two parts are held in position by a wooden pin which breaks on entering the whale, and the harpoon turns at right angles, with the semi-revolving head remaining fixed and coupled by the strain upon it.

Claim.—The application to the harpoon of a semi-revolving head resting upon segments of screws, or angular pivots, causing the harpoon to turn infallibly at right angles with the semi-revolving head when fast to a whale and a strain set upon it, and there to remain fixed or coupled together.

No. 38,208.—SAMUEL ADAMS and JEREMIAH R. FOGG, of Portland, Maine.—*Improvement in Kerosene Lamps*.—Patent dated April 21, 1863.—The glass chimney is secured upon the perforated cone plate by means of clasps and a screw, in the customary manner. The cone plate, supporting a cone, is pivoted to an arm projecting from a cylindrical metallic band, which fits snugly in the cap, to which it is secured by clasps, taking into oblong openings in the band. When the lamp is to be trimmed, a spring, which holds the cone-plate, is drawn back, and the latter, with the chimney attached, moved around upon its pivot, thus leaving the wick exposed, without the necessity of manipulating either glass chimney or cone.

Claim.—The band D, in combination with the pivoted cone-plate *l* and cap C, substantially in the manner and for the purpose set forth.

No. 38,209.—ABRAHAM ARNOLD, of Heidelberg, York county, Pa.—*Improvement in Pumps*.—Patent dated April 21, 1863.—This invention is based upon a peculiar construction of the plungers or connecting rods in a double-acting force pump, the rods being worked by a double crank, and that belonging to the lower valve working through the upper valve.

Claim.—A double-acting force pump having the connecting rod A of the lower sucker to work through the upper sucker at F, when operated by the double crank, represented by Fig. 2 at C C, the whole as shown and described.

No. 38,210.—WILLIAM C. BAKER, of New York, N. Y.—*Improvement in Screens for Heaters*.—Patent dated April 21, 1863.—The object of the improvement is to make a screen to surround a coil of heating pipes in such a way as to produce a current of air from the bottom and out of the top by making the sides solid and openings above and below.

Claim.—The employment, in combination with the steam or hot-water pipes, of a screen which is constructed substantially in the manner described, for the purposes set forth.

No. 38,211.—WILLIAM C. BAKER, of New York, N. Y.—*Improvement in Steam Radiators*.—Patented April 21, 1863.—The object of the improvement is to convey the steam upwards to the coil by a pipe, which likewise serves to allow the condensed steam or water to trickle back, the return pipe being connected with the supply pipe at the bottom of the coil.

Claim.—Conveying the steam from the boiler to the coil, and the condensed steam from the coil to the boiler, through one pipe, as described, by combining said pipe with both ends of the coil, substantially as hereinbefore set forth.

No. 38,212.—WILLIAM C. BAKER, of New York, N. Y.—*Improved Low-water Detector*.—Issued April 21, 1863.—Antedated March 25, 1863.—This invention consists of a contrivance for indicating too great a pressure of steam or lowness of water, by a vertical pipe, so arranged as to have its open end below the low water level, and raised to such a height above that level that the weight of the column of water will be equal to the maximum pressure of steam desired; said pipe then recurving downwards and opening to the ash pit or otherwise, so as to discharge steam into the fire and thus indicate or remove the danger.

Claim.—The employment, in combination with a steam boiler and open pipe E, of a pipe

or opening to the ash pit or furnace, the whole arranged to operate substantially as and for the purposes set forth.

No. 38,213.—AUGUSTUS A. BENNETT, of Cincinnati, Ohio.—*Improved Pistol Holster*.—Patent dated April 21, 1863.—The invention consists in operating automatically the flap, which secures and covers the pistol by a spring.

Claim.—The holster A, closed automatically by the oblique flap B, and metallic spring D, so as to combine security with facility of use, in the manner set forth.

No. 38,214.—JOHN W. BLODGETT, of Three Rivers, St. Joseph county, Michigan.—*Improvement in Portable Fences*.—Patent dated April 21, 1863.—This improvement consists in the arrangement of lapping rails or boards, the upper pair resting in the angle formed by two inclined shears, which are set in a base or sill, the lower two boards being retained with a notch on the upper side of the sill and two others connected by a pivot.

Claim.—The combination and arrangement of the lapping rails, shear braces, notched sill and pivot hinge, in the manner and for the purpose described.

Second, the arrangement of the lapping rails of the panels, pivot hinge and shear braces, in the manner and for the purpose described.

No. 38,215.—WILLIAM F. BURDEN, of Troy, N. Y.—*Improvement in Governors*.—Patent issued April 21, 1863.—The nature of this invention consists in the interposition of adjustable frictional gear wheels between the crank shaft and the spindle of the governor for increasing or diminishing its speed, and thereby that of the engine.

Claim.—First, the employment of adjustable frictional gearing, when interposed between the crank shaft and governor spindle of an engine, essentially as and for the purposes herein set forth.

Second, the auxiliary device, so applied, in connexion with a governor, that the engine can be set to run at any desired speed, and yet be controlled by the same governor, substantially as described.

No. 38,216.—CHARLES H. BURTON, of Cleveland, Ohio.—*Improved Propeller Wheel*.—Patent dated April 21, 1863.—This invention consists in a certain angle of contour of the bucket and is described in the claim.

Claim.—So forming the face of the bucket that lines describing such face, as shown at *a b c d*, &c., incline forward of a right angle at about six degrees, as shown in Figs. 1 and 5, for the purpose of causing the displaced water to flow directly aft, substantially as and for the purpose specified.

No. 38,217.—DAVID COPE, of Liverpool, Lancashire, England.—*Improvement in the Manufacture of Drums, Kegs, Casks, &c.*—Patent dated April 21, 1863.—Patented in England October 8, 1860.—The metallic plate heads of the cask have their edges turned up in a flange at right angles, and are fitted to the interior of the cylinder with the edges of the flanged head and the edge of the chime flush and even; then over them an U-shaped hoop is slipped embracing both, and all are secured together by being dipped in molten metal.

Claim.—The binding hoop *c*, substantially formed and fitted in the manner herein described for the purpose set forth and shown in the accompanying sheet of drawings.

No. 38,218.—GEORGE F. DALLON, of Flatbush, Kings county, N. Y.—*Device for Carrying off Water from Musical Instruments*.—Patent dated April 21, 1863.—A perforation having been made in the tube of the musical instrument, a socket is fastened thereto containing an absorbent or filtering material which shall not interfere with the integrity of the walls, the inner surface occupying the place of the removed tubing.

Claim.—The application to musical instruments, such as mentioned, of any absorbing or filtering material capable of absorbing and retaining moisture, over, to, or upon any perforation or opening in the instrument, either as hereinbefore described, or in any other way which will produce the intended effect.

No. 38,219.—CYRUS C. DENNIS, of Auburn, Cayuga county, N. Y.—*Improvement in Rakes for Harvesters*.—Patent dated April 21, 1863.—The object of this invention is to give to the rake head the four motions necessary for its work, namely, forward, upward, backward, and downward, from the revolution of a pinion; on the post is hung by a swivelling pin a segment of a sphere to which the rake head is attached; the latter is also hinged to the swivelling pin, so that both may turn around with the swivelling pin, and also raise up or descend by the joint, as the case may be. On the rear portion of the segment of the sphere is a gear of irregular form somewhat flat on its longest sides, but abrupt at its ends, so as to raise and lower the rake quickly. These gears engage with the pinion, and close to the gears is a groove in which the pinion shaft runs, thereby acting as a guide to the pinion.

Claim.—First, the use of an irregular gear on the surface of a sphere or segment of a sphere for the purpose, in connexion with a pinion, of getting four rake motions, as herein described and represented.

Second, in combination with the irregular gear an irregular shaped groove conforming thereto, as a guide for the pinion, substantially as described.

Third, supporting the sphere or segment thereof, at its centre, by a swivelling and hinged connexion, in the manner and for the purpose substantially as set forth.

No. 38,220.—DR. ALOYSE CHEVALIER AUER DE WELSBACH, of Vienna, Empire of Austria.—*Improvement in the Manufacture of Paper, &c., from the Husks of Indian Corn*.—Patent dated April 21, 1863.—Patented in Austria November 23, 1861.—The husks or leaves of maize are boiled in a solution of lime or soda till the fibre is detached from the soluble matter and precipitated; the fibre is then dried and carded, to be used for making fabrics or paper, and the soluble portion may be utilized for food.

Claim.—The process of obtaining and separating the textile material contained in the husks and leaves and stalks of maize or Indian corn, by exposing the same, together with a solution of lime and soda, or equivalent substances, to the action of hot or boiling water, and preparing the said textile material for use in the manner above described, or in any manner substantially the same as described.

No. 38,221.—CHARLES DOWNER, of Philadelphia, Pa.—*Improvement in Platforms of Weighing Frames*.—Patent dated April 21, 1863.—The platform of the scale is suspended from the steelyards, or weighing beam, and has a tilting table and retaining catch for discharging the contents.

Claim.—The platform composed of the frame H and tilting table I, when constructed, arranged for suspension to the graduated beam of a weighing frame, and operating substantially as and for the purpose herein set forth.

No. 38,222.—SAMUEL WARD FRANCIS, of New York, N. Y.—*Machine for Cancelling Postage and other Stamps*.—Patent dated April 21, 1863.—This hand-stamp is so constructed that, by a downward pressure on the handle, the cutting edges on its lower end are caused to rotate and cut out a portion of the stamp. A guard is arranged to prevent the rotation of the stamp, and the spring is adjusted to limit the depth of cut to the thickness of the material on which the stamp is printed.

Claim.—The method of cancelling adhesive stamps by means of a cutting edge, or series of cutting edges, so operated that, when applied to the stamps, one or more portions thereof shall be cut out and removed without injury to the material to which the stamps are attached, substantially as set forth.

Also, the combination and construction of a hand-instrument for cancelling stamps by cutting, as before referred to, so that by one downward pressure its cutters or scrapers shall be operated to remove a portion of the stamp without injury to the paper underneath, substantially as set forth.

Also, the combination with cutters, operated by a sliding handle of a studded guard and support, so arranged that the instrument is thereby caused firmly to grasp or to impinge upon the surface of the stamp to be cancelled, while the cutters are being operated; also to guard the cutters against undue pressure upon the paper, substantially as set forth.

Also, the combination with the cutters, of a hand-instrument for cancelling stamps, by cutting out of and removing from the stamp one or more portions thereof, of a spring so arranged as to bear the cutter upon the stamps with a pressure requisite to produce an incision in the paper of a depth not exceeding the thickness of stamps, substantially as set forth.

No. 38,223.—SOLOMON FREDERICK, of New York, N. Y.—*Improvement in Coal-Oil Burners*.—Patent dated April 21, 1863.—The invention consists of a double flaring cap which is placed on the end of a wick tube to prevent the extinguishment of the flame by lateral currents of air.

Claim.—As an improved article of manufacture, the top D, when made in the peculiar form and manner herein shown and described, and applied to the tube C, as set forth.

No. 38,224.—CHARLES W. GAGE, of Homer, N. Y.—*Improved Attachment of the Tow-Lines of Canal Boats*.—Patent dated April 21, 1863.—The tow-line is passed over a rod which is pivoted at its forward end and retained by a headed bolt at its rear; it is disconnected by withdrawing the bolt endwise, so that the draught on the line will vibrate the rod and cast off the line.

Claim.—The lever *d*, the rod *C*, the block *k*, and the spring *j*, the whole arranged in the manner and for the purpose substantially as herein described.

No. 38,225.—JAMES H. HILLS, of Burlington, Vt.—*Improved Car Coupling*.—Patent issued April 21, 1863; antedated March 24, 1862.—Each coupling head contains on its face an inclined plane for the end of the link to climb, and a depression to retain it; also, a pivoted tumbler which is vibrated by the advancing link in the act of coupling, the link being retained by the falling of the tumbler when the former has passed into the recess.

Claim.—The construction of a coupler with cavities or openings *a* and *b* in Fig. 2, and tumbler *c* in Figs. 1 and 3, combined with link *f* in Fig. 1, substantially in the manner and for the purpose above set forth.

No. 38,226.—JONAS HOLMES, of Clayville, Oneida county, N. Y.—*Improvement in Water Wheels*.—Patent dated April 21, 1863.—The buckets of this wheel have holes in the bottom, by which each communicates with the one below on the working side of the wheel, by which means a continuous sheet of water is intended to be obtained on that side of the wheel, and the buckets prevented from spilling their contents until they arrive at a point nearly under the shaft.

Claim.—The employment or use, in an overshot breast or any bucket water wheel of perforated bottoms D to the bucket, so arranged as to operate in the manner and for the purpose herein set forth.

No. 38,227.—WILLIAM HUGHES, of Rochester, N. Y.—*Improvement in Aprons for Stores and Grates*.—Patent dated April 21, 1863.—The front of the furnace has holes covered by sliding doors; by raising the doors the holes in the latter are brought into coincidence with those in the furnace front, and afford an entrance for the poker.

Claim.—The combination of the slides C C, apron A, provided, respectively, with the holes c c and openings a a, which, when in coincidence, allow the entrance and perfect action of the poker, without the escape of dust, substantially as herein set forth.

No. 38,228.—R. C. JACKSON, of Cleveland, Ohio.—*Improved Mode of Driving Propeller Screws*.—Patent dated April 21, 1863.—The invention consists in the arrangement of the crank shaft and the outboard shaft in line with each other, and coupling them together by gearing with a geared countershaft above, which gives an increased speed to the outboard or screw shaft.

Claim.—First, placing the crank shaft that connects with the engine in line with the outboard shaft, as specified.

Second, the herein-described arrangement for coupling the outboard and inboard shafts together, for the purpose set forth.

Third, the arrangement of the compound gear wheels E G and H I and counter shaft F, for the objects herein specified.

No. 38,229.—JOB JOHNSON and JOSEPH BARBER BOLTON, of Brooklyn, N. Y.—*Improvement in Track-Clearers*.—Patent dated April 21, 1863.—The track-clearer, running close to the rail, is on the end of a downward inclined spring shaft, which allows it to ride over inequalities, such as the joints of the rails; it may be lifted vertically so as to render it inoperative, and to allow for the rocking of the bed of the car to which it is attached; an arm extending from the truck abuts upon the under side of the track-clearer shaft so as to raise it when that side of the car is depressed.

Claim.—First, a track-clearer fastened upon the end of a slide that is inclined backwards and upwards, and fitted with a spring, or its equivalent, substantially as specified, whereby the said track-clearer rides over and clears the ends of rails or other rigid parts with which it may come in contact, as set forth.

Second, the stocks e and boxes h, constructed as specified, in combination with the track-clearers f and sliding rods g, as set forth.

Third, the lever m, in combination with the track-clearers f, said lever being fitted and acting as and for the purposes specified.

Fourth, the rod o and socket p, in combination with the track-clearers f f, for the purposes and as specified.

No. 38,230.—C. D. LAKEY, of Loudonville, Ashland county, Ohio.—*Improvement in Trusses*.—Patent dated April 21, 1863.—The pad is of an oval shape, and its neck is connected to a stem which works in a pipe-box, the latter being connected to the end of the hoops. The end of the stem passes through two disks, one attached to the stem, and the other to the hoop, and a volute spring between the disks is attached to the latter at its respective ends, and the spring is wound up by revolving the pad. The spring is kept at its tension by a sliding catch which engages with holes in the disk nearest to it.

Claim.—First, the pad A, stem B, pipe C, and spring I, when arranged and combined as herein specified.

Second, the catch J, in combination with the disk H, when constructed, arranged, and operated substantially as and for the purposes set forth.

No. 38,231.—M. CAREY LEE, of Philadelphia, Pa.—*Device to Prevent Counterfeiting Bank Notes, &c.*—Patent dated April 21, 1863.—The improvements consist in the coloring of the paper in shades or designs; the simultaneous printing of the obligatory parts, as the number, denomination, seal, and signature all at one time, and of a permanent color, while the design may be printed in fugitive ink.

Claim.—First, printing or staining a ground design or incorporating a color in a graduated shade.

Second, printing simultaneously the signatures, numbering, and seals, by placing the stamps, blocks, &c., in one frame.

Third, printing the ornamental part of the note as distinguished from the ground tint in fugitive, and the obligatory and denominational part in permanent color; all as already described or in any other manner substantially the same.

No. 38,232.—JOHN M. LONG, of Hamilton, Ohio.—*Improvement in Harvesters*.—Patent issued April 21, 1863.—Antedated December 4, 1862.—The fore carriage to which the machine is attached has upon its axle central plates which admit of some lateral play upon the king belt connexion, so as not to twist the draught rod in passing over uneven ground.

Claim.—Constructing the centre plates C and D with a central pivotal bearing, in combination with the vibratable centre bolt E and outer bearings c c, substantially as described and for the purpose specified.

No. 38,233.—JOHN M. LONG, of Hamilton, Ohio.—*Improvement in Crank-Wrists*.—Patent dated April 21, 1863.—The wrist is made of a ferrule and central bolt with a washer and nut. The ferrule is sunk into the crank, and the object is to make a firm attachment for the rod working thereon, and one which may be readily renewed.

Claim.—So making the wrist that the ferrule which covers the screw bolt or pin B shall be let into the face of crank A, and held in place by the screw bolt B, substantially as and for the purpose set forth.

No. 38,234.—ARTHUR MCCARTER, of Norristown, Pa.—*Improvement in Pumps*.—Patent dated April 21, 1863.—The cylinder of this double-acting pump is divided by a central transverse diaphragm into two chambers, having on each side of the partition two parts, each pair uniting at their junction with the chamber. Above the diaphragm is an eduction opening which communicates with each chamber by the more central of each of the pairs of ports. Above, in a chamber with five ports, is a sliding valve with an opening beneath by which it brings the eduction port of each chamber alternately in communication with the common eduction opening, and by its two ground or fitted-end faces alternately closes the eduction ports of either chamber which communicate with the discharge pipe.

Claim.—First, the combination of the three-faced valve, moved by the water, with the valve seat and the auxiliaries thereto, the whole constructed and operating substantially as and for the purpose described.

Second, the three-faced valve in combination with the five ports, substantially as described.

No. 38,235.—GEO. W. LUDLOW, of Elizabeth, Union county, N. J.—*Improvement in Gaiters*.—Patent dated April 21, 1863.—The back of the gaiter has a spring inserted between the folds of the stuff of which it is made, so as to preserve its shape.

Claim.—The combination of the spring B with the back of said gaiterette, substantially as and for the purposes set forth.

No. 38,236.—JOHN N. MCLEAN, of New Philadelphia, Ohio.—*Improved Window-Sash Supporter*.—Patent dated April 21, 1863.—This is a method of operating the eccentric which retains the sash by pressing it over against the opposite jamb. The manipulation is by means of the thumb-piece which pushes the slide in the groove and rotates the eccentric out of contact with the sash.

Claim.—The irregular groove i, slide j, and catch m, in combination with the face plate O, and its projections n and p, operating in the manner and for the purpose set forth and described.

No. 38,237.—HENRY MESSER, of Roxbury, Mass.—*Improvement in Hot-air Engines*.—Patent dated April 21, 1863.—Excess of speed of the engine causes the governor balls to operate a valve by which the compressed air is stored in a reservoir to be again let back to the assistance of the engine when an extra load shall have reduced the speed of the governor balls below their normal rate.

Claim.—The described new method of regulating a hot-air engine by means arranged and operating substantially as herein set forth.

No. 38,238.—FRANCIS MILLIKEN, of Boston, Mass.—*Improvement in Steam Cooking Apparatus*.—Patent dated April 21, 1863.—The improvement consists of a metallic dish containing a coiled metallic tube heated by steam, on which the food is laid. The coils are soldered together and have a basin-shaped form dishing towards a central cup to contain the gravy.

Claim.—The within-described apparatus for frying and broiling by means of steam, arranged and operating in the manner substantially as set forth.

No. 38,239.—LEWIS F. NOE, of New York, N. Y.—*Improvement in Culinary Steamers*.—Patent dated April 21, 1863.—In this improvement the sides and top of the vessel are attached together and placed over the flanged bottom, where it is secured by hooks, and at a suitable distance up the sides of the steamer is a flange which limits its descent into the vessel upon which it is used.

Claim.—A culinary steamer combining the attachment or junction of the top and bottom portions below the line of support upon the vessel on which it is to be used, with the projecting rim F, or its equivalent, substantially as and for the purpose set forth.

No. 38,240.—JAMES M. OSGOOD, of Chelsea, Suffolk county, Mass.—*Improved Holder for Hat Brushes*.—Patent dated April 21, 1863.—This appliance is intended for brushing the

crown of the hat, and consists of a ring or band adapted to the circumference of the hat and containing within it a brush supported by springs which are capable of lengthening or contracting to hold the brush in position as the outer band is adjusted in diameter to suit the varying sizes of hats.

Claim.—The combination of the band A and projections or holders *d g*, or their equivalents, for supporting and carrying a hat brush, as described.

Also, making the spring D adjustable so as to increase or diminish the distance between the holders *d g*, for the purpose described.

No. 38,241.—JOSHUA REBER, of Shoemakerville, Berks county, Pa.—*Improvement in Portable Fence.*—Patent dated April 21, 1863.—This fence is designed to be set up without posts or the necessity of interlocking; the panels consist of upright picket posts with horizontal boards and wires; to the upper wire a section of the same length is hinged by staples enclosing the wire, so that the two being spread at the bottom and the feet of the picket posts driven into the ground they may form a mutual support.

Claim.—The adjustable hinge wire C in connexion with the transverse grooves and staples in the pickets, when used for the purpose as herein described and set forth.

No. 38,242.—CHRISTIAN REIF, of Lewis township, Union county, Pa.—*Improvement in Clover-Hullers.*—Patent issued April 21, 1863.—Antedated January 30, 1863.—This transverse adjustable semi-cylinder is located across the machine in such a position as to catch the light seed and tailings, from whence they are carried out of the machine by the conveyer and elevated to be again operated upon.

Claim.—The adjustable cylinder C, with its conveyer A, adjustable wind gate G, and inclined board E, when arranged and combined as herein described.

No. 38,243.—A. L. ROBINSON, M. M. DONNELLY, and D. H. KRUM, of Cincinnati, Ohio.—*Improvement in Flasks for Founders.*—Patent issued April 21, 1863.—Antedated November 7, 1861.—The flask is supported upon a base, and at a suitable time after the pouring of the metal the fastenings of the core are withdrawn, and it is allowed to drop, while the casting with the cheek and cope remain supported upon the base.

Claim.—So supporting the core C that it may be released and allowed to fall from the interior of the casting at a suitable time after the metal has been poured, the casting meanwhile remaining supported by its rim resting upon the base A, substantially in the manner and for the purpose set forth.

No. 38,244.—JOSEPH B. RYDER, of Wapello, Iowa.—*Improvement in Corn Planters.*—Patent dated April 21, 1863.—The corn planter is supported on wheels, which are preceded by runners to make the furrow and seed tubes; the seed is dropped by moving the foot lever which works the slides in the bottom of the hopper as the slide rods are connected with the shaft vibrated. The seed falls upon a scatterer, so as to prevent the plants being crowded in the hill.

The cups project above the main surface of the slide, and parallel ridges are formed from the margins of the apertures, and the scrapers strike the outside of the holes before the centres, so as to prevent breaking the grain and to keep it rolling towards the centre of the hopper.

Claim.—First, the seed slide B, constructed and operating in the manner and for the purpose set forth.

Second, the cut-off I, constructed and operating in the manner and for the purpose set forth.

Third, the combination of the slide B and cut-off I, substantially in the manner and for the purpose set forth.

Fourth, the gravitating double delivery valve *m*, constructed and operating in the manner and for the purposes explained.

Fifth, the combination of the double scattering bar with the delivery valve *m*, substantially as and for the objects specified.

No. 38,245.—SAMUEL J. SEELY, of Brooklyn, N. Y.—*Improved Rubber Spring.*—Patent dated April 21, 1863.—Into each end of a rubber tube the shouldered shank of a metallic eyelet is inserted, and the rubber bound around the shank behind the shoulder so as to prevent the latter from being retracted.

Claim.—A spring composed of a piece of India-rubber tubing having eyes B, or their equivalents of metal, provided with shouldered shanks *a b* inserted into its ends and secured by seizing or bands *c*, substantially as herein specified.

No. 38,246.—CHARLES A. SHAW and JAMES R. CLARK, of Biddeford, Me.—*Improvement in Sewing Machine.*—Patent dated April 21, 1863.—The improvement is in that class of sewing machines which use a common sewing needle and make a running stitch, and consists of an arrangement of the motive and crimping wheels, which pucker the cloth, so that the straight motion of the needle passes it through the cloth from side to side; the wheels are placed on plates or bearings jointed near one end, and may be readily detached. By the motion of the crank the cloth is crimped and pressed on to the needle until the latter

is filled, when the crank is reversed to detach the needle from its holder, the cloth slipped on to the thread by hand, the needle readjusted, and proceed as before.

Claim.—First, the combination and arrangement of the wheels *m m' m''* and their shafts with the spring 3° and plates 4 5 5', which plates are connected at one end by a joint, or its equivalent, substantially in the manner and for the purpose set forth and specified.

Second, arranging and combining the wheels *m m' m''*, wheels *f f'*, crank *g*, and spring 3° with each other and with the plates 4 5 5' in such a manner as to be taken out of or put into the body of the machine A all at one time, by means of the screws *n n*, or their equivalents, substantially in the manner and for the purpose set forth and specified.

No. 38,247.—J. J. SMITH, of New York, N. Y.—*Improvement in Steam Radiators.*—Patent dated April 21, 1863.—The ornamentation of the coil of steam pipes forming the radiator is the feature of this invention.

Claim.—As a new article of manufacture an ornamented coil radiator, substantially as hereinbefore set forth.

No. 38,248.—WILLIAM STARK, of Pittsburg, Pa.—*Improvement in Operating Rolls for Rolling Iron.*—Patent dated April 21, 1863.—The object of this improvement is to avoid the necessity of passing the plate back over the rollers to run it again through between them as they continuously revolve in the same direction; it is accomplished by a sudden reversal of their movements, by which it can be passed back under pressure. The device is clearly explained in the claim.

Claim.—The combination of the counter-shaft, gearing into the main shaft of the rolls at both ends, by means of a pair of cog-wheels at one end and a pair of wheels and an idler at the other end, with the crabs, for connecting one of the rolls with the shaft at either side, at pleasure; the half crabs on the roll at either end being operated together so as to connect the roll with the shaft at one end, and disconnect it from the shaft at the other end, simultaneously, substantially in the manner and for the purposes hereinbefore described.

No. 38,249.—ANSON P. STEPHENS, of Brooklyn, N. Y.—*Improvement in Lock for Fire-Arms.*—Patent dated April 21, 1863.—The main spring is pivoted to the lock-plate and the hammer at its upper end connected with the trigger.

At its lower forward projection the hammer has a detent which engages in the half and full cock notches in the trigger, the retraction of which, by releasing the detent, permits the hammer to fall.

Claim.—The elliptical spring *f* attached at *i* to the hammer and at *e* to the lock plate, and extending as an arm *g* to the trigger, as and for the purpose specified.

Also, the trigger *k*, formed with the half and full cock notches *m* and *n*, in combination with the arms *e e*, extending from the tumbler and carrying the detent *r*, for the purposes and as specified.

No. 38,250.—HERMAN STRATER, jr., of Roxbury, Mass.—*Improvement in Air Condensing Apparatus for Forcing Liquids.*—Patent dated April 21, 1863.—The invention consists of an apparatus for condensing air and retaining the same under pressure ready for use; the reservoir is supplied with water and air, and has a receptacle for containing the air when compressed and an arrangement of induction and eduction passages and valves for the reception and delivery of the water and air to their proper localities and at the suitable times. The details of the arrangements may be found in the claim.

Claim.—The combination with the alternate air and water reservoir, in which the air is compressed and displaced by water, of a two-way cock, so arranged in relation to a water and air supply pipe as to operate substantially in the manner as hereinbefore set forth.

Also, the combination with the alternate air and water reservoir, in which air at the pressure of the atmosphere is compressed and displaced by water, of an air receiver, the two being connected by pipes and valves in such manner that the compressed air cannot return to the said reservoir, substantially as set forth.

Also, the air and water supply pipe on the alternate air and water reservoir and pipe connecting said reservoir with the air receiver, in combination with a double cock; the arrangement being such that communication between the reservoir and the air receiver is established, and stopped simultaneously with the admission to and emission from the reservoir of water, substantially as herein set forth.

Also, the combination with the alternate air and water reservoir, and air-discharge pipe connecting the same with the air receiver, of a valve or its equivalent, operated by a float so as to automatically close the said discharge pipe and stop the supply of water, substantially as hereinbefore shown and described.

No. 38,251.—ARNER SYLVESTER, of Dubuque, Iowa.—*Improvement in Grain Separators.*—Patent dated April 21, 1863.—The riddles are of an oval form and their upper convex sides flattened in the middle portions so as temporarily to detain the grain which falls through while the chaff, heads, &c., fall over the edges and are caught by a receptacle underneath; these riddles are arranged in pairs for the more equal distribution of the work, and each pair is driven by an eccentric on a common shaft, so that one pair moves to the right while the other moves to the left.

Claim.—The oval form of the riddles flattened on the middle portion, substantially in the manner and for the purpose set forth.

Also, arranging said riddles in pairs, the upper ones in one pair and the lower one in another pair, so as equally to divide the quantity of matter in each pair and thus diminish greatly the momentum which the riddles tend to acquire by their movement together, substantially as and for the purpose set forth.

No. 38,252.—FREDERICK A. TROUT, of New Britain, Hartford county, Conn.—*Improvement in Combined Plumb and Levels*.—Patent dated April 21, 1863.—On one of the faces of the level stock is a quadrant plate having a vernier of 90° and a radial bar pivoted at the centre of the quadrant, on which is carried a spirit-level. To work to the horizontal line this radial arm is brought parallel with the length of the level stock; to work to an angular elevation it is vibrated to the required degree on the vernier and secured in position by a thumb-screw.

Claim.—The employment of the right-angle and circular plates B B', traverse bar D', and tube C, in combination with a spirit-level stock, substantially in the manner and for the purpose described.

No. 38,253.—JOSEPH WELLS, of Hoboken, N. J.—*Paper Bag Machine*.—Patent dated April 21, 1863.—The paper is fed from a continuous roll to the folder wheel, where it passes between the blocks, the fold being a short distance from the centre, so as to leave a strip, which is bent over, pasted, and flattened by the devices on the upper edge of the block; it is then cut by the serrated revolving roller, with the lower half longer than the other, and turned by the plate with the centre to the edges, so as to bring the longer portion flat underneath the plate, from whence it passes to the draught roller, the pasting plate, and folder, which close the strip over, finishing the bottom of the bag.

Claim.—First, the guide blocks F G, constructed and arranged in respect to each other substantially as and for the purpose set forth.

Second, in combination with the said guide blocks the adjustable gauge wheel K, or its equivalent, as set forth, for the purpose specified.

Third, the arrangement of the lap-folders H I, in respect to each other and in combination with the said guide blocks, substantially as and for the purpose specified.

Fourth, the changing plate C with its securing rod J, or their equivalent, arranged and operating as set forth and for the purpose specified.

Fifth, the peculiar combination of the said changing plate and securing rod with the said severing knife and feeding rollers, substantially as set forth.

Sixth, the combination of the pasting plate O, or its equivalent, with the paste slot Z, substantially as set forth for the purpose specified.

Seventh, the combination of the said adjustable gauge wheel with the elliptical roller R, as set forth, for the purpose specified.

No. 38,254.—CHAS. O. WEST, ELIEL WEST, and JOHN CAREY, of Martinsville, Clinton county, Ohio.—*Improved Sugar Evaporator*.—Patent dated April 21, 1863.—The rear pan is divided by a partition and sets on transverse bars across the furnace opening. These bars have inclined planes near their ends and a depression at each mid length, so that either half of the pan can be slipped over the furnace and set upon the furnace wall. The flame, as it passes from under the front pans, is deflected by a plate depending from the crown of the fire chamber, so that it shall not impinge directly upon the bottom of the rear pan.

Claim.—First, the two iron bars J J, provided with depressions j, and inclined planes at their mid lengths and ends respectively, for the purpose of allowing one or other of the pans F F', to rest firmly down upon the walls of the furnace when in use for boiling, and thus to receive the full intensity of the heat, or to be elevated from the walls of the furnace and away from the fire when in danger of scorching by simply shifting the pans on the track in the manner specified.

Second, the arrangement of the deflecting plate or fender P depending from the furnace crown immediately in front of the "teache" opening B, for the purpose set forth.

No. 38,255.—J. E. WOOTTEN, of Philadelphia, Pa.—*Improvement in Railroad Car Springs*.—Patent dated April 21, 1863.—The spiral springs work between plates into which they are inserted by means of spiral grooves in the latter which match the coil.

Claim.—The spirally-grooved orifices in the plates A a, for securely holding the ends of the springs when used in combination with the spiral springs of a railroad car spring.

Also, the spring, constructed as herein described, in which the ends of the individual resilient parts thereof are permanently secured to the plates A a and serve the purpose of firmly holding the entire spring in one compact whole, which is equally capable of resilience under tensile, compressive, or lateral strains, without the intervention of lugs, bolts, rivets, or stays, in the manner and for the purpose herein set forth.

No. 38,256.—CHARLES J. WOOLSON, of Cleveland, Ohio.—*Improvement in Ash Boxes for Stoves*.—Patent dated April 21, 1863.—The invention consists of a detached ash-box to be fastened below the fire-door to the oven door or side plate of the stove to catch the ashes as they are scraped or fall out of the fire chamber.

Claim.—Attaching a portable ash-box, when constructed as described, to the oven or side plate of a cooking stove, below the fire-door, in the manner and for the purposes substantially as set forth.

No. 38,257.—BENJAMIN Q. BUDDING, of Milford, Mass., assignor to BENJAMIN D. GODFREY, of same place.—*Improved Rolling and Polishing Machine*.—Patent dated April 21, 1863.—The object of this machine is to dress, roll, and solidify the soles of boots or shoes, and this is accomplished by setting the last on which the boot is fixed on the upper end of an arm, which is capable of being inclined and controlled by springs and levers, so as to present the sole at any required inclination; a rest supports the toe and a roller is caused to traverse with a reciprocating motion over the sole, moving on a slide and actuated by a pitman and crank from a wheel on a vertical axis; the required pressure is given by a treadle attached by a rod to the end of the slide ways on which the roller carriage traverses, and which is capable of angular movements to suit the requirements of the work.

Claim.—Combining with a holding mechanism a mechanism which, while carrying a roll or rubber back and forth, at the same time permits vertical and angular movements to the roll or rubber, for the purpose of adaptation to curved or irregular surfaces or outlines.

Also, controlling the clamping or holding of the matter to be operated on through the medium of the treadle j, and its spring o, the ratchet f', pawl m, and its spring n, and stop q, or their equivalents.

Also, combining with the ways a a', over which the rubber or roll is reciprocated, the transverse or rocking levers b', and lever f, operating together for the purpose as above set forth.

No. 38,258.—GEORGE CLARK, of Sandusky, Ohio, assignor to Self and ROBERT DUNBAR, of Buffalo, N. Y.—*Improvement in Grain Cleaners*.—Patent dated April 21, 1863.—The grain is admitted into a central chamber, from whence it is distributed by the conical valve C', and the cone C, into an annular chamber, where the blast of air carries light grain, and offal, upwards and into the chamber under the dome; here the heavier particles fall and are discharged at the spout Q, while the lighter ones go to the suction blower, and are driven through it out of the machine. At the base of the drum is a cylindrical casing, which projecting downwards, deflects a larger or smaller proportion of offal to the lower discharge.

Claim.—First, the cylinders or shells A A', arranged with a suction air space B between them, in combination with the adjustable valve T, for the purposes and substantially as described.

Second, the cone distributor C, and automatic cone apex c', in combination with the cylinders or shells A A', and central grain supply tube F, for the purposes and substantially as set forth.

No. 38,259.—DE GRASSE FOWLER, jr., assignor to Self and MERWIN FOWLER, of Northford, New Haven county, Conn.—*Improvement in Paper Cards for Hooks and Eyes*.—Patent dated April 21, 1863.—Strips are punched up from the card which form tongues for the attachment of the hooks and eyes.

Claim.—The attachment of hooks and eyes, by the means of tongues or strips partially separated and projecting from the card, substantially as hereinbefore set forth.

No. 38,260.—A. W. HALL, of St. Louis, Mo., assignor to Self and B. W. ROBINSON, of South Reading, Mass.—*Improvement in Steam Ploughs*.—Patent dated April 21, 1863.—This locomotive steam engine has a gang of ploughs attached to it, and draws itself and them by means of a rope which is stretched across the field and which passes between traction pulleys on the engine.

Claim.—The employment of a steam engine or its equivalent motive power, in combination with a series of two or more traction pulleys ff, to be used in connexion with a rope extended across and properly secured at each end of the field; all being constructed and arranged to operate in such manner that the said motive power may be made to draw itself and the gang of ploughs attached across the field, substantially as herein described and represented.

No. 38,261.—CHARLES W. S. HEATON, of Belleville, St. Clair county, Ill., assignor to JAREZ J. PIGGOTT and HENRY REUTCHLER, of same place.—*Improvement in Cultivators*.—Patent dated April 21, 1863.—This invention consists of a two-wheeled cultivator with the plough-beams hinged at their forward ends, and the frame so arranged as to straddle the row of half-grown corn without breaking it; the various adjustments of the parts and the details of construction are defined in the claims.

Claim.—First, the truss-frame A, constructed in the manner described, in combination with short axles and vertical outside hangers i i, as and for the purpose set forth.

Second, the guard-brace E, arranged and operating substantially as described.

Third, the combination of the long tongues or poles K' K', neck yoke M, reach L, and brace N, substantially as and for the purposes set forth.

Fourth, the combination of the adjustable seat O, reach L, long tongues K' K', neck yoke M, and brace N, substantially in the manner described.

Fifth, a shovel beam formed of two parts B B', which make an angle, in combination with a slotted standard s, which is adjustable, substantially as and for the purposes set forth.

Sixth, the combination of the jury-brace *t*, which is adjustable, with the double beam *B B'*, and slotted standard *s*, substantially as and for the purpose set forth.

Seventh, the arrangement of the foot levers *n*, curved bars *p p*, notched cross-piece *q*, roller *m*, and cords or chains *o*, substantially as and for the purpose set forth.

Eighth, the arrangement of the slotted adjusting pieces *c*, pendent share-beams, and draught device *I*, with single swingletrees and frame *A*, and outside hangers *i i*, in the manner and for the purpose described.

Ninth, the combination of the slotted pieces *C*, brace rod *E*, frame *A*, and pendent share-beams, substantially as and for the purpose set forth.

No. 38,262.—JOHN JENNINGS, of Birmingham, England, assignor to S. & J. MYERS, of Boston, Mass.—*Improvement in Spectacles*.—Patent dated April 21, 1863.—The central bridge piece of these self-supporting spectacles is elongated and made of a harp-shape, to embrace the nose more perfectly than two mere salient edges.

Claim.—The spring harp-shaped bow *b*, when united to the lense frames *a a*, as shown, to make them self-supporting, and when so united as to admit of being spread without much deviation from the centre of vision, as herein represented.

No. 38,263.—ANSON JUDSON, assignor to Self, LEMUEL BEERS, and FREDERIC W. BEERS, of Brooklyn, N. Y.—*Improvement in Coal-Oil Lamps*.—Patent dated April 21, 1863.—The burner of this lamp has panes of translucent material in a metallic frame, or a cone of said material on a metallic foot.

Claim.—The construction of the cone of a flat-wick kerosene, petroleum, or coal-oil lamp partly of transparent or translucent material and partly of metal; the two being combined together as hereinbefore set forth or in manner substantially equivalent.

No. 38,264.—WILLIAM A. PURVIS, of Madrid, St. Lawrence county, N. Y., assignor to DAVID W. BALDWIN, of Watertown, N. Y.—*Improvements in Drag Saw*.—Patent dated April 21, 1863.—The log-supporting frame is set transversely with the saw frame, and the former moved when desired by throwing the driving mechanism in gear with a drum which draws upon the rope by which the log-carrier is advanced. The log is fastened to the carriage by a sliding adjustable yoke mounted upon the log-frame, and the saw is guided by a swinging guide frame with side braces to prevent lateral deflection.

Claim.—First, the combination of a saw frame with a transverse log-supporting frame and a mechanism for drawing up the log, so constructed and arranged in relation to the saw-driving mechanism that the latter may be caused to operate the former at pleasure, substantially as set forth.

Second, the combination of the log-supporting frame with a sliding and adjustable yoke constructed as herein described to firmly grasp logs of any dimensions and immovably to hold the same to the action of the saw substantially as set forth.

Third, the combination of the saw-driving mechanism with the yoke mounted upon the transverse log-frame and an adjustable friction or other gear so constructed and arranged and operating that the said yoke may be slid along the said frame and the log drawn up to the action of the saw the requisite distances at the will of the operator, substantially as set forth.

Fourth, connecting the one end of the shaft of the adjustable friction or other gear with a spring lever pivoted to the frame, while its other end is placed in fixed bearings in the frame, substantially as set forth.

Fifth, the combination with the saw-driving mechanism of a swinging guide frame and the saw guide block, so that the saw, in its reciprocating play, may be properly guided, at the same time allowing it to descend during the progress of the work, substantially as set forth.

Sixth, the employment in combination with a reciprocating saw-blade of converging side braces, whereby the flexible saw is, during part of its operation, literally stiffened, substantially as set forth.

No. 38,265.—O. C. SMITH, of Salem, Mass., assignor to A. N. CLARK, of Boston, Mass.—*Improvement in Looms*.—Patent dated April 21, 1863.—This loom is adapted to the weaving of elastic fabrics, and the points of improvement consist in a swinging frame to take up the slack of the warp which has passed between the elastic and non-elastic rollers which regulate the tension; and also in a method of driving the shuttles by reciprocating racks and pinions, which engage with teeth on the sides of the shuttles.

Claim.—First, the swinging frame *j* arranged and operating substantially as hereinabove described, and for the purpose of taking up the slack in the warp threads.

Second, the elastic and non-elastic nipping and feeding rollers operating together and upon the elastic threads passing between them, substantially as hereinabove described.

Third, the peculiar arrangement of devices herein described for operating the shuttles of the loom, the same consisting of the rack bars *a a'*, pinions *t t*, &c., and vertical lever *b'*, connected with and receiving motion from the driving shaft of the loom, substantially as set forth.

No. 38,266.—JOHN TAGGART, of Roxbury, Mass., assignor to Self and LIVERAS HULL, of Charlestown, Mass.—*Improvement in Mounting and Operating Ordnance*.—Patent dated

April 21, 1863.—The chassis on which the cannon are mounted has a rotary movement on an axis parallel with the motion of the gun as it is run "in battery," so that while one is in its usual position on the top, the other preserves its attachment to the carriage and chassis, but is suspended below.

Claim.—Either one or two cannons and a rotary chassis or slide frame, arranged and combined in manner and so as to operate together substantially as specified.

Also, a pivot carriage or traversing platform, one or two cannons, and a rotary chassis or frame, combined and arranged in manner so as to operate substantially as above specified.

No. 38,267.—RUDOLF WAGER, of Lancaster, Pa., assignor to Self and GUSTAVUS GROEZINGER, of same place.—*Improved Liquid Composition for Bating Skins or Hides*.—Patent dated April 21, 1863.—After the hides have been limed, they are soaked in a liquor prepared as follows: For a batch of fifty hides, take eight pounds muriatic acid, eight pounds aquafortis, three pounds common salt, and add water till Baume's hydrometer will indicate 36°. Fifteen to twenty minutes in this solution will remove the lime. For smaller skins the strength is reduced 30° and 20°.

Claim.—The materials added to water, in the formation of the bate, in the manner substantially as set forth, in the process of treating skins or hides for the purpose specified.

No. 38,268.—SAMUEL S. WILLIAMS, of Pittsburg, Pa.—*Improvement in Water Elevators*.—Patent dated April 21, 1863.—The improvements are in the bucket and the mode of tripping; the former has a partial covering, on which are hooks, one of which, as the bucket rises, engages with a tripping bar, which is pivoted to the sides of the curb, so as to tilt the bucket, and at the same time draw it out of the perpendicular to discharge the water into the spouts.

Claim.—The partial covering to the top of a tilting well-bucket, with an opening on each side of the bale, substantially as described.

Also, the yielding trip for tilting the buckets, constructed and arranged substantially as described—that is to say, having its centre of motion below the point at which it first comes in contact with the top of the buckets, and hence descending in the line of an arc of a circle as it is carried over the trough.

Also, in combination with the yielding trip, the hooks or other equivalent device to engage the trip, when placed back of the mouth or opening in the buckets for the discharge of the water, so that the water, as it is discharged from the bucket, shall not run over the hook and trip, substantially as described.

No. 38,269.—ENOCH OSGOOD, of Boston, Mass.—*Improvement in Self-balancing and Self-closing Faucets*.—Patent dated April 21, 1863.—In the vertical chamber of the faucet is a valve closing by an upward motion, and whose stem, passing upward, is connected to a diaphragm of such a size as that the pressure of water between them will keep the valve closed, except when forcibly opened by pressure upon the stem of the valve, which may be regulated to suit the purposes of a water-closet, or otherwise.

Claim.—First, a valve and a diaphragm connected together and arranged as herein described to hold and resist any pressure of fluids that may come between them to pass out through the valve for use, the diaphragm to be any degree larger than the valve requisite to give it any closing power wanted, the valve closing against the current of water, when relieved of the action of the lever *K*, or its equivalent.

Second, in combination with the foregoing, an adjustable graduating pressure, attached to resist the closing of the valve as desired for water-closets, and other purposes, substantially as and for the purpose herein described.

No. 38,270.—J. A. THOMPSON, of Geneva, N. Y.—*Improvement in Filters*.—Patent issued April 21, 1863.—Antedated November 29, 1861.—The filter is divided into strainers and separators, disinfecting, decolorizing, and deodorizing sections, arranged so that the water passes through them serially, the coarser sediment being arrested by cloths which may be readily renewed. The ice is placed in a chamber of non-conducting material.

Claim.—A filter and cooler for water and other liquids, constructed and arranged and operated substantially as described.

No. 38,271.—S. ACKLEY, of Hudson, Mich.—*Foot-Warmer*.—Patent dated April 28, 1863.—A foot-table is made of two sheets of metal attached to each other at or near the ends, and kept open in an elliptical form by studs *f*, or other suitable contrivances. The lower sheet is shorter, or narrower, than the upper one, and constitutes a deflector for the flame and heat of the lamp. The top or upper sheet is of the full width of the frame, in which the contrivance is enclosed so as to retain the heat within the frame and between the two sheets of metal, of which the foot-table is composed, and also to allow the heat to pass between the upper and lower sheets. The table is made to rest on stays or bearings attached to the frame. The lamp is held in position by slides at the bottom of the frame so as to allow of its removal for trimming, and is furnished with a curved reflector *m* of sheet metal attached to the wick tube.

Claim.—A foot-table *d d* of a foot-warmer or stove, constructed substantially in manner as and for the purpose described.

No. 38,272.—J. HOLMES AGNEW, of Dobb's Ferry, N. Y.—*Improvement in Boots*.—Patent dated April 28, 1863.—The inventor makes an incision in the instep of a boot two or three inches long, according to the size of the boots. Below the incision he places a transverse

No. 38,273.—J. A. BOWLUS, of Fremont, Sandusky county, Ohio.—*Improvement in Sugar Evaporators*.—Patent dated April 28, 1863.—The object of this improvement is to stir up and skim the evaporating juice, and this is effected by a vibrating skimmer which is attached to

No. 38,272.—J. HOLMES AGNEW, of Dobb's Ferry, N. Y.—*Improvement in Boots*.—Patent dated April 28, 1863.—The inventor makes an incision in the instep of a boot two or three inches long, according to the size of the boots. Below the incision he places a tongue or strip of leather fastened at both ends, so as to allow the foot to pass it. The two sides of the incision are provided with eyelets so that it can be laced. When, after long walking, or continued riding, the feet are swollen, the lacing can be loosened, and after the swelling of the feet subsides it can be tightened again.

Claim.—As an improved article of manufacture a boot having an opening or incision B in its instep provided with a lacing D, or other suitable fastening, and covered by a tongue C, attached at both ends to the inner side of the boot below the opening or incision; all substantially as set forth.

No. 38,273.—NORMAN ALLEN, of West Meriden, Conn.—*Improvement in Vices*.—Patent dated April 28, 1863.—The vice is mounted upon a ball fitting within a socket in a pair of jaws, which are pivoted at one end to the bed-plate, and at the other or free end are enclosed with a clasp provided with a set screw and a cam lever, by means of which the ball may be grasped to secure the vice in any position or released to permit its adjustment.

Claim.—The combination of the vice and universal joint, when the latter is provided with adjustable jaws or a clamp having a clasp and lever, or an equivalent fastening applied to it, and all arranged to operate as and for the purpose specified.

No. 38,274.—JOSEPH ANTHONY, of Greenbush, Rensselaer county, N. Y.—*Improvement in Railroads*.—Patent dated April 28, 1863.—This invention consists in appliances for securing the rails firmly in their place laterally and vertically, and preventing them being displaced by the jarring incident to their use.

Claim.—The following devices as described and for the purposes set forth in the above specification: First, the anchor-sleeper; second, the elastic cushion having double flanges; third, the combination of the anchor-sleeper, elastic cushion, the wedge or block, the rail, the sleeper, and the gage bar.

No. 38,275.—THOMAS D. AYLSWORTH, of Pine Bend, Dacotah county, Minn.—*Improvement in Grain Drills*.—Patent dated April 28, 1863.—This instrument consists of a roller in a frame which is preceded by a set of drag-shares and a seeding box with spouts. The shares are of a V-shape and attached by springs to a rock-shaft, by whose rotation under the actuation of a lever the shares are caused to penetrate more or less deeply into the ground. This rotation brings a pressure upon the card by which the seed roller derives its motion from the shaft.

Claim.—First, the V-shaped drill teeth H attached to the rock-shaft G by means of the springs I I, in the manner and for the purpose set forth.

Second, the combination of the teeth H, rock-shaft G, and lever K, provided with the pulley i, as and for the purposes above described.

Third, the combination of the teeth H, tubes J, and seed-rollers D, provided with adjustable cells as above set forth.

Fourth, mounting a seeding machine, provided with the teeth H, rock-shaft G, and lever K, upon rollers A A, in the manner and for the purposes above set forth.

No. 38,276.—CYRUS W. BALDWIN, of Boston, Mass.—*Improvement in Sewing Machines*.—Patent dated April 28, 1863.—The features embraced in this improvement are several, and may be especially examined by reference to the claim and drawings. They apply to a revolving reversible hook in a circular head to take and release the loop, a spool-holder with spreaders, with other appliances.

Claim.—First, the revolving and reversible hook K, in combination with the circular head H and its accompanying devices for enabling the hook to take and release the loop, constructed and operated substantially as herein described and for the purposes set forth.

Second, the bobbin or spool-holder Q, with the spreaders g g, constructed and operated substantially as herein described and for the purposes set forth.

Third, the revolving hook K, constructed and operated as described in my first claim, in combination with the bobbin or spool-holder and spreaders as described in my second claim, the whole constructed and operating as and for the purposes herein described and set forth.

Fourth, the adjustable cam g', with the spring i, the screw j', the cylinder b', and the slot k', in connexion with the shaft c, constructed and operating substantially as herein described for the purposes set forth.

Fifth, the adjustable cam g', constructed and operating as described in my fourth claim, in combination with the cam or eccentric c', and also with the spring feeder e' and rough feeder f, the whole constructed and operated as herein described and for the purpose herein set forth.

No. 38,277.—N. P. BASSETT, of Fulton, Oswego county, N. Y.—*Improvement in Fly Traps*.—Patent dated April 28, 1863.—This improvement consists in an admitting and detaining cover for an ordinary tumbler, it having a hole in the middle with a flange around its inner edge.

Claim.—The cover B, when provided with an opening c, surrounded at its lower edge by a flange d, and used in combination with a tumbler A, or other similar or suitable vessel, to form an improved fly-trap as herein set forth.

No. 38,278.—J. A. BOWLUS, of Fremont, Sandusky county, Ohio.—*Improvement in Sugar Evaporators*.—Patent dated April 28, 1863.—The object of this improvement is to stir up and skim the evaporating juice, and this is effected by a vibrating skimmer which is attached to a segment wheel, and as it vibrates, traverses by the mashing of the wheels of the segment in those of a rack on the end of the pan, sweeping the scum into side chambers provided for its reception.

Claim.—First, the arrangement of oscillating arms e with slats g, in combination with the shaft f, toothed segments h, and racks i, and with inclined sides b of the pan A, constructed and operating in the manner and for the purpose substantially as specified.

Second, the arrangement of the side channels E, in combination with the skimmer D and pan A, as and for the purpose shown and described.

No. 38,279.—CHRISTOPHER C. BRAND, of Norwich, Conn.—*Improvement in Revolving Fire-arm*.—Patent dated April 28, 1863.—This revolver has a cylinder shorter than the cartridge, and as the cylinder is rotated to bring another cartridge to the barrel, it is drawn back and again advanced to its position; in this movement the lock participates, and while the stock, barrel and trigger retain their permanent connexion, the sliding portions operated by the lever move in recesses in the stock which act as guides to the cylinder in its motions; a percussion pin located within the case transmits the blow of the hammer.

Claim.—First, the combination of a cylinder shorter than the length of the cartridge case used therein, and having, when operated, a compound back-and-forth and rotary motion, and a lock in such a manner that these two move together in a recess or recesses in the stock while the stock remains permanently connected with the barrel of the fire-arm, substantially as hereinbefore set forth.

Second, the combination with a cylinder having a sliding and rotary motion, and a lock moving with the cylinder to and from the barrel in a recess in the stock of a trigger, permanently connected with the stock, the whole being arranged to operate substantially as set forth.

Third, the combination with a sliding revolving cylinder, sliding with the lock in a recess or recesses in the stock of a lock case of such construction that it performs the functions of guiding the cylinder and protecting the lock, while moving to and from the barrel, substantially as herein set forth.

Fourth, the combination with a sliding revolving cylinder and a lock containing guide case when moving together in recesses in the stock, to and from the barrel, of a percussion pin located within said case, to transmit the blow of the hammer to the cartridge in the barrel, substantially as set forth.

Fifth, the combination of a lever which moves the sliding and revolving cylinder in a recess of the stock to and from the barrel, and of a mechanism for operating the revolution of the cylinder under such arrangement that when the said lever is raised on a pivot on the rear end thereof, the cylinder is drawn back and in line with the barrel and rotated upon its axis, substantially as herein set forth.

No. 38,280.—CHRISTOPHER C. BRAND, of Norwich, New London county, Conn.—*Improvement in Breech-loading Fire-arm*.—Patent dated April 28, 1863.—The breech-block is recessed to receive the flanged end of the cartridge, which is thus constructed to enable the casing to be drawn more readily from the barrel after discharge. The breech-pin carries the lock and slides back and forth under the impact of a lever and link, and it is provided with a bolt at its forward part which enters a socket under the barrel, forming a guide and stay, the main-spring being located within the cavity of the bolt.

Claim.—First, in breech-loading fire-arms in which a breech-pin is used, sliding in a recess in the stock and moving together with the lock to and from the barrel, the breech-block recessed in front to receive the flanged end of the cartridge, in combination with a hammer and hook, the latter being pivoted by a friction joint in the breech-block, and actuated by the hammer, substantially in the manner and for the purposes hereinbefore set forth.

Second, in breech-loading fire-arms, in which a sliding breech-pin, together with the lock, is moved to and from the barrel by a lever and an intermediate link, as described, guiding the said breech-pin by means of a hollow guide bolt made in one piece with or permanently attached to the said breech-pin, in combination with the arrangement of the main-spring within the cavity of the bolt, substantially in the manner and for the purpose hereinbefore set forth.

No. 38,281.—S. C. BRINER, of Middletown, Dauphin county, Pa.—*Improvement in Horse Rakes*.—Patent dated April 28, 1863.—This invention consists of a clearer or vibrating rod, and its connexions, which is so arranged that as the tooth bar is tripped for the discharge of the hay, this bar, protruding within the range of the teeth, sweeps between in such a way as to disengage the load. It consists of three parts, the clearer, rock shaft, and connecting rod, the latter being attached to the vibrating arm which actuates the tripping mechanism.

Claim.—The combination with the teeth C, treadle K, levers J H, and connecting rod I of the pivoted frame N a, toothed clearer O a, and connecting rod P, all constructed, arranged, and operating in the manner and for the purposes herein shown and described.

No. 38,282.—FRANKLIN H. BROWN, of Chicago, Ill.—*Improvement in Needles for Sewing Machines*.—Patent dated April 28, 1863.—This needle is made hollow from a point above

that which is reached in passing through the cloth to a point near the end, and a slit on the side of the needle with a threading hole at the top of its tubular recess affords the means of introducing the thread: a hole on the lower part of the needle makes a passage for the thread.

No. 38,283.—THOMAS COBLEY and JAMES C. COOMBE, of Hahl, Bavaria, and Hexton, Great Britain.—*Improvement in the Manufacture of Porcelain, Glass, &c., by the use of Fluorine*.

that which is reached in passing through the cloth to a point near the end, and a slit on the side of the needle with a threading hole at the top of its tubular recess affords the means of introducing the thread; a bulge on the lower part of the needle makes so large an opening that the needle plays freely, and a deviation in the slit above the bulge forms a lip which assists in threading the needle.

Claim.—First, the lip *d*, or its equivalent, made and constructed as and for the purposes set forth.

Second, the slit *c*, in combination with the hollow part of a needle, made and constructed as and for the purposes set forth.

Third, the threading hole *b*, in combination with a slit and hollow part of a needle, made and constructed as and for the purposes herein described.

No. 38,283.—THOMAS COBLEY, of London, England.—*Improvement in the Manufacture of White Lead.*—Patent dated April 28, 1863.—The improvement consists in grinding or crushing the lead ore, roasting it in a furnace and treating it with acetic acid in a gaseous or liquid form, in such proportions as to form a subacetate of lead. The liquor thus obtained is discolored by passing through animal charcoal, and then precipitated by allowing it to trickle down in a chamber, which is supplied with carbonic acid, whereby the excess of oxide in the subacetate is thrown down as carbonate of lead; the precipitate is then washed. To render it an oxy-carbonate it is treated with alkaline ley to withdraw the carbonic acid, and then dried for market.

Claim.—First, the manufacture of white lead from crushed or ground ore carbonates of lead, by the process set forth, or by means substantially the same.

Second, the method of treating precipitated white lead with a caustic alkaline solution for the purpose of producing an oxy-carbonate of lead, by which it is rendered more amorphous and less crystalline and the covering properties of lead are largely increased.

No. 38,284.—MILLS L. CALENDER, of New York, N. Y.—*Improvement in Lamps.*—Patent dated April 28, 1863.—The invention consists in making the body of the lamp of vulcanized India-rubber, and in the adjustment and adaptation of the parts—such as the method of attachment of the handle by a loop-spring and hook-catch; of the slide which carries the upper works of the lamp, and is retracted on a tubular guide affixed to the upper part of the handle; of the chimney case, the interior cup and cover, the chimney cap or cover, the annular reflector which may act as a shade, sliding on the chimney or suspended by a holder attachment; also, a construction of the flame orifice, so as to flatten the flame of a roundwick.

Claim.—First, the use and application of vulcanized India-rubber, gutta percha or similar material, as a lamp body, or the receptacle for oil, in combination with a wick-tube and burner.

Second, attaching the handle to the top of a lamp or burner in the manner substantially as described, by a groove loop-spring and hook-catch *F*.

Third, securing the chimney holder and appliances to the lamp or burner by a spring, for the purposes and in the manner substantially as represented; also combining the spring and handle, substantially as represented.

Fourth, using a horizontal slide or spring-slide attached to the chimney-holder for the purposes and in the manner substantially as represented.

Fifth, the perforated cup *B*, for the purposes specified.

Sixth, the cover *J* to the perforated cup *B*, when used in the manner and for the purposes substantially as described.

Seventh, a corrugated metallic chimney-case, arranged in the manner and for the purpose substantially as described.

Eighth, broadly, a lamp chimney-cap *N*, or draught protector, as described, or its equivalent.

Ninth, a metallic reflector to a lamp, with an orifice in its centre for the chimney to pass through.

Tenth, a centrally perforated metallic reflector to a lamp in combination with a suspensory or adjustable holder or attachment, whereby the reflector is secured to the chimney at any height.

Eleventh, a brevet metallic combined reflector and shade, for the purposes and in the manner as described, substantially.

Twelfth, a suspensory shade or reflector holder and slide, substantially as described when formed or cut from one piece of metal.

Thirteenth, the formation of the deflector or diaphragm *L*, where the opposite sides of the round flame orifice are raised or convex, so as to flatten the flame of a round wick.

Fourteenth, a lamp arranged with any or all the improvements substantially as described.

No. 38,285.—THOMAS COBLEY, of Hahl, Bavaria.—*Improvement in the treatment of Metallic Silicates and the Manufacture of Hydro-fluo-silicic Acid.*—Patent dated April 28, 1863.—Patented in England July 9, 1861.—The claim is sufficiently explicit.

Claim.—First, the application of fluorine for desilicizing metallic bases as herein described and set forth.

Second, the manufacture and production of fluo-silicic acid and silica by the same process simultaneously in and combination with the process for desilicizing mineral products in the manner herein described and set forth.

No. 38,286.—THOMAS COBLEY and JAMES C. COOMBE, of Hahl, Bavaria, and Hoxton, Great Britain.—*Improvement in the Manufacture of Porcelain, Glass, &c., by the use of Fluo-Silicates.*—Patent dated April 28, 1863.—Patented in England July 15, 1861.—The claims are very full and perfectly explicit.

Claim.—First, the application of fluo-silicates in combination with artificial silicates of the alkalies, alkaline earths and other earthy bases, to the manufacture of glass, pottery, porcelain and other ceramic and plastic wares, and more particularly the substitution of the fluo-silicic salts of the alkalies, alkaline earths and other earthy bases for the phosphoric compounds of the same or other bases in the manufacture of glass, pottery, porcelain, and other ceramic and plastic wares.

Second, the application of the fluo-silicates of lead and baryta, either separately or together, to the manufacture of glass and porcelain, either as a glaze or as a pigment, and either applied and used as direct or real fluo-silicates or by the admixture of any salt of lead or baryta with any fluorine or silicious or fluo-silicious material, so as to obtain the same results as if the fluo-silicate had been actually employed.

Third, the application of fluo-silicate of tin as a pigment or glaze or enamel in the manufacture of porcelain, of baryta in combination with fluo-silicate of zinc, as a substitute for lead in the manufacture of glass, and in combination with fluo-silicate of tin as a glaze or enamel in the manufacture of porcelain; and of the fluo-silicate of zinc, either alone or in combination with fluo-silicate of baryta, in the manufacture of glass, substantially as described and set forth in the body of this specification.

No. 38,287.—JAMES CANE COOMBE, of Hoxton, Middlesex, Great Britain.—*Improvement in Indurating and Preserving Stone, Cements, Wood, &c.*—Patent dated April 28, 1863.—Patented in England March 14, 1861.—The process consists in applying hydro-fluo-silicic acid to the stone or other material which contains potash, lime, or other alkali, so as to form an insoluble combination therewith; if the material does not possess the alkali, it is first to be impregnated with an alkaline solution and then treated with silicic acid. In the manufacture of artificial stone or cement, precipitated silica is mixed with lime, mortar, cement, or other material, and treated with hydro-fluo-silicic acid.

Claim.—First, the process herein described for indurating and preserving stone, brick, slates, wood, and other analogous materials, by the use of a solution of the fluo-silicic acid, in the manner substantially as set forth.

Second, the process herein described for the manufacture of artificial stones, mortar, cement, and such like substances, by the employment of hydro-fluo-silicic acid, precipitated silica, lime and alkalies, in the manner set forth.

No. 38,288.—JAMES A. COWLES, of Chicago, Illinois.—*Improved Clasp for Closing Preserve Jars.*—Patent dated April 28, 1863.—The jar has a shouldered neck with a conical stopper, the edges of the latter resting upon packing on the shoulder in the neck of the jar; a double wire clasp, whose bow fits upon the summit of the stopper, and whose ends embrace firmly the neck of the bottle under the shoulder, is then pushed on, and, by its rigidity, binds the stopper firmly to its seat.

Claim.—The clasp *d d d*, operating and working substantially as described.

No. 38,289.—C. O. CROSBY and HENRY KELLOGG, of New Haven, Conn.—*Improvement in Double-Frilling.*—Patent dated April 28, 1863.—The claim is perfectly clear, and needs no explanation.

Claim.—The article of manufacture called double-frilling, having the essential characteristics substantially as described, or, in other words, made of one piece with a centre line of crimps or plaits, each with a well defined edge secured in place and held flat and smooth by at least two longitudinal seams, with two frills composed of crimps, extending outwards from such seams, the crimps or plaits outside of the seams gradually expanding to the edges of the completed article.

No. 38,290.—EPHRAIM CULVER, of Shelburne, Franklin county, Mass., and THOMAS J. POMEROY, of East Hampden, Hampshire county, Mass.—*Improvement in Window Sash Fasteners.*—Patent dated April 28, 1863.—A vertical rod is attached to the window casing, above and below, and projecting from each sash is a post, through which the rod passes and to which it is fastened by a set screw, retaining the sash in any position.

Claim.—The rod *C*, the posts *A* and *B*, and the thumb-screws *E* or *F*, in combination for the purpose herein specified.

No. 38,291.—LEWIS H. DAVIS, of West Chester, Pa.—*Improvement in Pumps.*—Patent dated April 28, 1863.—The hollow cylinder is arranged within the barrel, and the piston works in packing between the two; the water is alternately taken in and expelled at each end by means of ports and valve chambers, in which are rolling valves. The packing of the piston rod, and of the piston, are both tightened by screwing in the gland or collar at the end of the barrel which compresses the packing against which it impinges, and also drives the cylinder against the packing in which the piston works.

Claim.—First, the hollow cylinder G, arranged within the barrel A, between the cover b and packing H, substantially as and for the purpose herein set forth.

Second, in combination with the packing H, cylinder G, and its projection a, the gland or follower d, the whole being so arranged and constructed that the packing for the piston and piston rod may be tightened simultaneously by forcing the said follower d in the cover b.

Third, the chambers K K' and L, with their respective valves and openings, the whole being arranged in respect to each other, and to the chambers of the barrel, to the air vessel, and to the suction pipe, substantially as set forth.

No. 38,292.—WILLIAM H. DEGGES, of Washington, D. C.—*Improved Propeller.*—Patent dated April 28, 1863.—The propeller is formed of two blades, projecting from the hub, and a cover or cap, which projects over to prevent "slip."

Claim.—Forming the blades or threads of the screw of the two plates b b and the cap d, as and for the purposes herein set forth.

No. 38,293.—WILLIAM H. DEGGES, of Washington, D. C.—*Improved Rudder.*—Patent dated April 28, 1863.—The shape of the horizontal section of the rudder is that of a wedge with a rounded head; the latter sets within a groove in the stern-post. The sides of the rudder are grooved where they abut upon the edges of the stern-post when the rudder is "hard up."

Claim.—Constructing rudders of the form and having the front surface and the groove at its sides, as herein set forth.

No. 38,294.—WILLIAM H. DEGGES, of Washington, D. C.—*Improvement in Ship-Building.*—Patent dated April 28, 1863.—The under-side of the vessel is recessed by longitudinal depressions continuous throughout its entire length, in which work the screw propellers out of the range of shot or collision.

Claim.—As an improvement in the construction of vessels, so forming the sides thereof as that recesses continuous throughout the length of the vessel will exist therein, as and for the purposes herein set forth.

No. 38,295.—WILLIAM D. DORSEY, of Decatur, Macon county, Ill.—*Improvement in Cultivators.*—Patent dated April 28, 1863.—The machine consists of a frame on wheels, with a draught pole and two beams carrying two shares attached to the frame by a clevis in front and resting upon the hind transverse beam at their rear ends. The beams are raised and the shares withdrawn from the ground by the feet of the driver on levers connected by rods to the plough beams.

Claim.—The arrangement, in the manner herein shown and described, of the two adjustable share frames I I and the operating foot levers L L with each other and with the bars E E, the pole A, and the driver's seat C, all as set forth.

No. 38,296.—DANIEL DRAWBAUGH, of Eberly's Mills, Cumberland county, Pa.—*Improvement in Millstones.*—Patent dated April 28, 1863.—The cone on the top of the driving spindle is made removable, and the arms on the spindle which drive the balance rines are so arranged with set screws as to impinge upon each of the arms equally.

Claim.—First, in combination with the driving arms and the rines the set screws for making uniform and equal contact between them, and thus regulate the driving force at all four points of contact, substantially as and for the purpose described.

Second, supporting the runner on the top of the spindle by means of a removable or adjustable pin or plug, for the purpose of preserving this point of suspension as near the centre of the stone, as it wears away, as possible, substantially as described.

No. 38,297.—ASAHEL K. EATON, of New York, N. Y.—*Improved Chrome Compound.*—Patent dated April 28, 1863.—The invention consists of the manufacture of chromite of baryta. A formula is given.

Claim.—The chromite of baryta as a new article of manufacture.

No. 38,298.—ASAHEL K. EATON, of New York, N. Y.—*Improvement in Ink for Printing Bank Notes, &c.*—Patent dated April 28, 1863.—The improvement consists in the use of chromite of baryta as an ingredient in printing ink, it being unaffected by re-agents, and its color being a guard against counterfeiting by photography.

Claim.—The use of the chromite of baryta as a tint for the protection of bank notes and other similar work.

No. 38,299.—MATT ELLIS, of South Carver, Plymouth county, Mass.—*Improvement in Farmers' Boilers.*—Patent dated April 28, 1863.—The invention consists in making a flue around the boiler, inside of the casing, by means of a cut-off and rim, so that the heat is compelled to go around instead of passing immediately into the chimney.

Claim.—The cut-off g g and rim b b b b, in connexion with the cylinder or drum a a a a and boiler K, as and for the purposes specified.

No. 38,300.—Cancelled.

No. 38,301.—MOSES G. FARMER, of Salem, Mass.—*Improved Alloys of Aluminum.*—Patent issued April 28, 1863.—Antedated January 3, 1863.—The improvement consists in combining copper and aluminum with one or more light-colored metals, the proportions varying for different purposes, such as composition for bearings of machinery, gun metal, or as a substitute for gold in jewelry, watch-cases, chains, &c.

Claim.—The alloys within described as compounded substantially of the metals and in the proportions set forth.

No. 38,302.—GEO. FINLEY, of Collins Township, Alleghany county, Pa.—*Improvement in Adjustable Lamp-wick.*—Patent dated April 28, 1863.—The improvement consists in lengthening the frame of the burner below the level of the base of the cone, leaving a sufficient opening to introduce a pair of scissors to trim the wick, or a match to light it; and in so constructing the wick-holder as to slide downwards in the burner and to lower the wick sufficiently for this purpose where it is out of the influence of the draught in the cone and chimney.

Claim.—Constructing and arranging the wick-tube in relation to the burner and cone or cap of lamps, substantially as hereinbefore described, so that the wick-tube may be depressed at pleasure, so far as to bring the top of the wick below the base of the cone or cap, and away from the influence of the draught produced by the cone, the burner frame below the cone being furnished with an opening or openings through which the wick can be lighted or trimmed for the purposes hereinbefore set forth.

No. 38,303.—ORLANDO V. FLORA, of Cincinnati, Ohio.—*Improvement in Carbon-Oil Lamps.*—Patent dated April 28, 1863.—The object of this improvement is to prevent the perturbation of the light caused by moving the lamp, and consists of a casing of corrugated and perforated sheet metal around the burner, and a flange forming a dish around the base to catch the air in the upward motion of the lamp.

Claim.—The corrugated body or case C of perforated metal or material, substantially as and for the purposes herein specified.

Also, the concave flange D, in combination with the corrugated, perforated body or case, substantially as and for the purpose herein set forth.

No. 38,304.—JOHN W. POSTER, of Racine, Wis.—*Improvement in Automatic Gates.*—Patent dated April 28, 1863.—This gate is on the lazy tongs principle and divides in the middle and separates to both sides by the weight of the carriage or other moving body on the platform on either side of it.

Claim.—First, applying the power to open and close the gate to the ends of bars N' O', working in guide slots o above and below stationary points i, upon which the gate is supported.

Second, the boss E, working upon a vertical guide-rod F, and employed in combination with levers C and H to communicate the required motion to the gate or gates from a weight applied to any part of the platform B.

Third, the described combination and arrangement of the levers C H K M, connecting rods J L R and R', and springs G and S, with the platform B and gate or gates, for the purposes specified.

No. 38,305.—BENJAMIN GARVEY, of New York, N. Y.—*Improvement in Coal-Oil Lamps.*—Patent dated April 28, 1863.—The invention consists in proportioning the size of the wick-tubes to the quantity of carbon in the vapor of coal-oil so that the oil will be perfectly consumed without smoking; and to obtain a given amount of light, a sufficient number of these tubes are placed side by side so that their combined flames are equivalent to a large one and expose a greater relative surface to the oxygen of the air.

Claim.—First, wick-tubes, the diameter of which is determined in the manner and for the purpose substantially described in the accompanying specification, taking one-sixteenth of an inch as the average diameter of tubes for general use.

Second, the combination of two or more such wick-tubes, for the purpose of producing one large flame by the combination of two or more small flames, in the manner described substantially in the accompanying specification.

No. 38,306.—ROBERT H. GRATRICK, of New York, N. Y.—*Improvement in Dyeing Wool, Silk, &c., with Aniline Colors.*—Patent dated April 28, 1863.—The improvement applies to animal substances, which are prepared for dyeing by being steeped in a solution of chloride of lime of the strength of 4° Twaddle, and then in a solution of sulphuric acid of a strength of 2° Twaddle. They are then washed and are ready for dyeing in the ordinary manner.

Claim.—The application to yarns or fabrics made of worsted, wool, silk, or other animal substances, of the solution herein specified, preparatory to dyeing with colors derived from aniline or analogous substances, substantially in the manner described.

No. 38,307.—ISAAC HALDERMAN, of Bucyrus, Ohio.—*Improved Washing Machine.*—Patent dated April 28, 1863.—The semi-cylindrical rubber is worked by a handle, and is suspended by gudgeons in serrated boxes in the sides of the machine. Each roller in the rubber and concave is composed of a series of truncated cones which are arranged relatively to each

other so that the depressions of one shall match the salient edges of the other, and the suds box is put together with dovetail joints.

Claim.—First, the serrated boxes *a*, for the purpose herein fully described.

Second, the construction and arrangement of the truncated rollers *k*, in the manner herein set forth.

Third, the boxes *a*, combined with the rollers *k*, and the manner of constructing the tub *B*, the whole arranged substantially as herein set forth.

No. 38,308.—WM. M. HENDERSON, of Baltimore, Md.—*Improvement in Pumps*.—Patent dated April 28, 1863.—This invention consists of two valvular pistons on the same rod and working in a horizontal cylinder, which has a central induction valve and end eduction valves, through which the water passes into an air vessel above.

Claim.—First, the arrangement of the pump barrel *A* and the air vessel *C*, as herein set forth.

Second, two suction valvular pistons connected and moving together in the same line in a single barrel; the valves opening at different times and in opposite directions, yet moving with their pistons through the cylinder at the same time and in the same direction at any one stroke, in combination with a cylinder having a central suction pipe attached thereto, so as to be always between the two suction valvular pistons at all points of the stroke, as described.

No. 38,309.—JAMES HILL, of Providence, R. I.—*Improved Mode of Pointing Tags of Shoe Strings*.—Patent dated April 28, 1863.—The end of the tag is cut obliquely and the cut edges rolled together so as to form a conical end.

Claim.—Cutting a tag slantwise at its end and compressing and reducing it tapering or conically, the whole being substantially as represented.

No. 38,310.—PAUL KELLAR and JOSHUA ROGERS, of Sublette, Lee county, Ill.—*Improved Washing Machine*.—Patent dated April 28, 1863.—The vibrating rubber is of a semi-cylindrical form and has a perforated vertical partition; the concave on which it works consists of two pieces which are placed within the suds box and removable therefrom.

Claim.—The cross partition *G* dividing the rubber *D* into two compartments, when the said rubber is used in connexion with the removable sections *B B'*, the whole arranged, combined, and operating substantially as and for the purposes herein set forth.

No. 38,311.—STEPHEN C. KETCHUM, of Winchendon, Worcester county, Mass.—*Improved Mode of Converting Motion*.—Patent dated April 28, 1863.—The motion is derived from the shaft, which has a disk attached to it, upon which works a hooked rod with a slot in it enclosing the end of the shaft; the rod is also provided with a pin which works in a cam-groove in the face of the disk, the revolution of which communicates a reciprocating motion to the rod and an alternate circular or oscillating motion to the crank pin on the shaft to which the lower end of the rod is attached.

Claim.—The combination of the rotating shaft *E*, disk *B*, hooked and slotted rod *D*, and pin *c*, the whole arranged and operating substantially as and for the purpose herein specified.

No. 38,312.—EUGENE JOSEPH LAURENT, of France, (now residing in America.)—*Improvement in Machines for Making Trimming*.—Patent dated April 28, 1863.—On the periphery of a rotating pattern block are projections on which the braid or other trimming is placed while it is being fastened; various adjustments are placed around it, such as means for holding it steady while sewing the members of the trimming together, also a tension, bobbin spindles, and a take-up roller.

Claim.—A rotating pattern block fitted with projections suitable for holding trimming until its members are fastened together, the design of the trimming being determined by the arrangement of said projections.

Also, the combination of said rotating pattern block with means for holding it from turning, the whole operating substantially as herein set forth.

Also, the combination of said rotating pattern block with a cord tension, the whole operating substantially as herein set forth.

Also, the combination of said rotating pattern block with one or more supports for thread bobbins, substantially as herein set forth.

Also, the combination of said rotating pattern block with a holder for supporting the same, the whole operating substantially as herein set forth.

Also, the combination of the said rotating pattern block with a stripper, the whole operating substantially as herein set forth.

No. 38,313.—WM. H. MAPLE, of Chariton, Lucas county, Iowa.—*Improvement in Corn Planter*.—Patent dated April 28, 1863.—This planter has a frame and three shares—one in front to furrow out, and two behind to cover. The corn is dropped down a spout behind the forward share by means of a shaft, crank, and lever operating a seed slide.

Claim.—The shaft *K* provided with a crank *i*, and the lever *I* connected with the crank *i*, as shown, for operating the seed slide *H*, when said parts are applied to, or used in combina-

tion with, a beam *A* having three shares *E C C* attached to it, and all arranged as set forth.

No. 38,314.—ROBERT J. MARCHER, of New York, N. Y.—*Improvement in the Manufacture of Wooden Mouldings or Strips for the Frames of Mirrors, Pictures, &c.*—Patent dated April 28, 1863.—The outer part of the frame is made with an ogee or other moulding, and a bead is inserted into a groove in the inner face of said outer frame, which forms an inner finish and affords a rebate edge for the picture and glass to abut against.

Claim.—A moulding or strip for the manufacture of picture and other frames constructed of two parts or portions *A B*, connected together in the manner substantially as herein set forth.

No. 38,315.—GEORGE McCLEMENT, of Philadelphia, Pa.—*Hand Stamp*.—Patent dated April 28, 1863.—The socket has a solid face, on which the permanent letters are cut, and a slot in which the type are arranged and fastened by a temper screw. The end of the handle of the stamp abuts against the base of the type, being secured into the socket and fastened by a screw.

Claim.—First, the combination of the type box, constructed substantially as described, handle-bed *A*, and adjusting and holding devices *c* and *d*, all in the manner and for the purpose set forth.

Second, the combination of screw-threaded handle-bed *A b*, type box *B a*, and screw *d*, or its equivalent, in the manner and for the purpose described.

No. 38,316.—A. Y. McDONALD, of Dubuque, Iowa.—*Improvement in Screw Wrenches*.—Patent issued April 28, 1863.—Antedated April 8, 1863.—The shank of the stationary jaw has holes, in which a stud on the socket of the screw is dropped to adjust the movable jaw, which is further moved by the rotation of the screw which works therein.

Claim.—The sliding jaw *U* provided with the spring *E*, in combination with the stop *H* and screw *F*, the latter being fitted in an internal or female screw *a* in the jaw *D*, and the stop *H*, provided with a projection *c* to fit in holes *d* in the shank *A* of the stationary jaw *C*, substantially as and for the purpose herein set forth.

No. 38,317.—WM. L. McDOWELL, of Philadelphia, Pa.—*Improvement in Grates*.—Patent dated April 28, 1863.—The curved and horizontal portions of the two middle grate bars are removed, and there is attached to the front parts of the adjacent bars a cross-piece, on which the front end of a removable bar may rest, while its rear end is supported by a depression in the hind bar of the grate.

Claim.—Combining the draw-bar *B* with a basket grate *A* by removing the horizontal and curved portions of the two bars *a' a'*, of latter, and connecting the two adjacent bars *a2 a2* together by means of the depressed cross-piece *a3*, constructed substantially as described, to serve as a retaining support for the front end of the said draw-bar *B*, while its rear end is supported in the depression *a4*, with its upper side in the same horizontal plane as the upper sides of the remaining bars of the grate, substantially as described and set forth, for the purpose specified.

No. 38,318.—WM. L. McDOWELL, of Philadelphia, Pa.—*Improvement in Stoves*.—Patent dated April 28, 1863.—The fire-box is surrounded by a series of nearly vertical plates, of which the lower edge of one is within the upper edge of the one below it, so as to leave a space through which the heated air can pass into the apartments, the air reaching the said heating space through orifices in the annular plate which surrounds the base of the fire-box.

Claim.—First, the employment of a perforated supplementary top plate *C* in combination with the usual top plate of the base of a stove, substantially in the manner described, for the purposes specified.

Second, the employment of a series of deflecting plates *D D1 D2 D3*, arranged and supported around the cylinder or fire-box of a stove so as to operate in the manner described and for the purposes specified.

No. 38,319.—DAVID H. METCALF, of Battle Creek, Calhoun county, Mich.—*Improvement in Stoves*.—Patent dated April 28, 1863.—The wall of the lower part of the stove is made double, forming an annular air-heating chamber around the furnace or fire-box. This is supplied with air from below the fire-box through a chamber and openings around its upper margin. The air passes into the apartment through damper openings in the side of the outer chamber, and the upper cylindrical portion of the stove is made of a single thickness, and acts as a radiator.

Claim.—First, combining with a sheet-iron "air-tight" stove a short air-heating chamber *d*, perforated bottom *c c c*, air-heating chamber *E'*, and exit pipes *g g*, substantially as described.

Second, a sheet-iron "air-tight" stove, having the double bottoms *b E* and the air space *E'*, substantially as and for the purposes described.

Third, a sheet-iron "air-tight" stove so constructed, with conducting pipes *f*, or their equivalents, that it is an air-heater below and a radiator above, in the manner described.

Fourth, the damper openings *g g* and exit pipe *f* in combination with the air-chamber *d E'* and single wall top *G*, substantially as described.

other so that the depressions of one shall match the salient edges of the other, and the said box is put together with dovetail joints.

Claim.—First, the serrated boxes *a*, for the purpose herein fully described.

Second, the construction and arrangement of the truncated rollers *h*, in the manner herein set forth.

Third, the boxes *a*, combined with the rollers *h*, and the manner of constructing the tub *B*, the whole arranged substantially as herein set forth.

No. 38,308.—WM. M. HENDERSON, of Baltimore, Md.—*Improvement in Pumps*.—Patent dated April 28, 1863.—This invention consists of two valvular pistons on the same rod and working in a horizontal cylinder, which has a central induction valve and end eduction valves, through which the water passes into an air vessel above.

Claim.—First, the arrangement of the pump barrel *A* and the air vessel *C*, as herein set forth.

Second, two suction valvular pistons connected and moving together in the same line in a single barrel; the valves opening at different times and in opposite directions, yet moving with their pistons through the cylinder at the same time and in the same direction at any one stroke, in combination with a cylinder having a central suction pipe attached thereto, so as to be always between the two suction valvular pistons at all points of the stroke, as described.

No. 38,309.—JAMES HILL, of Providence, R. I.—*Improved Mode of Pointing Tags of Shoe Strings*.—Patent dated April 28, 1863.—The end of the tag is cut obliquely and the cut edges rolled together so as to form a conical end.

Claim.—Cutting a tag slantwise at its end and compressing and reducing it tapering or conically, the whole being substantially as represented.

No. 38,310.—PAUL KELLAR and JOSHUA ROGERS, of Sublette, Lee county, Ill.—*Improved Washing Machine*.—Patent dated April 28, 1863.—The vibrating rubber is of a semi-cylindrical form and has a perforated vertical partition; the concave on which it works consists of two pieces which are placed within the suds box and removable therefrom.

Claim.—The cross partition *G* dividing the rubber *D* into two compartments, when the said rubber is used in connexion with the removable sections *B B'*, the whole arranged, combined, and operating substantially as and for the purposes herein set forth.

No. 38,311.—STEPHEN C. KETCHUM, of Winchendon, Worcester county, Mass.—*Improved Mode of Converting Motion*.—Patent dated April 28, 1863.—The motion is derived from the shaft, which has a disk attached to it, upon which works a hooked rod with a slot in it enclosing the end of the shaft; the rod is also provided with a pin which works in a cam-groove in the face of the disk, the revolution of which communicates a reciprocating motion to the rod and an alternate circular or oscillating motion to the crank pin on the shaft to which the lower end of the rod is attached.

Claim.—The combination of the rotating shaft *E*, disk *B*, hooked and slotted rod *D*, and pin *c*, the whole arranged and operating substantially as and for the purpose herein specified.

No. 38,312.—EUGENE JOSEPH LAURENT, of France, (now residing in America.)—*Improvement in Machines for Making Trimming*.—Patent dated April 28, 1863.—On the periphery of a rotating pattern block are projections on which the braid or other trimming is placed while it is being fastened; various adjustments are placed around it, such as means for holding it steady while sewing the members of the trimming together, also a tension, bobbin spindles, and a take-up roller.

Claim.—A rotating pattern block fitted with projections suitable for holding trimming until its members are fastened together, the design of the trimming being determined by the arrangement of said projections.

Also, the combination of said rotating pattern block with means for holding it from turning, the whole operating substantially as herein set forth.

Also, the combination of said rotating pattern block with a cord tension, the whole operating substantially as herein set forth.

Also, the combination of said rotating pattern block with one or more supports for thread bobbins, substantially as herein set forth.

Also, the combination of said rotating pattern block with a holder for supporting the same, the whole operating substantially as herein set forth.

Also, the combination of the said rotating pattern block with a stripper, the whole operating substantially as herein set forth.

No. 38,313.—WM. H. MAPLE, of Chariton, Lucas county, Iowa.—*Improvement in Corn Planter*.—Patent dated April 28, 1863.—This planter has a frame and three shares—one in front to furrow out, and two behind to cover. The corn is dropped down a spout behind the forward share by means of a shaft, crank, and lever operating a seed slide.

Claim.—The shaft *K* provided with a crank *i*, and the lever *I* connected with the crank *i*, as shown, for operating the seed slide *H*, when said parts are applied to, or used in combina-

tion with, a beam *A* having three shares *E C C* attached to it, and all arranged as set forth.

No. 38,314.—ROBERT J. MARCHER, of New York, N. Y.—*Improvement in the Manufacture of Wooden Mouldings or Strips for the Frames of Mirrors, Pictures, &c.*—Patent dated April 28, 1863.—The outer part of the frame is made with an ogee or other moulding, and a bead is inserted into a groove in the inner face of said outer frame, which forms an inner finish and affords a rebate edge for the picture and glass to abut against.

Claim.—A moulding or strip for the manufacture of picture and other frames constructed of two parts or portions *A B*, connected together in the manner substantially as herein set forth.

No. 38,315.—GEORGE McCLEMENT, of Philadelphia, Pa.—*Hand Stamp*.—Patent dated April 28, 1863.—The socket has a solid face, on which the permanent letters are cut, and a slot in which the type are arranged and fastened by a temper screw. The end of the handle of the stamp abuts against the base of the type, being secured into the socket and fastened by a screw.

Claim.—First, the combination of the type box, constructed substantially as described, handle-bed *A*, and adjusting and holding devices *c* and *d*, all in the manner and for the purpose set forth.

Second, the combination of screw-threaded handle-bed *A b*, type box *B a*, and screw *d*, or its equivalent, in the manner and for the purpose described.

No. 38,316.—A. Y. McDONALD, of Dubuque, Iowa.—*Improvement in Screw Wrenches*.—Patent issued April 28, 1863.—Antedated April 8, 1863.—The shank of the stationary jaw has holes, in which a stud on the socket of the screw is dropped to adjust the movable jaw, which is further moved by the rotation of the screw which works therein.

Claim.—The sliding jaw *U* provided with the spring *E*, in combination with the stop *H* and screw *F*, the latter being fitted in an internal or female screw *a* in the jaw *D*, and the stop *H*, provided with a projection *c* to fit in holes *d* in the shank *A* of the stationary jaw *C*, substantially as and for the purpose herein set forth.

No. 38,317.—WM. L. McDOWELL, of Philadelphia, Pa.—*Improvement in Grates*.—Patent dated April 28, 1863.—The curved and horizontal portions of the two middle grate bars are removed, and there is attached to the front parts of the adjacent bars a cross-piece, on which the front end of a removable bar may rest, while its rear end is supported by a depression in the hind bar of the grate.

Claim.—Combining the draw-bar *B* with a basket grate *A* by removing the horizontal and curved portions of the two bars *a' a'*, of latter, and connecting the two adjacent bars *a2 a2* together by means of the depressed cross-piece *a3*, constructed substantially as described, to serve as a retaining support for the front end of the said draw-bar *B*, while its rear end is supported in the depression *a4*, with its upper side in the same horizontal plane as the upper sides of the remaining bars of the grate, substantially as described and set forth, for the purpose specified.

No. 38,318.—WM. L. McDOWELL, of Philadelphia, Pa.—*Improvement in Stoves*.—Patent dated April 28, 1863.—The fire-box is surrounded by a series of nearly vertical plates, of which the lower edge of one is within the upper edge of the one below it, so as to leave a space through which the heated air can pass into the apartments, the air reaching the said heating space through orifices in the annular plate which surrounds the base of the fire-box.

Claim.—First, the employment of a perforated supplementary top plate *C* in combination with the usual top plate of the base of a stove, substantially in the manner described, for the purposes specified.

Second, the employment of a series of deflecting plates *D D1 D2 D3*, arranged and supported around the cylinder or fire-box of a stove so as to operate in the manner described and for the purposes specified.

No. 38,319.—DAVID H. METCALF, of Battle Creek, Calhoun county, Mich.—*Improvement in Stoves*.—Patent dated April 28, 1863.—The wall of the lower part of the stove is made double, forming an annular air-heating chamber around the furnace or fire-box. This is supplied with air from below the fire-box through a chamber and openings around its upper margin. The air passes into the apartment through damper openings in the side of the outer chamber, and the upper cylindrical portion of the stove is made of a single thickness, and acts as a radiator.

Claim.—First, combining with a sheet-iron "air-tight" stove a short air-heating chamber *d*, perforated bottom *c c c*, air-heating chamber *E'*, and exit pipes *g g*, substantially as described.

Second, a sheet-iron "air-tight" stove, having the double bottoms *b E* and the air space *E'*, substantially as and for the purposes described.

Third, a sheet-iron "air-tight" stove so constructed, with conducting pipes *f*, or their equivalents, that it is an air-heater below and a radiator above, in the manner described.

Fourth, the damper openings *g g* and exit pipe *f* in combination with the air-chamber *d E'* and single wall top *G*, substantially as described.

No. 38,320.—C. A. MILLS, of Hazel Green, Grant county, Wis.—*Improvement in Coffee Roasters*.—Patent dated April 28, 1863.—The roaster is placed over a fire, and the coffee kept in motion by clock-work, driven by a spring, which likewise actuates a fan that serves as a governor for the spring, and introduces a draught of air to keep the spring cool.

Claim.—The combination of the air-entrance F and the fan D with the air-case E, the spring C, and the roasting vessel G, as herein shown and described, so that the movement of the latter will be regulated, and the spring will be kept cool, all as set forth.

No. 38,321.—DANIEL MOORE, of Brooklyn, N. Y.—*Improvement in Revolving Fire-arms*.—Patent dated April 28, 1863.—The invention consists of a revolving cylinder with chambers partially open at the rear end, and charged at the forward end; the partial opening at the rear of the chambers being covered by a fixed circular abutment so to sustain the force of the explosion, in combination with a fixed abutment projecting from the stock against the open portion of the chamber in line with the barrel. It also consists of a swinging gate in the bracket of the piece to keep the cartridge in the chamber or opening, and to allow the withdrawal of the spent capsule.

Claim.—First, the circular abutment 2, at the rear end of the cylinder, partially closing the chambers, in combination with a fixed abutment 3, projecting from the stock and covering the open portion at the rear end of the chamber on line with the barrel, as set forth.

Second, the gate *o*, fitted to swing on the centre 8 upon the bracket *c* of the barrel, and when closed retain the cartridge cases in the chamber, as set forth.

No. 38,322.—WILLIS E. MOORE, of Crawfordsville, Ind.—*Improvement in Metal Cartridges for Cannon*.—Patent issued April 28, 1863.—Antedated December 18, 1863.—The improvement consists of a cartridge whose case is made of metal and tapers to a point at its rear with weak points, by which a portion of the contained gases resulting from the explosion are admitted behind the case and expel it from the gun.

Claim.—First, effecting the discharge of the metal case of a cartridge, substantially as set forth.

Second, a cartridge made of taper form, and with one or more weak points in its circumference, substantially in the manner and for the purpose set forth.

No. 38,323.—JACOB H. MUMMA, of Harrisburg, Pa.—*Improvement in Straw-Cutters*.—Patent dated April 28, 1863.—The straw as it passes to the cutter is carried between two rollers, the upper one having longitudinal grooves and edges alternately, and teeth inserted in the grooves; and the lower one having annular flanges or corrugations around its periphery.

Claim.—First, the ribbed and toothed roller for drawing and masticating the straw.

Second, the flanged roller underneath for assisting the drawing of the straw forward to the cutter bar.

No. 38,324.—J. R. MURPHY, of Pittsburg, Pa.—*Improvement in Sash-Fasteners*.—Patent dated April 28, 1863.—The invention consists of two pivoted arms, whose presser ends are closed together by a spring under the finger and thumb pieces, and thereby impinge upon the side of the window frame to retain the sash at the desired height; the sash being freed by the pressure on the spring which withdraws the pressers from contact with the window frame.

Claim.—A sash-fastener composed of two pivoted knee-shaped pieces with cam-shaped presser feet controlled by a spring, the whole being constructed, arranged, and operating, in connexion with the window-frame, to hold the sash at any fixed point therein without the necessity of notches, rack, or other holding mechanism, substantially as herein described and set forth.

No. 38,325.—WALTER P. NEWHALL, of New York, N. Y.—*Improvement in Umbrellas*.—Patent dated April 28, 1863.—The brace, instead of being attached to the bow by a staple or stirrup, is pivoted into an eye formed by the bending of the bow itself.

Claim.—An umbrella, its rod or bow having the eye or loop for attaching the brace thereto formed from the continuous length of the said rod or bow by bending it in the shape substantially as hereinbefore described.

No. 38,326.—MARCUS ORMSBEE, of New York, N. Y.—*Photographic Printing Frame and Slide*.—Patent dated April 28, 1863.—The adjustments in this instrument to be placed over the negative are a perforated slide which is adjustable as to distance from the negative, a vignetting screen, and a glass sliding in guides and ground on both sides, so as to soften the light.

Claim.—First, a perforated slide D, of metal or other material, adjustable in its proximity to the negative plate, substantially as described.

Second, in combination with a main perforated slide of any suitable construction, the separate, independently adjustable perforated screens E E, employed in the manner and for the purposes set forth.

Third, the use of the doubly ground glasses G G, in the manner set forth, to soften and equalize the light.

No. 38,327.—GEORGE W. OTIS, of Lynn, Mass.—*Improvement in Window Ventilators*.—Patent dated April 28, 1863.—This improvement is to be inserted in the place of the upper part of a pane of glass which has been removed. It consists of a metallic plate, which is so bent as to rest upon the upper edge of the glass, and against the rebate of the frame, and is then bent over so as to form a shelter against rain. The upright part in the plane of the window glass has openings cut through it, and a register plate, with similar openings, slides in grooves in the former plate, to open or close the ventilator.

Claim.—A ventilating attachment to a window, consisting of the parts A B C X and *ac*, or their equivalents, when arranged and combined with the sash and glass, all as herein shown and described.

No. 38,328.—LEONARD PARKER, of Winterset, Madison county, Iowa.—*Improvement in Bee-Hives*.—Patent dated April 28, 1863.—This hive is constructed with a lower chamber for a moth-trap, with entrance tubes made of perforated metal, and separated from the homestead above by a perforated partition. The homestead has a central portion devoted to brood comb, and in a chamber above are the usual honey boxes. The bee entrance consists of an alighting board, with perforated doors to close the hive, and a perforated cover for ventilation. The homestead has a vertical partition, with a guide on the alighting board to direct the bees into either apartment.

Claim.—First, the miller trap *g*, when arranged and constructed as herein described for the purpose set forth.

Second, the frame *s*, for brood comb, when used in combination with the homestead *d*, as herein described and for the purpose set forth.

Third, the arrangement of the guide *m*, doors *o*, and perforated cover *p*, when used in combination with the alighting board and entrance to the hive, as herein described and for the purpose set forth.

No. 38,329.—S. J. PARKER, of Williamsport, Lycoming county, Pa.—*Improvement in Shingle Machine*.—Patent dated April 28, 1863.—This invention belongs to that class of machines where the block is mounted on a reciprocating carriage and presented to a circular saw which removes a shingle. The claims are voluminous and sufficiently explicit.

Claim.—The vibrating block M, provided with the forks *o o*, and connected with the ratchet wheels D D by means of the connecting arms L L, crank arm E E, and pawls I I, when the same is operated by means of the stationary friction roller *q*, or its equivalent, in such a manner that the carriage is allowed a free movement forth and back, and the said ratchet wheels are actuated equally, whether the reciprocations are long or short; the whole arranged, combined, and operating substantially as herein set forth.

Also, the feed roller C, made of a hollow, metallic cylinder, with the shaft F passing through it, and with perforations in its periphery through which are driven the points *f f*, clenching against the shaft; the whole arranged as described, so that the roller is unaffected under all conditions, and feeds the bolt equally and uniformly, substantially as specified.

Also, securing the shaft E of the forward feed roller in hinged bearings *h h*, and bracing it against side movement by means of a central-jointed bearing *e*, which allows it to adapt itself with equal pressure to an inclined or uneven end of the shingle bolt, substantially as herein described.

Also, in combination with the feed roller supported by hinged bearings *h h*, the vertical shaft G, jointed connecting bar I, and sliding rod H, for expanding the rollers for inserting the bolt, the whole arranged and operating substantially as herein set forth.

Also, the combination of the two separated spring sliding rods H and I, so arranged that they allow the carriage to slide freely forward and back without impediment, but come in coincidence when the said carriage is drawn fully back, so that the feed rollers may be expanded by their action, substantially as herein described.

Also, in combination with the curved sliding stop-bar S, having notches *a' a'*, or their equivalents, the adjustable gauge rod U, provided with the horizontal arm *u'*, the whole arranged so that the length of stroke of the carriage is adapted to the size of the bolt to be sawed, substantially as herein set forth.

Also, in combination with the subject-matter of the preceding clause, the inclined track or way T, arranged substantially as and for the purpose herein described.

Also, the shoulder *k'* of the stop bar S, the eccentric *d'*, stop *b'*, cam *ac*, and sliding sleeve Q, provided with the friction roller *r*, or its equivalent, in combination with the pinion O, for the purpose of coupling and uncoupling the latter to and from its shaft, arranged substantially as herein described.

Also, connecting the eccentric shaft R with the vibrating lever C' by means of the inclined crank *p'*, connecting bar W provided with the slot *q'*, arm A', and rock-shaft B', the whole arranged and combined in such a manner that the said eccentric shaft is turned backward by the action of the lever, so as to permanently uncouple the driving pinion at any time, and so that the automatic action is carried on without impediment, substantially as herein specified.

Also, the cross-head H' of the driving shaft, in combination with the spur wheel D', provided with the pins *t' t'* and the spiral spring I', arranged and operating substantially as and for the purposes herein set forth.

No. 38,330.—EDWARD JUANES Y PATRULLO, of New York, N. Y.—*Improvement in Machinery for Separating the Fibre of Tropical Plants*.—Patent dated April 28, 1863.—The invention consists of a revolving drum armed with teeth, and scraping surfaces between, which revolves at a high velocity within a case, and strips the fleshy portions from the fibres of the leaves which are presented by the toothed feed-rollers to the action of the drum.

Claim.—The improved machine herein described, for the preparation of the fibre of Agave Americana and the like tropical plants, the same consisting of a drum with widely separated combs formed with teeth *b b* and scraping surfaces *b'*, substantially as represented, operating at a high velocity within and under a closely fitted stationary case, and combined with feed rolls adapted to allow the presentation and removal of the leaves substantially in the manner and with the advantage herein set forth.

No. 38,331.—JAMES M. PEIRCE, of Mokena, Will county, Ill.—*Improvement in Gates*.—Patent dated April 28, 1863.—The gate is suspended by rollers from a pivoted rail which is raised or lowered by cords. On raising the end of the rail the rollers travel down the inclined plane and open the gate, and on restoring the rail to its former position it is inclined in the other direction, and the gate travels on its hanger rollers and closes the gateway.

Claim.—The combination of the rising and falling gate carrier or rail *C* with the shoulders *f*, gate *B*, and cords *h*, in the manner herein shown and described, so that by pulling one of said cords the gate will be opened and fastened open, and by pulling the opposite cord the gate will be removed from the shoulder *f* and caused to close by its own gravity, all as set forth.

No. 38,332.—TIMOTHY R. PORTER, of Syracuse, N. Y., and GEORGE H. COOK, of New Brunswick, N. J.—*Improvement in Flue Walls for Salt Blocks*.—Patent dated April 28, 1863.—The fire walls on each side of the furnace are built hollow so as to prevent the conduction of heat to the surrounding earth, and the fire may be supplied with air through the chambers thus formed.

Claim.—The application of hollow walls to the construction of flue walls in salt blocks, substantially as set forth in the foregoing description and drawings.

No. 38,333.—WILLIAM C. RAY, of Redington, Hunterdon county, N. J.—*Improvement in Presses*.—Patent dated April 28, 1863.—In this machine the screw of the press passes through a nut which is pivoted in a lever which has a vertical and longitudinal motion on its fulcrum, the longer end of said lever being depressed by a weighted yoke lever, the whole being so arranged as to give play to the nut, which is free to oscillate and adjust itself under the pressure of the levers.

Claim.—The combination of the screw *J*, pivoted nut *I*, yoke lever *F*, and links *G*, with the weighted levers *D*, the whole being arranged and operating as described, for the purposes set forth.

No. 38,334.—JOHN A. REED, of Jersey City, N. J.—*Improvement in Direct Action Steam Pumps*.—Patent issued April 28, 1863.—Antedated January 23, 1863.—The steam and the pump cylinder are placed in line with a piston in each on a common piston rod. Each cylinder is surmounted with a cock valve connected by means of a tappet rod, and actuated by a tappet arm on the piston rod, so as at the same moment to change the movements of the pistons.

Claim.—The combination of the two cock valves *B D* on the steam and water cylinder, the levers *d d'*, weights *E E*, tappet rod *f*, and tappet arm *h*, on the piston rod, the whole combined and operating substantially as herein specified.

No. 38,335.—ISAAC REIN, of Philadelphia, Pa.—*Mode of Preventing the Counterfeiting of Bank Notes, &c.*—Patent dated April 28, 1863.—This invention is directed against the counterfeiting by engraving, while at the same time securing against counterfeiting by photography, and it is accomplished by producing bank notes of which a portion is engraved and the balance of the work executed by photo-lithography or photo-zincography, so as to defy imitation by the graver.

Claim.—The combination of the work of engraved plates with photo-lithography or other modes of photography upon metal or other substances from which impressions may be printed in ink for the production of bank notes or paper values, as set forth in the above specification and accompanying exhibits.

No. 38,336.—JAMES REID, of New York, N. Y.—*Improvement in Revolving Fire-arms*.—Patent dated April 28, 1863.—The rear ends of the chambers are arranged so as to be fired with fixed ammunition or to be fitted with a nipple plug for loose ammunition. A vibrating segment plate in connexion with the recoil plate covers the rear end of the cartridges.

Claim.—First, the nipple breeches screwed into the rear ends of the chambers in the revolving cylinder, in combination with the recoil plate at the rear of the cylinder, fitting in such a manner as to allow of the removal of said screw nipple breeches and the introduction of fixed ammunition, as set forth.

Second, the segmental plate *i*, fitted, as specified, on the side of the recoil plate *h*, to cover the rear ends of the cartridges in the chambers *2 2*, as set forth.

No. 38,337.—ROBERT RICE, of Georgetown, Vermillion county, Ill.—*Improvement in Cultivators*.—Patent dated April 28, 1863.—The side bars are adjustable, as to distance from the middle bar, by means of the transverse bars sliding in mortises, and the detaching and securing of the curved side braces of the standards. The braces which connect the side and central bars forward are elastic, and admit of a certain amount of adjustment. The handles are partially supported on an elastic bar so as to reduce the jar in the hands of the operator.

Claim.—First, the connecting of the front ends of the bars *a a* of the implement to the draught pole *B*, by means of the elastic plates *b b*, in combination with the cross-bars *c c* fitted to the draught pole *B* and passing loosely through the bars *a a*, and with the braces *e e* attached to the plough standards *C C* and the cross-bars *c c*, as herein set forth.

Second, the handles *E E*, attached at their front ends to the draught pole *B*, by means of screws or bolts *g*, in combination with the spring or elastic bar *i*, and the upright *D*, on which the rod *k* bears, substantially as and for the purpose herein specified.

No. 38,338.—THOMAS D. ROBERTS, of Utica, N. Y.—*Improvement in Handsaw*.—Patent dated April 28, 1863.—The frame is made of a single piece of wood bent to the right shape, and the straining piece has a double nut in which its ends are socketed so as to be lengthened or shortened by the rotation of the nut.

Claim.—First, a saw frame *B*, constructed of a single piece of wood bent in the form substantially as and herein shown and described.

Second, the nut *D*, and screws *d d*, applied to the bars *C C*, and the latter arranged with the saw frame, either constructed as shown or in any proper manner, for the purpose of straining the saw-set, as set forth, and this saw-straining device whether one screw *d* is used or both of them, as herein set forth.

Third, the combination of the saw frame *B*, constructed of a single piece of wood, as shown, with the nut *D*, bars *C C*, and screw or screws *d d*, as herein specified.

No. 38,339.—SAMUEL ROEBUCK, of Brooklyn, N. Y.—*Improved Mosquito Canopy*.—Patent dated April 28, 1863.—The improvement consists in the construction of the head to which the arms are fitted, the same being placed within loop projections on the flange of the socket and capable of being vibrated on their connecting wire and collapsed when not in use.

Claim.—The head *A*, formed of a socket *a* and flange *b*, the latter being provided with loop-projections *d* and shoulders *e*, the loop-projections being provided with indentations *f*, which, in connexion with the shoulders *e*, hold the wire *D* in proper position for the purpose specified.

No. 38,340.—GELSTON SANFORD and JAMES E. MALLORY, of New York, N. Y.—*Improvement in Machinery for Breaking Hemp and Flax*.—Patent dated April 28, 1863.—The hemp or flax is fed from a feeding table between two pairs of fluted rollers, which receive a reciprocating rotary motion from a crank vibrating an arm, in combination with a rotary motion not reciprocating, imparted by means of a pinion on the crank pin, so that the said additional rotary motion shall cause the rollers to have a greater range in the direction which the fibre is taking from the feed table to the point of exit from the machine.

Claim.—In mechanism for operating rollers for breaking or cleaning flax, hemp, or other like fibrous substances, imparting to such rollers a reciprocating rotary motion by means of a crank connected with an arm vibrated thereby, substantially as described, in combination with an additional rotary motion operating in one direction only and imparted by a pinion, or the equivalent thereof, on the crank pin, and communicated by cog-gearing to the rollers, the axis of the intermediate gearing being connected with the vibrating arm, which transmits the reciprocating motion to the rollers, substantially as and for the purpose specified.

No. 38,341.—S. M. SHERMAN, of Fort Dodge, Iowa.—*Improved Device for the Construction of Brooms*.—Patent dated April 28, 1863.—The broom-corn or other material is placed within pivoted jaws, where it is enclosed around the broomstick and there subjected to pressure by a plunger and screw which reduce it to the shape and density required for the head of the broom.

Claim.—The two bars *A A* in combination with the jointed bar *F* and the plunger, the latter being formed of the jaws *E E*, side pieces *f f*, and cross-bar *e*, and operated by the screw *C*, or its equivalent, all arranged for joint operation as and for the purpose specified.

No. 38,342.—JOHN SUTTON and JAMES GREGORY, of New York, N. Y.—*Improved Deck Lights for Vessels*.—Patent dated April 28, 1863.—This deck-light contains a "bull's-eye" in a metallic hinged frame and opens downwards, being pivoted to a lug on the under side of the deck. The window-frame is attached to the deck-plate by screws and the raised flange pressed firmly against the packing to exclude wet, the enlarged orifice of the hinge playing loosely on the pivotal pin to admit of the window-frame flange finding its level on the packing.

Claim.—First, the combination of the slot *A*, in the hinge *E*, of the frame containing the glass with the fixed pin or bolt *a* and the bearer *f* of the base-plate *g*, or equivalents, as and for the purpose herein fully shown.

Second, the combination of the sliding screw-bolt *G*, having an oblong channel *B*, with the lugs *D* of the door-frame, and base-plate *g*, as and for the purposes herein fully shown.

Third, the combination of the frame containing the glass *F* with the web *C*, as and for the purpose fully shown.

No. 38,343.—GEORGE W. TOWAR, of Detroit, Mich.—*Improved Lumber Raft*.—Patent dated April 28, 1863.—The cribs, two or more of which form a raft, are made with a bottom of longitudinal timbers and vertical side pickets driven into holes along the sides and end, and these stayed by traverse timbers and side fenders. The cribs are attached by ropes which pass around windlasses on each crib.

Claim.—First, the formation of the bow crib A, as shown and described.

Second, the arrangement of the windlasses D D at the ends of each crib for the purpose of producing an adjustable coupling, as specified.

Third, the pickets B, in the sides and end of cribs, in combination with fenders or wales G, enclosing and protecting the pickets, as and for the purpose set forth.

Fourth, the traverse timbers b b, securing the bottoms and tops of cribs, as described.

No. 38,344.—L. M. VAN SICKLE, of Woodbridge, N. J.—*Improved Construction of Gun Boats*.—Patent dated April 28, 1863.—The screw propellers are located between the hull and a downwardly projecting plated gunwale. They are formed of plates riveted to each other and to a spiral flange which winds around the central shaft.

Claim.—First, the arrangement of the extra plates H on the outer edges of the gunwales D in combination with the side propellers G G, constructed and operating as and for the purpose specified.

Second, the arrangement of spiral flanges b, projecting from the propeller shafts c, in combination with a series of single blades a fastened to each other and to the flanges b by means of rivets or bolts, substantially as and for the purpose specified.

No. 38,345.—L. F. WARD, of Marathon, Cortlandt county, N. Y.—*Improvement in Extension Ladders*.—Patent dated April 28, 1863.—The improvement consists in the method of locking the extension section so as to retain it at its elevation, which is by inclined planes attached to the upper section, which as they press against the spring catches in the lower section, push them in, and are retained by them when passed. Also, in a carriage which traverses the track formed by the side pieces of the ladder and is raised and lowered by a winch and rope.

Claim.—The inclined planes P P in combination with the spring catches P for locking the sections.

Also, the construction of the ladder in the manner and for the purpose substantially as described.

No. 38,346.—RICHARD WASHBURN, of Ramapo, Richland county, N. Y.—*Improvement in Straw Cutters*.—Patent dated April 23, 1863.—The motion of the lever has the effect of bringing down the knife upon the straw, and also, by means of a secondary lever, of lifting the bottom of the trough so as to meet the advancing knife, their motions being thus reciprocal towards and from each other.

Claim.—First, the combination of the reciprocating bottom C with the reciprocating knife E, in the manner substantially as herein shown and described, so that both the knife and the bottom shall have a simultaneous movement to and from each other all as set forth.

Second, the arrangement of the lever G in combination with the hand-lever D, link d, knife-head F, and link b, all constructed and operating in the manner and for the purpose herein shown and described.

No. 38,347.—SIGMUND WEIDENFELD, of New York, N. Y.—*Improvement in Preparing Grain, &c., for Malting*.—Patent dated April 28, 1863.—The ground grain is steeped in water, which is impregnated with gases resulting from the dry distillation of a mixture of sulphuric acid 4 parts, wood charcoal 2 parts, crystallized soda 1 part; one ounce and three quarters of this mixture being used to every hundred weight of meal.

Claim.—Mashing Indian corn, or any other kind of grain, by a cold solution, substantially as described.

No. 38,348.—JOSEPH H. WELTY, of Mount Carroll, Carroll county, Ill.—*Improvement in Bee-hives*.—Patent dated April 28, 1863.—The improvement consists in a tube to be placed between two hives as a means of communication between them; and it is provided with a slide and operating wire handle so as to be closed or opened as required.

Claim.—The application to bee-hives of the combination of the slotted tube B, its side C, and the wire D, when used as and for the purpose substantially as delineated and specified.

No. 38,349.—ANDREW JUDSON WHITE, of Brooklyn, N. Y.—*Improvement in Lamp Wick*.—Patent dated April 28, 1863.—The improvement consists of a roving of vegetable fibre covered with a coating of gluten by being passed through a vessel containing a solution of gluten, from whence it is passed to a tube to bring it to the proper shape and afterwards dried.

Claim.—A machine-made wick composed of unspun cotton, flax, or jute, covered and held together with gluten.

No. 38,350.—JAMES O. WHITCOMB, of New York, N. Y.—*Improvement in Magazine Field Batteries*.—Patent dated April 28, 1863.—This battery consists of a frame on wheels carry-

ing a row of gun barrels, and in connexion with them a series of rotation disks with chambers in their periphery, which are by rotation under suitable charge-chambers loaded with powder and ball, and discharged by electricity when they arrive opposite to the bore of the barrels. The rotation of the shaft carrying the disks is given by a hand lever click and ratchet wheel.

Claim.—First, one or more rotating cylinders or chamber blocks, in combination with the insulated igniting devices for discharging said chambers by electricity, when arranged at the breech of barrels as herein set forth and represented.

Second, The general arrangement and operation of the ratchet R and spring X with the lever L, click c, and spring t, when the ratchet R is fixed in the common shaft or axis a, with one or more of the rotating cylinders or chamber block C, as herein set forth and represented.

Third, the chargers d d d working into the sockets G G G G, when used separately or in series, for the purpose herein set forth and represented.

Fourth, the sliding bar m with its two wedge-shaped pieces l' l, working against the studs of the springs 2' 2, in combination respectively with the rods I I, the check wires 6' 6' 6' 6' and 6 6 6 6, and also with the springs h' h, substantially as and for the purpose herein set forth and represented.

Fifth, the bullet pressers D D D D carrying the galvanic or voltaic battery wires p p p p, as herein set forth and represented.

Sixth, the relieving wires k k k k fixed to the shaft u, when made to work into and out of the bullet holders by motion communicated from the shaft e through the arms v and M and pitman l to said shaft u, as herein set forth and represented.

No. 38,351.—ENOCH WHITTEMORE, of North Paris, Oxford county, Me.—*Improved Wood Horse*.—Patent dated April 28, 1863.—The jaws of the horse are provided with teeth and a sliding frame between the jaws, which, being depressed by a treadle, causes the teeth on the said frame to approach the teeth on the jaws and firmly clamp the wood between them.

Claim.—The combination and arrangement of the jawed lever and its treadles with the wood horse, the same being substantially as and to operate together as specified.

No. 38,352.—GEORGE WRIGHT, of Washington, D. C.—*Improved Apparatus for Casting Fuzes*.—Patent dated April 28, 1863.—The "cope" and "nowell" which form the front and rear of the fuze, and the cheeks which form its periphery, are arranged in a frame, and the former are attached to cross-bars, which are mutually approached by spiral springs, or reeded by cams to open and close the moulds into which the metal is poured.

Claim.—First, removing the cope e and nowell f from the fuze, while the latter is firmly held and supported by the cheeks K K, or their equivalents, for the purpose herein set forth.

Second, the arrangement of the cams G G, parts e and f and K K, and the means of guarding the same, substantially as and for the purpose herein set forth.

Third, moulding and removing a secondary part in the same machine with the main part, substantially in the manner and with the advantage herein set forth.

No. 38,353.—ROBERT K. WRIGHT, of Philadelphia, Pa.—*Improved Composition for Preserving and Water-proofing Leather*.—Patent dated April 28, 1863.—The composition is made as follows: Three pounds of gum copal dissolved by boiling in two quarts of linseed oil; when cold, add one gallon oil of turpentine, mix, and bottle tightly.

Second, take half a pound of caoutchouc and dissolve in a gallon of oil of turpentine. Mix four measures of the first-named composition with one of the latter and apply with a brush.

Claim.—The above-described composition for preserving leather, made of the ingredients enumerated, mixed or compounded in about the proportions specified.

No. 38,354.—DUDLEY B. CHAPMAN, of Milford, Worcester county, Mass., assignor to Himself and EBENEZER D. DRAPER, of the same place.—*Improvement in the Manufacture of Silicate Soap*.—Patent dated April 28, 1863.—Compounded of starch or other farinaceous matter, 2 parts; silicate of soda or potash, 4 parts; sulphate of soda, 2 parts.

Claim.—The combination of an alkaline silicate, a sulphate of soda or an anhydrous carbonate of soda, and a farinaceous or mucilaginous substance, the whole being substantially as described and for use as an ingredient of soap.

No. 38,355.—CHARLES DEAVS, of New York, N. Y., assignor to ARCHER & PANCOAST of same place.—*Improvement in Lanterns*.—Patent dated April 28, 1863.—The improvement is in the construction of the casing of the lantern, two sides of which are made of sheet-metal bevelled to serve as reflectors, and connected by cross-bars at the bottom; the other sides are occupied by panes of glass, and beneath the casing is the lamp which is hinged thereto. The guard wires, which are fastened to the lower edge of the casing, pass upwards and form a pivot for the chimney cowl, and also eyes for the attachment of the handle.

Claim.—First, the case or body C of the lantern formed of the glass plates e e, and a sheet-metal portion so cut or shaped as to form, when bent, two sides a a and the top b of the case or body, the lower ends of the sides being connected by cross-bars c c, substantially as set forth.

Second, the combination of the case or body C, constructed substantially as described, with the lamp A, the former being connected to the latter by hinges or joints D, as and for the purpose specified.

Third, forming the sheet-metal sides *a a* of the lantern with bevelled inner surfaces *jj*, to serve as reflectors, substantially as set forth.

Fourth, the rods F, bent at their upper ends to form pivots for the cap-piece E, and also to form eyes for the bail or handle G, and secured at their lower ends to the crossbars *c c*, to serve as guards for the glass plates *e e*, as herein described.

No. 38,356.—GEO. W. DUNCAN, of Bath, Maine, assignor to Himself and CHARLES DAVENPORT, of the same place.—*Improved Cat-block for Ereeing a Ship's Anchor*.—Patent dated April 28, 1863.—The anchor hangs from the ring of the cat-block, being suspended below the cat-head. The block ring opens below by means of vibrating levers, one attached to each half.

Claim.—The combination of the tackle block B, and the lever ring hooks D D, and their chains E E, the said block to be suspended from a cat-head or a davit by means of a fall or rope C, and the whole to operate substantially in manner and for the purpose specified.

No. 38,357.—STUART GWYNN, of New York, N. Y., assignor to GEO. ODIORNE, of Boston, Mass.—*Improvement in Apparatus for Carbureting Gas*.—Patent dated April 28, 1863.—The invention consists in forcing the air from a condenser through a porous medium charged with hydro-carbon in a chamber, which is supplied from a reservoir which feeds it in quantities regulated according to its evaporation. The air from the generator is charged with moisture and passed through iron filings, whereby from the oxydization hydrogen gas is liberated and passed to the generator to overcome the excess of carbon in the carburetted air.

Claim.—First, the general arrangement and combination of apparatus, substantially as herein shown and described, for forcing the air through a porous medium diffusely charged but not filled with fluid, so that the air shall penetrate through as well as pass over the mass of porous substance, as herein set forth.

Second, the arrangement and combination of apparatus, substantially as herein shown and described, for maintaining the proper level of the fluid and effecting the vaporization, in the manner set forth.

Third, the arrangement and combination of apparatus, substantially as herein shown and described, for generating hydrogen gas to supply atmospheric air charged with the vapor of hydrocarbon fluids in proportion to the excess of carbon it contains.

No. 38,358.—ALFRED HEAVEN and ROBERT SMITH, of Manchester, England.—*Improvement in Embroidering Machines*.—Patent dated April 28, 1863.—Patented in England March 21, 1861.—This machine is applicable to that class of embroideries where the material is stretched on a vertical frame, on each side of which is a mechanism for grasping the double-pointed needle which carries the thread through the cloth. This improvement consists in the mechanism by which the reciprocating carriage is actuated and the driving belt of said carriage shifted to the fast and loose pulleys, the shifting motion being derived from the strain upon the thread.

Claim.—The combination of mechanism, herein described, for giving the carriage B its motion to and from the frame D when such mechanism is used in combination with the shipping mechanism, as set forth.

Also, the mechanism, substantially as described, for shipping the belt J from the fast on to the loose pulley, and from the loose on to the fast pulley, for the purposes as set forth.

Also, the employment of the tightened thread to actuate the shipping mechanism, as above described.

No. 38,359.—CHAS. W. SMITH and G. H. BABCOCK, of New York, N. Y., and B. B. HOTCHKISS and CHAS. A. HOTCHKISS, of Sharon, Conn.—*Improvement in Explosive Projectile for Rifled Ordnance*.—Patent dated April 28, 1863.—The shell is cast in one piece with an opening in front for the fuze plug and a shoulder in the interior to sustain a plate which divides the interior into two chambers, the rear one for the powder and the forward one for the balls, with a tube connecting the powder chamber with the point fuze.

Claim.—First, in explosive projectiles for ordnance, dividing the cavity into two parts by the plate B, or its equivalent, supported upon or by the body of the shell, so that it cannot be forced backward by the inertia of the balls C, but may be easily thrown forward by the explosion of the powder in D, substantially as and for the purpose herein set forth.

Second, the combination of the tube E, plate B, and fuze plug K, so arranged that the bullets C may be inserted through the mouth of the shell after the tube E is in place and the fuze plug caused to embrace the end thereof, substantially as herein shown.

Third, an explosive projectile in which the point is cast in one piece with the body, with a weak line G and with the plate B inserted in the cavity thereof, in the manner herein specified.

No. 38,360.—NATHAN STEDMAN, of Aurora, Ind., assignor to Self and JOSEPH MILLER, of same place.—*Improved Pump*.—Patent dated April 28, 1863.—In this pump the water is

discharged through a tubular piston rod from a pump located under the water level; the improvement consists in a double check valve on a lever at the bottom of the pump chamber, which valves alternately open and close by the motion of the plunger, and when the pump is at rest allow the water to run out to the level of the water in the well; and also in the construction of the plunger, which consists of two annular plates and stay rods, which occupy the central portion of the hollow plunger which connects with the discharging piston rod.

Claim.—The lever F, when used in combination and placed in relation with the two valves D E of the pump, to operate in the manner and for the purpose herein set forth.

Also, the piston valve formed of the two annular plates *g g'*, connected by vertical rods *h*, in combination with the holes *i*, in the upper and lower ends of the piston G, and the tubular piston rod H, all arranged for joint operation, as set forth.

No. 38,361.—PHILO P. STEWART, of Troy, N. Y.—*Improvement in Stoves*.—Patent dated April 28, 1863.—The invention consists in constructing the cylinder of the fire chamber with an annular hot-air chamber between the fire-bricks forming the inside of the said chamber and its outer casing. The hot-air space communicates with the fire chambers by orifices; there is also a cold-air chamber in the door, and one over the fire, the latter of which discharges air into the gases rising from the fire, and causes them to be consumed.

Claim.—The combination of the outer fire cylinder *c* with the annular hot-air chamber *s*, and with fire-brick perforated and forming the inner fire cylinder *d*, in the manner substantially as herein described and set forth.

Also, the perforated plate *m* and cold-air chamber *k*, in combination with the door *w*, having therein the cold-air chamber *z*, the whole being arranged over the fire chamber and annular hot-air chamber *s*, and for the purposes herein described and set forth.

No. 38,362.—MARSHALL SMITH, of St. Louis, Mo.—*Improvement in Mail Pouches*.—Patent dated April 28, 1863.—The invention consists of a mail pouch or trunk, which is divided into apartments separately secured, so as to be suitable places of deposit for letters, and avoid the necessity of making them into bundles to be put into a common receptacle.

Claim.—The employment of the mail pouch A B, constructed substantially as herein described and represented, having one or more compartments, provided with the securing devices *e f g f'*, or formed with a series of chambers, substantially as herein shown, specified, and represented, for the purposes set forth.

No. 38,363.—PORTER FITCH, of Brooklyn, N. Y.—*Improvement in Mark Holder for Bales, &c.*—Patent dated April 28, 1863.—The improvement consists of an instrument having a metallic blade terminating in a point, and at the barbed end socketed into a holder by which it is thrust into the bale with the tag wire attached, and the handle being withdrawn the blade is left in the bale with the tag attached, the barb preventing its withdrawal.

Claim.—First, the blade D, as shown in Figs. 1 and 2.

Second, the dart D, as shown in Figs. 3 and 4.

Third, the use of the arms F F, in connexion with the shaft E, as shown in Figs. 1 and 2.

Fourth, the use of the blade D, the wire or chain I, and the tag T, in combination with the shaft E, substantially as shown in Figs. 1 and 2, all substantially as and for the purpose described.

No. 38,364.—THOMAS W. GOODWIN, Portsmouth, Va.—*Improvement in Engine Levers*.—Patent dated April 28, 1863.—The object of this improvement is to provide a means of starting in motion the main shaft of machinery when at a dead point by the pawls which work into the ratchet. The detail of the construction may be found in the claim.

Claim.—First, the lower end of the lever having slots *c c* and *e' e'*, dogs *d d d' d'*, and hinged joints *f*, Figs. 1, 2, 3 and 4, when used as and for the purpose herein described.

Second, the cross balance bar *h* and the pivot *k*, when used as and for the purpose herein described.

Third, the spring *n* and the springs O O, or their equivalents, when used as and for the purpose herein described.

Fourth, the eccentric loop *p*, the pin *p'*, and the handle *r*, when used as and for the purpose herein described.

Fifth, the lugs *t t'*, when used as and for the purpose herein described.

Sixth, the ratchet wheel *s*, made of two disks *s' s'*, between which the lower end of the lever *a* works on a main shaft *b*, all constructed substantially and for the purposes specified.

No. 38,365.—HENRY W. GOODRICH, of Chelsea, Mass., and EDWARD A. LOCKE, of Boston, Mass.—*Mark Holder for Bales, &c.*—Patent dated April 28, 1863.—This instrument consists of a barbed rod to be thrust into the bale, having on its end a distinguishing mark, or a means of attachment for one.

Claim.—As a new article of manufacture, a device constructed substantially as described, with barbs, corners, or indentations, or otherwise so shaped and arranged as to render it easy of insertion in, and difficult of extraction from, packages of fibrous material, when said device is provided with means for securing thereunto or therein an identifying mark or label, or is itself impressed with an identifying mark.

No. 38,366.—LOUIS ALBRIGHT, of Ottawa, Ohio.—*Breech-loading Fire-Arm*.—Patent dated May 5, 1863.—This arm is convertible for use with the common percussion cap, with the flanged metallic cartridge, or with percussion wafers or primers. The stock and barrel are joined by a web, to which is hinged a breech-piece or plug, in which the dog and other internal parts of the lock are contained. To the forward end of the first and third forms of plug is attached a blade, projecting laterally, which acts to sever and remove the but of the common cartridge. In the second form of the breech-piece is a sliding block N, connected to the hammer by a rod and pin to prevent the forward end of the plug from being intercepted by the projecting flange of the metallic cartridge cases, and which retracts on cocking and closes by the forward stroke of the hammer in firing. The third form of breech-piece or plug is also provided with a knife to open the cartridge, and with an automatic device to supply the primers to the touch-hole.

Claim.—First, the combination of the hinged and sliding breech-plug E E' or E'', carrying the dog, hammer and main spring, the trigger K, pivoted in the stationary stock, and the screw-threaded and milled abutment A', when the said parts are constructed, arranged, and operated in the manner and for the purpose specified.

Second, the knife L, projecting laterally from and flush with the forward end of the hinged plug E E' E'', and acting to sever and remove the but of the cartridge by the act of closing the plug, in the manner set forth.

Third, the hinged plug E', having the sliding block N adapted to be retracted to allow the passage of the said plug over a metallic percussion cartridge and to be closed automatically by the cocking and discharge of the hammer, as and for the purpose set forth.

Fourth, the arrangement of hinged plug E'', hammer H'', slide P, wafer magazine O, cap R, and touch-hole J, the whole being combined and operating together in the manner described.

Fifth, in the breech-loading arm above described, the employment of the exchangeable hinged breech blocks E E' E'', for the use of different forms of ammunition, as explained.

No. 38,367.—ANTOINE ANDRE, of Chicago, Cook county, Illinois.—*Improved Device for Stopping Bottles*.—Patent dated May 5, 1863.—This invention consists in attaching a screw valve to a seat firmly fixed to the neck of the bottle so as to stop it effectually, or by retraction to allow communication with the funnel-shaped mouth-piece.

Claim.—A device for stopping bottles, having in combination a screw valve A, passage f, channel g, and funnel-shaped mouth-piece C, all arranged and operating in the manner and for the purpose described.

No. 38,368.—BENJAMIN T. BABBITT, of New York, N. Y.—*Improved Marine Propeller*.—Patent issued May 5, 1863.—Antedated May 3, 1863.—This invention consists in the arrangement of one or more screw propellers, each within a stationary cylindrical casing with a peculiarly constructed chamber in front and rear of the casing, so as to discharge a column of water equal in area to the greatest submerged section of the vessel.

Claim.—The combination with one or more screw propellers, of chambers D H, constructed substantially as herein specified for the purpose set forth.

No. 38,369.—WM. R. BAGNALL, of Chelsea, Suffolk county, Mass.—*Improved Apparatus for Curing Caoutchouc*.—Patent dated May 5, 1863.—The object of this invention is to provide a vat and appliances for curing rubber, by which, while there is a large surface of rubber exposed to the curing fluid, there is a very small surface of the volatile fluid exposed to the atmosphere. This is accomplished by making the vat very deep in proportion to its width, and of a length adapted to the width of the sheet of rubber, there being a vertically adjustable partition with a roller at its lower edge descending deep into the vat, around which the rubber is drawn at a rate adapted to the requirements of the process.

Claim.—Constructing the curing vat with a narrow area at the level of the contained fluid and with a movable partition, operating substantially as specified.

Also, combining a vitreous or other suitable rod or roll with the movable partition, and also combining such rods or rolls with the vat at its upper edges, substantially as shown.

No. 38,370.—N. A. BOYNTON, of New York, N. Y.—*Improvement in Ventilating Dampers*.—Patent dated May 5, 1863.—In this improvement the damper and regulator are constructed on the slide register principle, with a perforated or slotted part, and in this case the damper is so combined with a ventilator as to regulate the fire and afford a means for ventilation. At the point of the flaring enlargement of the stove-pipe is a truncated conical contraction, and these diverging surfaces are slotted; inside of this V-shaped annular recess is a double-slotted flanged shell fitting it, and by rotation opening or closing both sets of apertures.

Claim.—The employment of the double-slotted flanged shell C, in combination with the slotted projection B and slotted shell A, the parts being constructed and operating together, substantially in the manner herein shown and described.

No. 38,371.—ABRAM BRIGHAM, of Lawrence, Mass.—*Improved Pipe-Drainer*.—Patent dated May 5, 1863.—The object of this invention is to place it in connexion with a pipe which is liable to be choked by a collection of water of condensation; and it consists of a

floating ball in a suitable chamber of a peculiar construction, which is connected by a pipe, with the passage to be kept clear, the ball floating in water, and being elevated upon a stem to which two valves are attached, which work in two seats above and below a discharging chamber with a partition between.

Claim.—First, the cover of the box A, made hollow in the form of a circular tube or pipe with the under side perforated in order to distribute the condensed steam equally when it enters the drainer, in combination with wire P and air valve L, substantially as described.

Second, the making the valve seats with a partition T between them, for the purpose herein set forth.

No. 38,372.—FRANCIS P. CATLIN, of Hudson, St. Croix county, Wis.—*Improvement in Window-sash Supporters*.—Patent dated May 5, 1863.—This invention consists in a tumbling weighted lever set within a recess on the side and edge of a window casing, bearing by the edge of one of its members on the edge of the sash; one face of impingement, either that on the sash or that on the tumbler, being shod with India-rubber or other elastic substance.

Claim.—First, the combination of the arm or lever K and the weight W inserted in the casing, as described, with the rubber or other elastic substance R inserted either in the sash or in the lever K.

Second, the lever K and weight W inserted in the sash with the rubber or other elastic substance attached to either the casing or arm K, substantially as and for the purpose described.

No. 38,373.—DAVID N. B. COFFIN, jr., of Woburn, Middlesex county, Mass.—*Improvement in Boots and Shoes*.—Patent dated May 5, 1863.—This improvement consists in the arrangement of a series of buttons on one part, and of eyelets or loops on the other part of the boot, so that the boot lace may be passed in its zigzag course alternately through an eyelet and over a button and fastened at each end, and afterwards may be loosed by being unbuttoned without untying and without disarrangement of the cord.

Claim.—The button-laced boot and shoe as a new article of manufacture, the distinguishing feature of which consists of the arrangement of a series of buttons and a series of holes, eyelets, loops or studs upon the different parts which are to be drawn together and secured to each other; these buttons on the one part, and holes, eyelets, loops or studs on the other, being arranged to receive a lacing, string or cord, alternating from one member of one series to one of the other, and *vice versa*, so that the unlooping of the string from one button loosens the loop upon the next; and unlooping one or more of the loops from their respective buttons, the fastening of the boot or shoe is loosened while the ends of the string remain fast, and such loops of the string may be looped on again, so refastening the boot or shoe, substantially as herein set forth.

No. 38,374.—CALVIN D. CRANE, of Fort Wayne, Allen county, Indiana.—*Improvement in Tax Calculators*.—Patent dated May 5, 1863.—The claim contains as clear a statement as can readily be made within the limits. A detailed description of the process of calculation would be beyond the scope of the present abstract.

Claim.—The permutation method of calculating applied to the calculation of taxes in the manner described in the specification, viz: first, by the printing of the taxes on the multiples of \$100 at each per cent. on a separate slip, so that the several slips may be arranged into any required series of per cents; and, second, the arranging of the taxes on the intermediate amounts between one and one hundred dollars, including the poll-tax, on a separate sheet cut with appropriate apertures, so that they may, when necessary, be added to the amounts on the slips.

No. 38,375.—C. O. CROSBY, of New Haven, Conn.—*Improvement in Machine Shirred Ruffle*.—Patent dated May 5, 1863.—The object is to form a ruffle or frill which shall be perfectly regular, more so than that which is made by the ordinary plan of a running thread upon which the stuff is gathered by hand. The object is accomplished by attaching to a sewing machine a rocking shaft, on which is a foot-piece bearing upon the stuff near the ordinary presser, and having a reciprocating motion gauged to the motion of the sewing machine, which pushes up the stuff into folds or plaits just as it comes under the weight of the presser; an additional thread is provided, which, under the guidance of a sliding rod, passes back and forth transversely on the face of the fabric and is crossed by the sewing machine stitch.

Claim.—The mechanically-shirred ruffle described, as a new article of manufacture, whether the same be double or single, or either with or without a band or binding attached thereto, substantially as herein set forth.

No. 38,376.—G. A. DABNEY, of San José, Santa Clara, California.—*Improved Washing Machine*.—Patent dated May 5, 1863.—In this machine an oscillating concave of rollers is used in connexion with a rubber, which is moved automatically with the motion of the roller-concave by means of the cords which connect the bars with the block on the rubber shaft. The depression of the bars effect the pressure of the rubbers in the extension of the spiral spring.

Claim.—The combination of the oscillating concave and rubber, when used in connexion with the oblique bars *f f*, connected with the rubber by the cords *g' g'*, and the rubber arranged as shown to admit of having its pressure graduated at the will of the operator, as herein set forth.

No. 38,377.—THEODORE D. DAY, of Brooklyn, N. Y.—*Improvement in Skirt Wire.*—Patent dated May 5, 1863.—The invention consists in covering skirt wire, or the braided covering, with a water-proof composition to prevent the oxydization of the steel wire.

Claim.—Water proof skirt wire prepared substantially as described.

No. 38,378.—DANIEL N. DENMAN, of Milburn, Essex county, N. J.—*Improvement in Liquid Filters.*—Patent issued May 5, 1863. Antedated December 25, 1862.—The water as it passes out of the penstock is made to turn a wheel, and is then discharged into the tank. A wheel revolving within the tank by power derived from the water-wheel has a web of felt around it, through which the water passes into the interior of the wheel; this web is passed over other rollers, being cleansed in its passage, and the filtered water is discharged at the ends of the wheel.

Claim.—First, a device for filtering water and other liquids composed of a wheel *F* fitted in a reservoir *A*, and provided with an endless apron or roll *G*, of felt or other fibrous material, when all are arranged in such a manner that the liquid to be filtered will pass from the reservoir through the apron or roll into the wheel, and be discharged from the ends of the latter, substantially as set forth.

Second, in combination with the reservoir *A*, wheel *F*, and apron or roll *G*, the rotary brush cylinder *I*, when used as and for the purpose set forth.

Third, the pivoted bar *J*, with roller *K* attached, in combination with the apron or roll *G*, wheel *F*, and reservoir *A*.

Fourth, the driving-wheel *D* and penstock *B*, when combined and arranged with the reservoir *A*, wheel *F* and apron or roll *G*, to operate as and for the purpose herein specified.

No. 38,379.—W. W. DINGEE and A. B. FARQUHAR, of York, Pa.—*Improvement in Threshers and Separators.*—Patent dated May 5, 1863.—The improvement consists in the suspension of the feeder's platform by a rod from the rubber, so as to act as a brake, the feeding end of the machine being over the hind axle, and the grain delivery before the front wheel. The coupling joints allow the shaft rods free longitudinal motion, and the rake head derives its motion direct from a prolongation of the line shaft.

Claim.—First, driving the rake shaft *C* from the continuation *B* of line shaft *A*.

Second, placing the delivery hopper *F* of the fan in front of the front axle of the wagon.

Third, the combination of the feeder's platform *J* with the wagon brake *L*.

Fourth, connecting the line shafting by reversible couplings in which the shaft has a free longitudinal movement.

No. 38,380.—SIMEON F. EMERSON, of Seville, Medina county, Ohio.—*Improved Clothes Wringer.*—Patent dated May 5, 1863.—This device is intended to adjust the pressure of the upper upon the lower roller, by means of the impingement of the end of the thumb-screw upon the wedge, which is interposed between the spring and the sill of the machine.

Claim.—The wedge *F* and thumb-screw *G*, when arranged and operated as and for the purpose set forth.

No. 38,381.—HENRY FISHER, of Alliance, Ohio.—*Improvement in Hand Mowing Machines.*—Patent dated May 5, 1863.—The machine is pushed before the person operating, and the reciprocating motion given to the knives by means of a hand crank and gearing with a wrist, connecting rod, and bent lever attached to the knife bar.

Claim.—Operating the sickle *B* through the medium of the bent lever *H*, connecting rod *I*, crank pulley *k*, gearing *j k*, and crank *l*, when said sickle and its operating mechanism are used in connexion with the bar *C*, rollers *E F*, and finger bar *A*, all arranged and operated as shown, for the purpose set forth.

No. 38,382.—ABNER GREENLEAF, Jr., of Brooklyn, N. Y., and THOMAS C. VICE, of New Haven, Conn.—*Improvement in Kilns for Drying Grain.*—Patent dated May 5, 1863.—The kiln is heated by a series of pipes, which pass from the furnace to a rear chamber, and thence to the chimney, their ends being inserted into thimbles, whose inside diameters correspond with the inner and outer diameters of the flue pipes, so as to make an unbroken passage. A pipe from the steam boiler passes through the kiln, and is reverted back again to add to the temperature by the waste heat.

The grain is distributed on the kiln by suspended sieves, which receive it from the hopper.

Claim.—First, the arrangement of the crooks or thimbles *E* with openings *a*, the diameter of which is larger on one end than on the other, to correspond to the inside and outside diameter of the fire flues or pipes *C C'*, and to be used in combination with said pipes, substantially as and for the purpose shown and described.

Second, the arrangement of the flue chamber *D* at the rear end of the kiln *A*, in combination with the pipes *C C'* and furnace *B*, constructed and operating as and for the purpose specified.

Third, the pipe *G* extending from the exterior of the kiln through the latter and back to the chimney, in combination with the pipes *C C'*, as herein shown and described.

Fourth, the arrangement of the sieve *I* with the hopper and the platform *H*, as and for the purpose herein shown and described.

No. 38,383.—W. L. GREGORY, of Amsterdam, Montgomery county, N. Y.—*Improvement in Water-Wheels.*—Patent dated May 5, 1863.—This wheel is to be driven by the force of a current, and consists of rotating disks with a number of vertical shafts with rotating buckets connected together and to a stationary gear by chains, whereby the buckets, as the wheel rotates, present a broadside to the current and are deflected so as to present an edge when returning against the current.

Claim.—The combination and arrangement of the buckets *C C' C'' C'''*, pinions *g d*, chains *D f*, and wheel *e*, as herein shown and described.

No. 38,384.—JOSEPH L. HALL, of Cincinnati, Ohio.—*Improvement in Locks.*—Patent dated May 5, 1863.—This improvement relates to that class of locks in which a series of gated "tumblers" oppose the retraction of the bolt unless they are arranged according to a secret formula.

The invention consists in the application of a sliding dog acting in combination with the fast tumbler to prevent a clue to the formula; also in devices to facilitate a change in the combination without removing the lock; and in the disposition and arrangement of the parts to diminish friction.

The devices are fully set forth in the claims.

Claim.—First, the provision of the sliding check-piece or dog *E*, operated in advance of the main bolt by the same key or other device which moves the latter, in combination with one or more sets of tumblers, substantially as and for the purposes set forth.

Second, in the described combination with the fast tumbler *Q*, the provision of the sliding check-piece or dog *F*, operated in advance of the main bolt by the same bit, key or other instrument which moves the said bolt, the whole being combined and operating as and for the purposes substantially as set forth.

Third, the arrangement of a hollow withdrawable hub *G*, containing the operating stem *N*, and supporting the series of alternate loose tumblers *I*, and fast washers *J*, the whole being confined to said hub by the annular cap *M*, in the manner represented.

Fourth, the combination of the cap *T*, shiftable stem *N*, and fast tumblers *Q*, to facilitate numerous and ready changes of combination, as explained.

Fifth, the fixed washers *J*, gate *j*, in line with the aperture *S* in the hub *G*, to afford a fixed guide for the trier, as described.

No. 38,385.—WILLIAM HAMILTON, of Allegheny, Pa.—*Improved Machinery for Dressing Axle Boxes.*—Patent dated May 5, 1863.—The invention consists in adjusting two cutter rests upon a carriage, the cutters having an interposed adjustable gauge between them, so as to act simultaneously, and preserve a correct relative position while turning off both ends of an axle box at the same time.

Claim.—Facing both ends of an axle box at the same time, by means of two cutters placed parallel to each other at right angles to the axis of the axle box, which is caused to revolve on its axis, the cutters being so operated as to approach each other as the box is being faced, in the same relative position to each other and to the axis of the axle, substantially as described.

The combination of cutters for facing the ends of axle boxes, placed at each end thereof, and susceptible of motion toward each other while preserving a given angle of inclination to the axis of the box, with a mandrel for holding the box from its inside, capable of opening on each side of its centre for the purpose of holding the axle box with its axis at the proper angle to the cutters, and yet allowing the cutters to pass beyond the point of contact of the exterior surface of the mandrel and the interior circumference of the axle box, substantially as described.

The use of an adjustable gauge interposed between the two cutters for the purpose of stopping the operation of the machine, when the axle box has been faced down to the required length.

No. 38,386.—DENNIS HARRIS, of New York, N. Y.—*Improved Apparatus for Evaporating Saccharine and other Liquids.*—Patent dated May 5, 1863.—The semi-cylindrical pan is heated by being set in a steam bath, and by a series of pipes passing around inside of it. The circulation of the sirup is kept up by a series of revolving disks, which rotate upon a shaft whose axis is above the level of the liquid.

Claim.—The rotating disks *f* and blast pipes *C*, one or more, in combination with the pad *B* and steam under pressure, all arranged as and for the purpose set forth.

No. 38,387.—ROBERT G. HATFIELD, of New York, N. Y.—*Improvement in Sliding Door-Sheaves.*—Patent dated May 5, 1863.—The sheaves on the hangers, from which the door is suspended, have a tire of elastic material to enable them to move noiselessly along the track, and the height of the door is regulated by elevating screws which raise the hanger upon the axle-box of the sheaves.

Claim.—The application of adjusting apparatus to the bearings of sliding door-sheaves, for the purpose described.

Also, the construction of wheels of sliding door-sheaves with a tire or periphery composed of a muffler or sound-deadening material.

No. 38,388.—RICHARD WATSON HAWKINS, of Pittsburg, Pa.—*Improved Chimney Fastener.*—Patent dated May 5, 1863.—This invention consists of a clip to fit over the foot flange of a lamp-chimney, which is placed near the point occupied by the permanent fastener, while the chimney is placed in position, and slipped round to the opposite side to retain it there.

Claim.—The use of a chimney fastener for lamps, consisting of a slide placed in the burner frame, and having arms or other equivalent device for holding down the flange of the chimney on one side, and capable of being slid round towards the points or other device by which the chimney is held down on the opposite side, substantially as hereinbefore described.

No. 38,389.—MARK W. HOUSE, of Cleveland, Ohio.—*Improvement in Electric Baths.*—Patent dated May 5, 1863.—The object of the invention is to provide facilities for passing general or interrupted currents through the patient; also direct, transverse, and diagonal currents.

The claims define the construction and arrangement.

Claim.—First, constituting the head electrode C, the terminns of two batteries, which may receive positive + and negative — from either battery or instrument, or both of the positives or both of the negatives, thus completing a double circuit through a single electrode, while the opposite poles of the batteries, respectively, terminate in traversing electrodes upon the sides of the tub, thus completing the circuit of either or both of the batteries, or induced current or currents, through any conducting medium placed between them.

Second, the traversing electrodes, in combination with conductors placed along the sides of the tub, as and for the purpose specified.

Third, such an arrangement of traversing electrodes that two independent sets of currents can be worked at the same time, in the same direction or in opposite directions, either longitudinally, transversely, or diagonally, through the conducting medium in the tub.

Fourth, working a primary uninterrupted current, in connexion with an induced interrupted current, either or both of which may be local or general, combinedly or single, as specified.

Fifth, the adjustable head electrode, when constructed and arranged so as to expand and contract their surface, as and for the purpose set forth.

No. 38,390.—D. B. HOWELL, of New York, N. Y.—*Improvement in Fastenings for Ornaments in Dress.*—Patent dated May 5, 1863.—The ends of the plates are provided with sharp pins, which preserve the same general curve, and the plate being deflected or bowed the pins are entered into the cloth, and the straightening of the plate sinks them in up to the edges of the plate.

Claim.—The combination of a spring plate A and pins *a a*, applied to a shoulder strap or other ornament, substantially as and for the purpose herein specified.

No. 38,391.—J. P. HOWELL, of Washingtonville, Orange county, N. Y.—*Improvement in Horse-tooth Files.*—Patent issued May 5, 1863.—Antedated February 21, 1863.—The file is set in a groove or socket in a metallic handle, being guided and kept from abraiding the lips of the animal by its raised edges.

Claim.—A horse-tooth file composed of a cast-metal stock or handle A and a file B, made separately and fitted together, substantially as herein shown and described.

No. 38,392.—F. M. HUBBARD, of Protection, Erie county, N. Y.—*Improvement in Sash Fastenings.*—Patent dated May 5, 1863.—This appliance is enclosed in a box and set into the edge of the sash. A thumb-screw operates a wheel, which drives an eccentric into impingement against the casing, or withdraws it. The position of the wheel is retained by a spring and click operating into a ratchet on said wheel.

Claim.—The driving wheel *g*, the wheel *k*, the spring *h*, the cam wheel *L*, and the knob *e*, the whole arranged in the manner and for the purpose substantially as set forth.

No. 38,393.—HENRY B. JAMES, of Trenton, N. J.—*Improvement in Watches.*—Patent issued May 5, 1863.—Antedated November 14, 1862.—The idle end of the balance spring is supported by means of a coil, to the end of which it is attached by a sleeve; the centre of the coil is attached to an arbor on the plate. The object is to provide an elastic support, in place of the rigid attachment by pin and stud, by which improvement the spring has a greater range and freedom of motion.

Claim.—First, providing an elastic vibrating support for the balance spring, substantially as herein specified.

Second, combining the use of the elastic vibrating support for the balance spring with the system of compensation for expansion, which constitutes the subject-matter of my letters patent of December 27, 1859, by making the said elastic support of combined laminae of two metals, substantially as herein specified.

Third, the within-described mode of connecting the balance spring and elastic vibrating support by means of the side ring *e*, applied in combination with the enlarged end of the arm *b* of the said support, as herein specified.

Fourth, securing the elastic supporting coil B to the plate C by means of the taper stud *a* applied to the coil and plate, in the manner herein specified.

No. 38,394.—JOSEPH KEECH, of Waterloo, Seneca county, N. Y.—*Improvement in Plough Clevis.*—Patent dated May 5, 1863.—The clevis consists of a toothed and slotted plate, through which the draught rod passes, and which may be rotated on a disk wheel, which itself may be varied in its set on the notched end of the beam; the effect of this four-fold toothed arrangement being to give the draught rod any required lateral or vertical adjustment in its relation to the end of the beam.

Claim.—The dial-plate C, provided with cogs *d d* on one side, engaging with the cogs *a a* of the beam, and with concentric radial teeth *g g* on the other side, engaging with the index plate D, that sustains and adjusts the draught rod, substantially as and for the purposes herein set forth.

No. 38,395.—ELISHA KENNEY, of Livermore, Androscoggin county, Maine.—*Improvement in Ox-bow Fastening.*—Patent dated May 5, 1863.—The bow is passed up through a hole in the bow cap, and then its neck is passed outwardly along a narrowed slot, and, the spring being lowered over the head of the bow, it is prevented from returning to the round orifice through which it had passed.

Claim.—The spring B combined with a bow cap, in the manner and for the purpose herein set forth.

No. 38,396.—THEODORE E. KING, of Ashtabula, Ohio.—*Improvement in Fences.*—Patent dated May 5, 1863.—This is an improvement in the construction of ornamental metallic fences, where the posts, base, and portions constituting the panels and gate are made separately and attached by lugs, bolts, brackets, and braces, as is explained in the claims.

Claim.—First, securing the posts to the base G by means of the flanges E and screws and nuts F F', as specified.

Second, the adjustable brace O for supporting the panel in an upright position, arranged and operated as set forth.

Third, the brackets, Figure 6, for securing the panels to the posts, as specified.

Fourth, the brackets M N N' for uniting the panels and securing them to the base G, as described.

Fifth, the gate brackets P Q P' and the hinge R S S', shown in Figure 7, constructed and arranged as and for the purpose set forth.

No. 38,397.—PHILIP KOCH, of New Haven, Conn.—*Improvement in Machine for Making Nuts.*—Patent issued May 5, 1863.—Antedated April 18, 1863.—The bar is pushed through a hole in the cutter, and the ascending lever cuts off a blank, which is then passed to the die, which removes the central portion, and, after being hammered and dressed, it is discharged from the machine. The motions are too intricate to be explained within moderate limits.

Claim.—First, the stationary cutter formed of the steel bar C, with a hole *b* made in it, in connexion with the lever D, or its equivalent, arranged, as shown, to cut the blank from the bar from its under side upward, substantially as set forth.

Second, the combination of the die O and punch Q, when arranged as shown, to operate as and for the purpose specified.

Third, the pin *u* attached to the spring U, and having the spiral spring W connected with it in combination with the slides X X', all arranged as and for the purpose described.

Fourth, the combination of the die C' and movable bed B', arranged for joint operation, substantially as and for the purpose specified.

Fifth, the slides G I, arranged as shown, when used in combination with the lever D and stationary cutter bar C, as and for the purpose set forth.

Sixth, the slides X X', arranged as shown, when used in combination with the pen *u* and box T, to operate as and for the purpose specified.

No. 38,398.—M. P. LARRY, of Windham, Cumberland county, Me.—*Improvement in Apparatus for Upsetting Tires.*—Patent issued May 5, 1863.—Antedated January 16, 1863.—The heated portion of the tire is placed on an arc-shaped anvil and retained by toothed clamps, a half-round and tapering false anvil being placed under the tire by which it is raised in that position; the tire is hammered, and the false anvil being gradually withdrawn, the tire is upset in that portion, and this shortened to the required extent, the tire is prevented from slipping by being leaned over laterally, which causes the teeth of the clamps to take a firm hold of it.

Claim.—A tire shrinker, constructed, combined, and arranged as shown and described.

No. 38,399.—EDWARD LUMLEY, of Elizabeth City, Union county, N. J.—*Improvement in Lathes for Turning Irregular Forms.*—Patent dated May 5, 1863.—The pattern and the

blank are each chucked in an upright frame, and the cutter frame, which has upright sides and a longitudinal motion on ways, is advanced to the blank, so that the rotating cutter will remove the outer portions of the blank to a point where its further forward progress is arrested by the pattern. The desired obliquity of the faces of the cutter knives is given by the vibration of the bed of the cutter stock and is secured by the engaging of the point with notches on a bar above the side ways of the machine.

Claim.—Vibrating the cutter H in the manner and for the purpose hereinbefore specified.

No. 33,400.—BURTON MALLORY, of New Haven, Conn.—*Improvement in Locks and Latches.*—Patent dated May 5, 1863.—The bolt is made to suit a right or a left hand door by shifting the bolt in the case so as to expose the inclined edge of the latch to the proper side of the door when closing.

Claim.—A reversible latch-bolt when the same is placed in a case independent of the lock case, and made reversible in the manner substantially as herein specified.

No. 33,401.—J. B. McMILLAN, of North Vernon, Jennings county, Ind.—*Improvement in Water Elevators.*—Patent dated May 5, 1863.—The elevator consists of a frame with a cord, bucket, and a windlass, with a ratchet wheel and a pawl and brake; the bucket has a tipping bail which, in rising, is engaged by a hook which tips the bucket and discharges the water over the side of the curb.

Claim.—The combination and arrangement of the ratchet collar F, compound pawl and brake E D, tipping hook L, tipping bail B, and return spout G, all substantially as shown and described.

No. 33,402.—JOHN D. METS, of Dubuque, Iowa.—*Apparatus for Cutting Ornaments in Paper, Leather, &c.*—Patent dated May 5, 1863.—The object of this instrument is to cut off sheets of leather, or other material, to a given pattern for ornamental book covers, and consists of knives of the desired shape attached to a frame, and with an elastic frame within the space enclosed by the knives, which will yield to the pressure and remove the cut portion when the cutters are raised.

Claim.—First, combining with the framework A and B the knife *a* and the frame C, and its knife *b*, and the yielding platforms D and E, as and for the purposes described.

Second, the removable cutter-frame C, with its yielding platform E, when arranged within an outer cutter frame, substantially as and for the purpose described.

Third, constructing the main knife-frame so that it will constitute a holder or support for one or more removable knife-frames, substantially as described.

No. 33,403.—SARGENT O. MORSE, of Medford, Mass.—*Improvement in Apparatus for Grinding File Blanks.*—Patent dated May 5, 1863.—The file blank is set in a holder with a depression to fit the blank and form a gauge to grind by; the tang being held by clamps, and the device guided by pattern lips or edges.

Claim.—The blank-holder *a*, when made with the recess, (corresponding in depth to the blank to be ground, so that its faces shall be patterns to which to reduce the surface of the blank,) and with the clamps *b* for grasping the tang.

Also, combining with the tang-holder *a*, the gauge-plate *g*, when made with the pattern lips or edges, and to be confined directly to and so as to form part of the holder or carrier, for the purpose as above set forth.

No. 33,404.—BARAK T. NICHOLS, of Newark, N. J.—*Improvement in Saddles.*—Patent dated May 5, 1863.—This improvement consists in connecting the sides of the longitudinally divided saddle by means of springs and screw bolts, so that the "spread" of the saddle may be adjusted to the back of the animal.

Claim.—The combination of the screw bolts S S with the springs D D, substantially in the manner and for the purposes described.

No. 33,405.—N. P. OTIS, of Yonkers, Westchester county, N. Y.—*Improvement in Parallel Vice.*—Patent issued May 5, 1863.—Antedated May 3, 1863.—This vice is attached to the bench by a strap which encloses a circular portion of the pillar, which is notched or grooved to give it a firm attachment to a flanged socket by means of keys. The parallelism of the jaws is secured by means of cross-bars pivoted together and attached to each of the jaws.

Claim.—First, the strap D and bar C applied to the part *a* of the shank or pillar B of the vice, and connected by the keys E when the said part *a* has any angular or irregular form which will adapt it to be firmly held, substantially as and for the purpose described.

Second, the combination of the cross-bars J J, bar C, strap D, shanks or pillars B B, swivel jaw A, permanent jaw I, screw G, and socket F, when arranged as shown to form an improved article of manufacture for the purpose specified.

No. 33,406.—EMORY PARKER, of Meriden, Conn.—*Improvement in Door Knobs.*—Patent dated May 5, 1863.—The knob has a threaded socket screwed into a threaded spindle and

secured from further rotation by a clevis or staple which fits within flanges on the shank and over the square spindle, being afterwards covered by the escutcheon.

Claim.—In combination with the screw-threaded knob and the screw-threaded angular spindle the clamp piece *b*, or its equivalent, fitting a recess in the shank, and located within the escutcheon of the knob, in the manner and for the purpose substantially as set forth.

No. 33,407.—PHILIP G. PELTZ, chief engineer United States Navy.—*Improvement in Adjustable Port-hole for Directing Ordnance.*—Patent dated May 5, 1863.—The muzzle of the piece is presented through an opening formed by the correspondence of spiral grooves in each of the two vertical rollers; as these are rotated a similar opening is presented, but in an elevated position. These rollers are fixed on the inside of the port-hole or embrasure.

Claim.—First, the use of spirally grooved rollers, substantially as herein described, rotated by a screw, lever, or other suitable means, for the purpose of presenting at any desired height an aperture to receive the muzzle of the gun.

Second, elevating or depressing guns by means of spirally grooved rollers, substantially as herein described.

Third, the reversible boxes F F employed in the described combination with the rollers D D for the purpose of changing their distance asunder.

Fourth, the casing J employed in the described combination with the rollers D D to exclude smoke and gas.

No. 33,408.—CHARLES PERLEY, of New York, N. Y.—*Improved Vertical Windlasses.*—Patent dated May 5, 1863.—This invention consists in the arrangement of the vertical shafts of the capstan and chain heavers in a triangular position, so that they may be brought nearer together and take less width transversely of the vessel, and to admit of the introduction of two speeds by which the chain heavers may be rotated with a power approximate to the varying occasion. Other points of detail are explained by the claim.

Claim.—First, arranging the shaft to which the motive power is applied and the vertical shafts carrying the chain heavers in a triangular position, so that the said heavers may be brought nearer together transversely of the vessel, as set forth.

Second, the combination of two pinions or wheels *k* and *r* with the gearing of the vertical windlass, when said wheels *k* and *r* are of different sizes and fitted in such a manner as to be connected to or disconnected from the motive power, substantially as specified, in order that the vertical windlass may receive a faster or slower movement from the motive power, as set forth.

Third, the construction of the coupling squares on the shaft *i* and the recesses in the respective wheels *k* and *r*, whereby one wheel is coupled and the other uncoupled by an endwise motion given to the said vertical shaft *i*, as specified.

Fourth, the arrangement of the pinion *w* and shaft *z* for raising and lowering the shaft *i*, as specified.

Fifth, constructing the box or base of the vertical windlass containing the gearing, of a triangular shape in its general outline, in order that the said base may occupy but little space and more firmly sustain the strain of the chain cables, as specified.

Sixth, in combination with a chain heaver, fitted in such a manner that it may be rotated from below or disconnected from the motive power, the double gearing for communicating a fast or slow motion to such chain heaver, substantially as specified.

Seventh, constructing the base box of the vertical windlass with the elevated portion *e* above the top *b*, substantially as shown, whereby double gearing can be introduced and the chain wheels are raised from the deck as little as possible, as set forth.

No. 33,409.—CHARLES PERLEY, of New York, N. Y.—*Improvement in Constructing Cannon.*—Patent dated May 5, 1863.—The cannon is made with an exterior surface tapering towards both ends from a point over the charge chamber; a reinforce band carrying the trunnions is slipped over the muzzle and back so far as to meet the end of a similar reinforce, which forms a cap on the breech, advancing to the point of junction with the former band.

Claim.—The barrel *a*, with the exterior surface tapering both ways, in combination with the ring *c* and breech cap *b*, drawn together by screw bolts, or their equivalents, as and for the purposes specified.

No. 33,410.—JOHN POOLE and THOMAS J. PATTIN, of Harmar, Washington county, Ohio.—*Improvement in Sicages for Zinc Wash-boards.*—Patent dated May 5, 1863.—The zinc is corrugated between a lower bed die and an upper movable one, which is hinged so as with the bed-plate to form a jaw. The latter is operated by a cam which alternately raises it and allows it to fall; and the jaw may be retained at its elevation by means of catches which engage notches on vertical spring slats.

Claim.—The bed-plate C, the weighted lever drop L, in combination with the cam or small wheel G and spring catches *w w*, in the manner and for the purpose set forth.

No. 33,411.—JOHN POOLE and THOMAS J. PATTIN, of Harmar, Washington county, Ohio.—*Improvement in Clamping and Nailing Wash-boards.*—Patent dated May 5, 1863.—

This consists of a bed on which the centre and side pieces of the wash-board are placed and the reciprocating flanged sides approached by means of a lever and cam to hold them together while being nailed through the holes in the flanges.

Claim.—The sliding clamps E E, standards or posts B B, with the lever L, and cams D D, in the manner and for the purposes set forth.

No. 38,412.—WM. J. POTTER, of Chicago, Ill.—*Process for Graining and Ornamental Painting.*—Patent dated May 5, 1863.—The process is as follows: The design is engraved in relief or otherwise, and the relieved surface covered with a composition prepared as follows: one pound of macerated glue, to which is added one pint molasses, four tablespoonsful of oil of tar, one ounce lampblack, one tablespoonful olive oil, and one half teaspoonful of soda; the composition digested in boiling water. This, when cooled, forms a composition for taking a cast of the engraving, and being elastic, is bent over a shaft, forming an ornamental roller. The surface to be ornamented is painted over uniformly, and the surface roller moistened with an oily composition and applied to the surface of the paint, which is allowed to dry in the parts not covered by the composition; the latter being afterwards wiped off with the undried paint beneath it.

Claim.—The employment in connexion with the aforesaid roller of some suitable solution, as described, for preventing the drying of the paint forming the figure or ornament, and thereby producing the ornamental design required by subsequently removing the paint forming such figures in the design, substantially as and for the purposes specified and described.

No. 38,413.—Suspended.

No. 38,414.—E. K. ROOT, of Hartford, Conn.—*Improvement in Shot Metallic Cartridges.*—Patent dated May 5, 1863.—The case is made with a rounded and weakened end, and a flanged base or rear, and is filled with shot, wad, powder, and fulminate, in that order.

Claim.—The combination of a charge of powder, a charge of shot, and the fulminate, with a case or shell surrounding or enclosing them, constructed substantially in the manner described and for the purpose set forth.

No. 38,415.—JOHN B. ROOT, of Brooklyn, N. Y.—*Improved Marine Propeller.*—Patent issued May 5, 1863; antedated May 3, 1863.—The hub of the propeller is of a conical shape, the point directed "aft," and the blades proceed from the base of the cone and are attached to a ring of larger diameter, being so curved and disposed as to draw the water from the circumference and discharge it behind the centre.

Claim.—The arrangement of the blades and hub of the propeller substantially as herein specified, whereby the water is drawn from the circumference toward the centre and discharged from the centre directly astern of the vessel, as herein set forth.

No. 38,416.—HENRY ROSEN, of Elkhart, Elkhart county, Ind.—*Improvement in Pumps.*—Patent dated May 5, 1863.—This pump has two pistons and two pump stocks; the plungers are attached to vibrating rolls working on a common pivot and connected by their ends to rods which are attached to a crank wrist revolved by a handle.

Claim.—Driving the buckets of the two barrels A and A' from a crank shaft I, through the medium of the rods K and K', arms D and D', and rods B and B', the whole being arranged and operating as and for the purpose herein set forth.

No. 38,417.—GEORGE C. ROUNDEY, of New York, N. Y.—*Improvement in Gas Burners.*—Patent dated May 5, 1863.—This gas burner is intended to be set as a cap above another burner, and consists of an enlarged chamber in the tube below the fish-tail orifice in which the gas is heated before it passes out of the burner.

Claim.—The combination of the cap-tube A, the expansion chamber B, and fish-tail tip C, substantially as herein described.

No. 38,418.—THOMAS F. ROWLAND, of Green Point, Kings county, N. Y.—*Improved Apparatus for Launching Vessels.*—Patent dated May 5, 1863.—This invention consists of a vibrating lever with a catch attached to the permanent ways, and engaging with a socket on the under side of the sliding ways, so as to prevent the vessel sliding off while the temporary blocking is being removed.

Claim.—The arrangement or use, in connexion with the ways A C of the rotating shaft D, extending from one set of ways to the other and provided with catches b, all operating in the manner herein shown and described.

No. 38,419.—ALFRED ROYER, of Reed's Mills, Vinton county, Ohio.—*Improved Device for Heating Ores for Smelting Furnaces.*—Patent dated May 5, 1863.—The invention consists of a grating above the head of the furnace, on which the ore is exposed to the flame as it passes into the chimney, so as to give a preliminary heating to the ore. A current of water is passed through the hollow grate bars to preserve them from being melted. The grate vibrates on a centre to discharge the ore into the furnace.

Claim.—The grate D, adapted to present the ore in an open condition to the flame of the tunnel head, and to discharge the heated ore, the said grate being preserved from destruction by a current of water traversing its interior, the whole being combined and operated substantially as set forth.

No. 38,420.—LUMAN RUNDELL, of New Baltimore, Greene county, N. Y.—*Improvement in Hay Elevating Forks.*—Patent dated May 5, 1863.—The tines of the fork are of a sickle-shape, and set into the head so that the shanks which enter the head are parallel with the handle, and gradually leaving it assume a position in advance of the head, so as to be easily inserted; the fork is swung in such a way as to be back with its load, which enables the head to bear it without strain.

Claim.—Extending the tines of a hay-fork back of the head in a sharp curve and thence to their points in a flat curve, substantially as herein shown and described, and in such relation to the handle and loop from which the fork is suspended in elevating the same, that said tines can be easily rocked into the hay, and that in elevating the load lodges in the sharp curve, where it exerts almost no lateral strain on the but ends of the tines, and consequently the liability of snapping the same at the place where they enter the head is obviated.

No. 38,421.—W. J. SAGE, of Steubenville, Ohio.—*Improvement in Horse Powers.*—Patent dated May 5, 1863.—The horse power consists of two horizontal wheels, with cogs on the upper edge of the lower wheel, and on the lower edge of the upper one, with a pinion between them. The draught animal walks on the lower wheel and draws upon the upper one, they rotating in opposite directions and actuating the pinion.

Claim.—The combination of the two toothed wheels C D, pinion E, and shaft F, arranged to operate in the manner as and for the purpose herein set forth.

No. 38,422.—ORRIN J. SAVAGE and GEORGE P. HAWLEY, of Ithaca, N. Y.—*Improvement in Lamp Burners.*—Patent dated May 5, 1863.—The outer chamber of the burner consists of two conical frustums, base to base, the lower one with large holes, and the upper one finely perforated.—The slit of the cone forms a rectangular base with a narrow top.

Claim.—First, the cone A, with its slot narrowed at the top, and gradually widening by straight and uniform lines to the bottom of the square or rectangular bottom, as represented.

Second, the combination of the cone A, the broad and flaring, finely perforated or foraminous sheet metal belt B, widening as it descends, and the base C, narrowing as it descends, with large perforations, made and used as represented and described, for the purposes set forth.

No. 38,423.—JACOB H. SHEAR, of Albany, N. Y.—*Improvement in Cooking Stoves.*—Patent dated May 5, 1863.—The object of this improvement is to equalize the heat of the stove by placing a double plate, forming a flue, behind the fire and above the oven, so that the heat of the fire shall not strike so directly into the part of the oven adjacent to the fire. These chambers are connected by openings, as described in the claim.

Claim.—The combination of the flue M and its openings a a b b, flue H and its openings c c, and its openings into flues C and E, with the back and bottom flues C D E, in the manner and for the purposes set forth in the above specification.

No. 38,424.—LEVI SHORT, of Philadelphia, Pa.—*Improved Composition for Filling Shells.*—Patent dated May 5, 1863.—Composition of the following ingredients: 40 pounds saltpetre, 7 pounds charcoal, 6 pounds asphaltum, 2 pounds antimony, 7 pounds sulphur, 2 gallons naphtha; mix, settle, and decant the supernatant liquor to saturate fibrous material as a filling for shells. The sediment is taken in its plastic state, and formed into fire balls, to be used in charging explosive projectiles.

Claim.—First, a combustible composition formed of the above-named ingredients, or their equivalents, substantially in the proportions and for the purposes herein set forth.

Second, metallic pellets or missiles filled with combustible matter, in combination and use with explosive projectiles, for the purposes and substantially as set forth.

No. 38,425.—OTIS W. STANFORD, of Mason, Warren county, Ohio, and ANDREW W. CRANE, of Lebanon, Ohio.—*Improvement in Grain Separators.*—Patent dated May 5, 1863.—The invention consists in the adaptation of the parts to receive the full and even effect of the wind by making the fan case narrower than the shoe case, so as to prevent leakage of wind on the edges of the shoe, and by placing the riddle, on which the grain or seed first falls, out of the way of the blast, so as by its vertical lateral motion to separate the seed before it is exposed to the wind.

Claim.—The vertically and laterally agitated shoe B, having the riddle D in the upper front part of it, immediately under the hopper, and mainly out of the blast, in the described combination with a case A A', having that part of it A which contains the shoe so much wider than that part of it A' which contains the fan, as to enable the interior width of the shoe at its front end to be equal to or somewhat in excess of the fan case at its front end, as and for the objects set forth.

No. 38,426.—DAVID STUART, of Philadelphia, Pa.—*Improvement in Cooking Stoves and Ranges*.—Patent dated May 5, 1863.—The improvement mainly consists in a superstructure to the ordinary flat-top stove, forming chambers in which vessels are set; also, in a falling door at front, the object being to so place the culinary vessels on and about the fire as to carry away into the chimneys the fumes, steam, and odor resulting from the various operations of cooking.

Claim.—First, the chamber F, with its door k, the chamber G, the fireplace J, and the oven L, when the said chambers are arranged to receive the culinary vessels, to communicate with each other and the fireplace, and in respect to each other and the oven, substantially as and for the purpose herein set forth.

Second, the culinary vessel g, the flange p on the upper edge of the same, said flange resting on a ledge n', so formed in the top plate A of the stove, and so situated in respect to perforations v that the said perforations shall form a communication between the interior of the vessel and the chamber within which the vessel is suspended, for the purpose described.

Third, the combination of the compartment F, the perforated door k and the perforated valve d, or its equivalents, the whole being arranged for roasting, frying, broiling, and other like purposes, substantially as described.

No. 38,427.—GUISEPPE TAGLIABUE, of New York, N. Y.—*Improved Instrument for Ascertaining the Amount of Water, &c., in Barrels of Oil, &c.*—Patent dated May 5, 1863.—The instrument consists of a glass tube, with a spring valve on each end, which are connected by a rod. This is plunged slowly down into the cask through the bung-hole, the valves being kept open by pressure on the rod. When it is filled up even with that in the barrel, it is withdrawn, and the depth of water and oil may be seen in the tube, and the amount calculated by the graduated scale.

Claim.—First, the tube constructed of metal and glass.

Second, the valves at top and bottom acted on by one rod, and opening and closing together.

Third, the graduated scale on the glass sides of the tube, constructed as aforesaid.

Fourth, the whole constructed substantially as and for the purpose described.

No. 38,428.—DANIEL E. TEAL, of Norwich, Chenango county, N. Y.—*Improved Chair*.—Patent dated May 5, 1863.—The chair is arranged with a coiled spring under the seat, and resting on the frame, so as to form an elastic support for the back of the seat, when the sitter leans back in the chair.

Claim.—The combination of the seat A, the springs C C, or their equivalents, and the frame B, adapted to tilt back at the will of the sitter against the resistance of the springs, substantially as shown and described.

No. 38,429.—GEORGE W. THOMPSON and JOSEPH FOSTER, of Bordentown, N. J.—*Improved Apparatus for Generating Gas from Petroleum and other Hydro-Carbons*.—Patent issued May 5, 1863; antedated November 10, 1862.—The object of this invention is to prevent the accumulation of hard incrustation, which is difficult of removal, and interferes with the heating of the retort. The means used are explained in the claim.

Claim.—Depositing on the bottom of the retort a layer of unslacked lime, charcoal, or other equivalent material, and so arranging the feed pipe D that the oil will drop directly on to the said layer, as and for the purpose herein set forth.

No. 38,430.—JOHN TRESCH, of New York, N. Y.—*Improvement in Machinery for Moulding Pottery*.—Patent dated May 5, 1863.—The invention consists of a double-headed reciprocating carriage, each head provided with a series of cores corresponding to stationary flasks on the ends of the ways on which the carriage traverses. The clay being placed in the mould the carriage is advanced, and the cores being thrust into the flask are revolved so as to bring the clay to the shape and finish of the space between the cope and nowel. The back of the flask which forms the flat bottom of the flower-pot is provided with studs which make the hole in the bottom of the ware. A remover, carrying cores of the same shape as and disposed like those on the end of the carriage, is introduced into the pots, and the hinged sectional flask is opened so as to free them to be carried to the kiln. The operation of moulding proceeds at one end, while the removal is going on at the other.

Claim.—First, the arrangement of the double-headed reciprocating carriage C, each head being provided with a series of revolving cores e, in combination with two stationary flasks D D, one opposite to either head of the carriage, all constructed and operating as and for the purpose described.

Second, the arrangement of a hinged cap j and brace k, in combination with a sectional flask D, constructed and operating in the manner and for the purpose substantially as described.

Third, the employment of the remover D, constructed substantially as specified, for the purpose shown and described.

No. 38,431.—WATERS WARREN, of Three Oaks, Berrien county, Mich.—*Improvement in Beehives*.—Patent dated May 5, 1863.—The hive is constructed of polygonal form with alternate sides of wood and glass, and is surmounted by a similarly constructed honey box which may be rotated on a central pivot, so as to allow or obstruct the communication between the hive and honey box, by means of the holes in the roof and floor of the respective apartments.

Claim.—The body B and spare-honey box E, constructed of alternate sides of wood and glass and arranged in polygonal form, in combination with the cap or cover G and platform A, substantially as described.

Also, the manner of arranging or applying the spare-honey box E to the body B of the hive, to wit: by fitting the box E on a central pivot or pin e, when said box E is provided with holes h in its bottom g, and the top C of the body B is provided with similar holes e', as and for the purpose specified.

No. 38,432.—RICHARD VOSE, of New York, N. Y.—*Improvement in Elliptic Springs*.—Patent dated May 5, 1863.—The ends of the elliptic springs are inserted in or attached to sockets, which are in turn controlled in their longitudinal displacement by tension plates which pass around and bind them together, the planes of the elliptic springs and of the tension plates being at right angles to each other.

Claim.—The combination of one or more curved, metallic bearing plates A and A', with one or more curved metallic tension plates B and B', when said plates are arranged in planes at angles to each other substantially as herein set forth.

Also, when bearing plates A and A' are arranged and combined with tension plates B and B' in the formation of an improved spring, substantially as herein set forth, confining and securing said plates by means of the metallic heads C C and D D, or their equivalents, substantially in the manner herein described.

Also, the use of intermediate, compensating springs, when combined with the bearing plates A and A', and tension plates B and B', of my improved spring, substantially in the manner and for the purpose herein set forth.

No. 38,433.—CALEB C. WALWORTH, of Boston, Mass.—*Improvement in the Arrangement of Conducting Pipes and Manifolds*.—Patent dated May 5, 1863.—On the side or sides of a conducting pipe are chambers which connect with the various pipes of the manifold; the steam is admitted by means of a valve whose seat is on the partition between the chamber and the conducting pipe, so as to communicate with all the manifold pipes opening into that chamber by one valve opening.

Claim.—The combination of the conducting pipe, valve and manifold, when arranged substantially as herein shown and described.

No. 38,434.—THEOPHILUS VAN KANNEL, of Chester, Randolph county, Ill.—*Automatic Cherry-Stoner*.—Patent dated May 5, 1863.—This machine is an improvement on Van Kannel's cherry-stoner, patented October 14, 1862, in being entirely automatic. The cherries are placed in the hopper and fed one at a time at each motion of the box: the cherry is received in a depression, and the box being raised the fork pushes the stone through a hole in the centre of the depression so that it drops out of the machine. The stoned cherry is retained on the barbed fork till a spring claw detaches it and discharges it from the machine.

Claim.—First, the curved spring-rocker E, constructed and applied to the mouth of the hopper and operating in conjunction with the slide F, or its equivalent, for feeding cherries to the machine one at a time, substantially as described.

Second, an automatic device I I', applied to a sliding box F, for discharging the stoned cherries separately from the machine, substantially as herein described.

Third, an alternately sliding and vibrating claw-plate I I', substantially as and for the purposes herein described.

Fourth, a removable plate K, applied to and forming a part of the box A, substantially as and for the purpose described.

Fifth, the combination of a conical hopper D with an automatic feeding device E and slide F, substantially as and for the purpose described.

Sixth, the perforated reciprocating basin G, for receiving and centering the cherries and retaining each cherry during the operation of the stoning fork H, in combination with a machine operating substantially as herein described.

Seventh, a machine for stoning cherries, operating substantially as and for the purposes specified.

No. 38,435.—CHARLES H. WHITE, of Emmett, Calhoun county, Mich.—*Improvement in Safety Switches for Railroads*.—Patent dated May 5, 1863.—The object of this improvement is to prevent the wheels from running off the track on to the ground when arriving at a switch which is locked on the wrong rail, and consists of an extra flange or guide rail which embraces the inner side of the wheel which is presented to the track, and an inclined plane and flat surface which the flange of the other wheel is compelled to climb and traverse until it drops into its proper position with its flange inside its appropriate rail.

Claim.—The use of the flanches I I, tongues *a a*, grooves *e e*, rebates *u u*, and flange supporters J J, in combination with the track switch rails A A, when arranged relatively with each other and with the said rails, substantially as and for the purposes specified.

No. 38,436.—JOSEPH WHITECAR, of Philadelphia, Pa.—*Improvement in Hoisting Oyster Dredges.*—Patent dated May 5, 1863.—A shaft with conical flanged ends is arranged on the gunwale of the boat so as to catch the lower bars of the dredge, which is so arranged as to width that as it passes over the side of the boat the widest portion is so raised that the plates or scrapers on its lower edge do not come in contact with the shaft as it passes over into the boat.

Claim.—Constructing and arranging a pair of conical wheels substantially as described in combination with an oyster or other dredge, for the purpose above set forth.

No. 38,437.—NORMAN WIARD and HERMAN SHLASBAUM, of New York, N. Y.—*Improvement in Skirt Supporters.*—Patent dated May 5, 1863.—From a waist belt are suspended hinged levers with elastic band springs around each, which are adapted to suspend and retain a portion of the dress which may be placed within their grasp.

Claim.—The new article of manufacture herein described, consisting of hinged levers adapted to be operated by a single band of elastic material held in place on the levers as represented and lipped in order to receive and hold suitable parts to seize the skirt, in the manner shown.

No. 38,438.—S. LLOYD WIEGAND, of Philadelphia, Pa.—*Improved Process of Manufacturing Illuminating Gas.*—Patent dated May 5, 1863.—The invention consists in transmitting the gases generated by the decomposition of steam by carbon heated to incandescence, through coal or other hydrocarbons at a high temperature and conveying the resulting vapors into a retort at a still higher temperature, and then decomposing them simultaneously with superheated steam and converting them into gas for illuminating purposes.

Claim.—The combination of the processes disclaimed when combined in the manner or in any equivalent manner, as set forth and described.

No. 38,439.—GEO. B. WIGGINS and J. W. HOARD, of Providence, R. I.—*Improvement in Grinding the Upper Cutter of Nail Machines.*—Patent dated May 5, 1863.—This machine is designed to grind the cutter in a certain curve to compensate for the tendency of the metal to curve itself in the opposite direction while being sheared from the plate, and consists of a horizontal rotating grinding wheel and a rest to which the cutter is attached, the rest being advanced to the wheel by means of a feed screw.

Claim.—The arrangement of the grinding wheel C and the carriage F, for grinding the movable cutter of a nail machine, substantially as described.

No. 38,440.—SAMUEL H. WILLIAMS, of Shoemaker'sville, Berks county, Pa.—*Improved Window Sash Fastener.*—Patent dated May 5, 1863.—The invention consists of a cam-shaped serrated roller or rollers in a case let into the window sash, which retire into the case when the sash is raised, but impinge against the boxing when the sash is relieved, with sufficient force to maintain the sash in position, in combination with a sliding spring bolt which engages with notches in the casing and may be retracted by a thumb-piece.

Claim.—The serrated oval rollers B B, in combination with the adjustable screw D, when said devices are used for the purpose described and set forth.

No. 38,441.—LOFTIS WOOD, of Brooklyn, N. Y.—*Improvement in Incendiary Shells.*—Patent dated May 5, 1863.—The invention consists in the construction of a projectile with a powder chamber and a separate chamber to contain molten metal, both chambers being lined with a non-combustible substance.

Claim.—The invention of coating or lining a shell projectile with the composition hereinbefore described, or with any other equivalent fire-proof substance susceptible of producing the same result as set forth.

Also, the construction of a cast metal shell *a a a a*, *b b*, *c c c*, formed with a smaller enclosed charge chamber *d d*, and a larger enclosed incendiary chamber *e e e e*, when formed and separated by a transverse air-tight partition or diaphragm *f f f*, the interior surfaces of which are coated with any fire-proof, non-conducting composition, as shown in Fig. 2 and indicated at I I I, through all of which and whereby any molten or fused metal may be effectually and safely enclosed within an explosive mass, thus composing an incendiary and explosive projectile for the purposes as hereinbefore fully set forth and described.

No. 38,442.—FREDERICK W. BOND, of Cypress Hills, Kings county, N. Y., assignor to JOHN B. MURRAY, of New York, N. Y.—*Improvement in Tourniquets.*—Patent dated May 5, 1863.—The encircling ligature which brings the pressure of the pad upon the artery is made of an endless band of vulcanized rubber, being a section of a tube of that material.

Claim.—The employment of an endless band of vulcanized rubber as an elastic ligature, in the combination of a pad and elastic ligature, substantially as described.

No. 38,443.—MARTIN H. CRANE, assignor to CRANE, BREED & Co., all of Cincinnati, Ohio.—*Improved Metallic Burial-Case.*—Patent dated May 5, 1863.—The claim is explicit, and describes the invention as consisting in making the burial case in parts or sections, with protuberances and overlapping flanges for convenient attachment, and the latter of such a shape as to enclose a space for cement.

Claim.—The production, as a new article of manufacture, of a sectional metallic burial-case—that is to say, a case whose lower shell or both upper and lower shells are composed of two or more parts, which may be united for use or disunited for transportation at pleasure, substantially as set forth.

Also, making the top, bottom, ends, and sides cast in separate pieces or sections united at the angles by overlapping flanges, substantially as set forth.

Also, forming upon each section a flange arranged to lap over or under a corresponding section flange in such manner as to admit of the interposition of a cementing substance, substantially as set forth.

Also, providing the flanges of the lower shell section with lugs, or their equivalent, to receive the ends of the screws, substantially as set forth.

No. 38,444.—JOSEPH W. DOUGLAS, of Middletown, Conn., assignor to W. and B. DOUGLAS, of same place.—*Improvement in Pumps.*—Patent dated May 5, 1863.—The object is to make all the valves accessible by the removal of one nut and a cap; they are arranged upon a single plate which covers the ports to the eduction and induction chambers, and are fastened by a screw-bolt and cap passing through the centre of the plate.

Claim.—The valves *j j*, *k k*, all placed on one and the same plate, when used in combination and arranged with a cap E and single screw-bolt F, passing through a pier *e*, substantially as shown and described.

No. 38,445.—CHARLES ELLIS, of Gloucester, Mass., assignor to Himself and DANIEL DOUGLAS, 3d, of same place.—*Improved Sail Hank.*—Patent dated May 5, 1863.—The improvement consists in placing two sets of friction rollers on the hank, one set above the other, so as to prevent the binding of the hank upon the spar in raising or lowering the sail.

Claim.—The combination and arrangement of the sail hank and the two sets or ranges of friction rollers, in manner and so as to operate substantially as described.

No. 38,446.—JOHN GREY and JOHN D. GREY, of Pittsburg, Pa., assignors to Themselves and THOMAS GREY, of same place.—*Improvement in the Manufacture of Sheet-Iron Hollow Ware.*—Patent dated May 5, 1863.—The flat sheet-iron is exposed in sockets of gradually increasing width to dies of corresponding increased size, so as by a succession of operations to be gradually expanded to the required shape, and form a seamless pan or dish.

Claim.—Making articles of seamless hollow ware out of sheet-iron, in the manner substantially as described, by the use of a succession of shallow, bottomless dies, having flaring or curved sides, each die in the series being of greater diameter than the last, with forceers of corresponding shape and depth, whereby the articles are gradually shaped from a flat disk by successive stages, the bottom or central part of the disk being last shaped.

No. 38,447.—FREDERICK W. GROTE, of New York, N. Y., assignor to Himself and CLAU O. TIETJEN, of same place.—*Improvement in Sewing Machines.*—Patent dated May 5, 1863.—The invention consists in the device for extending the loops at the upper or needle thread on the under side or back of the cloth, and carrying the under or locking thread through them by means of the lower hooked spool carrier. Also in the arrangement of a feeding wheel, whose shaft may be rotated around the needle shaft, so as to feed in any direction and maintain its distance from the needle. Also in the method of opening the needle, which is fully explained in the claim.

Claim.—First, the combination of the cylinder G, the spool case J, spool I, and stationary plate H, the whole constructed and arranged to operate substantially as and for the purpose herein specified.

Second, the construction, combination, and arrangement of the bar N carrying the feed wheel, and the needle-bar E, substantially as herein specified, whereby the feed wheel is enabled to be adjusted around the needle to feed in various directions and always kept close to the needle.

Third, operating the feed wheel by means of a dog lever P applied to the said wheel, a lever R R' attached to the bar N which carries the feed wheel, and connected with the dog lever P and a wiper 23 attached to the needle-bar, the whole combined and arranged to operate substantially as herein specified.

No. 38,448.—CHARLES C. LLOYD, of Philadelphia, Pa., assignor to Himself and R. H. GRATZ & Co., of same place.—*Improvement in Dry Gas Meters.*—Patent dated May 5, 1863.—The objects of the improvement are to overcome friction by removal of the shaft of the spiral flange wheel out of the gas chamber, and by conducting the vibrating flag-shafts through packing boxes into the upper chamber above the valve chest; and to reduce the

number of parts and passages, so that the gas may have free egress; also in an arrangement whereby the valve faces are made self-cleaning, by means of recesses cut in them so as to form cutting edges to remove tarry deposit.

Claim.—First, dispensing with the use of packing around the shafts of the spiral flange wheel and the index mover, or either of them, by placing the said spiral flange wheel G outside of and separated from the gas chest, substantially as described, for the purpose specified.

Second, the employment of a supplementary packing box in combination with each of the vibratory flag shafts used for operating the valves and index, the said packing boxes being placed in the top plate of the gas chest, substantially as described and set forth for the purpose specified.

Third, the arrangement of the valves B B' in such relation to the final outlet channel L that the latter shall serve as a single and direct outlet channel from the central openings of the said valves to the outside of the meter, substantially as described and set forth for the purpose specified.

Fourth, making the curved recesses 2 2 3, in the two side faces of either the cap or seat of each of the valves of a dry gas meter, substantially as described and set forth for the purpose specified.

No. 38,449.—JAMES M. ORDWAY, of Manchester, N. H., assignor to CHARLES E. HODGES, of Dorchester, and NATHANIEL D. SILSBEE, of Boston, Mass.—*Improvement in Preparing Hydrated Silicates of Potash and Soda.*—Patent dated May 5, 1863.—The highly silicious soluble silicate of soda or potash is treated with chloride of soda or other neutral salt, and the precipitate pressed, dried, and ground.

Claim.—The process, substantially as described, of producing a solid, hydrated alkaline silicate, the same consisting in treating a solution of silicate by precipitating the silicate, and subsequently pressing and drying it, substantially as specified.

Also, the application of chloride of sodium or a neutral alkaline salt to a solution of an alkaline silicate, as a means of effecting precipitation of the mineral matter of the solution.

No. 38,450.—CHARLES H. PALMER, of New York, N. Y., assignor to Himself and SAMUEL COLGATE, of same place.—*Improvement in Seicing Machines.*—Patent dated May 5, 1863.—This machine makes the chain stitch, and the presser foot and vertically moving needle frame are operated by cams inside the yoke frames appertaining to those two motions. The frame is made of a sill and two uprights, the latter being attached to the sill by being hooked through slots underneath it, and fastened by a screw which passes through feet or flanges on each side piece.

Claim.—First, the construction and arrangement of the parts A A1 A2 A3 so as to form the framing of a sewing machine, substantially in the manner and for the purpose herein set forth.

Second, the construction and arrangement of the presser foot C, centre c, cams D D', and screw d, substantially as and for the purpose herein set forth.

Third, the construction and arrangement of the slot a a', spring C', centre c, and presser foot C, substantially as and for the purpose herein set forth.

Fourth, the combination of the wheels G G' with the yoke F and projections f f', substantially in the manner represented and for the purpose herein set forth.

No. 38,451.—ISAAC PEACOCK, of Shortsville, Ontario county, N. Y.—*Improvement in Horseshoes.*—Patent dated May 5, 1863.—The shoe has a raised rim or cork all around the outside, and a rim, less salient than the former, around the inner edge, the heel ends being recurved towards each other.

Claim.—First, constructing a shoe with a continuous calk d, in combination with the continuous stiffening rib e and the wide bottom surface or groove a', substantially as herein described.

Second, in combination with the improvement embraced in the claim above, the peculiar manner of curving the shoe at the heel, as shown and described for the purpose set forth.

No. 38,452.—S. E. PETTEE, of Philadelphia, Pa., assignor to THE UNION PAPER BAG MACHINE COMPANY, of same place.—*Paper Bag Machine.*—Patent dated May 5, 1863.—The invention is an improvement on the machine of H. G. Armstrong, patented October 2, 1860, and consists: Firstly, in the lateral adjustment of the plate to which the spindle, which carries the roll of paper, is journaled. Secondly, in the lateral adjustment of the plate which carries the pasting device. Thirdly, in folding the continuous sheet of paper by sharp-edged pulleys which crease the paper, and others that fold it down, dispensing with the "former." Fourthly, in making the pulleys adjustable laterally as to each other and to the paper to determine the creases for different sized bags. Fifthly, in the rollers which guide the paper to the severing device. Sixthly, in the construction and adjustability of the striker to and from its centre of rotation, and in regard to the rollers. Seventhly, in the pasting blade which transfers the paste from the roller to the lap of the bag, the blade having a projection which determines its action on the paste roller in respect of the amount of paste transferred

from the latter. Ninthly, in the roller with angular projecting plates acting in combination with the paste roller to determine the width of the paste on the latter.

Claim.—Firstly, hanging the spindle G which carries the roll of paper to a plate E, so secured to the frame as to be readily adjusted laterally thereon, for the purpose specified.

Secondly, so connecting the plate D, which carries the roller I and the pasting device to the frame, that the whole may be adjusted laterally on the said frame, for the purpose specified.

Thirdly, folding the continuous sheet by means of a pulley or pulleys M M, or their equivalents, in combination with the horizontal pulleys d d, or their equivalents, to the same, the sharp edges of the pulleys forming the crease at the proper place in the paper, and the pulleys d d, or their equivalents, turning down the fold determined by the creasing pulleys, thereby dispensing with the objectionable "former" used in the machines for making paper bags.

Fourthly, so securing the creasing pulleys M M to the shaft I that they can be adjusted thereon, in respect to each other and to the paper, for the purpose described.

Fifthly, the roller h h secured to the bar P, and so arranged as to present a lateral sagging of the paper without disturbing the creases made by the pulleys M M.

Sixthly, so constructing the revolving striker that the striking bar can be moved to and from the centre of rotation and secured after adjustment, for the purpose specified.

Seventhly, the revolving striker when arranged in respect to the rollers τ τ and the rollers ω and ω' , as and for the purpose herein set forth.

Eighthly, imparting to the pasting blade I5, by the devices herein described, or their equivalents, the motion described to and from the pasting roller, as well as the motion described to and from the folding rollers, for the purpose herein set forth.

Ninthly, the bevelled portion of the plate I5 so formed and arranged as to conform or nearly conform to the circumference of the roller 6, and so as to effectually transfer the paste to and spread it over the fold at the bottom of the bag, as described.

Tenthly, the roller 7, with its angular projecting plate 2 2, when combined and operating in conjunction with the paste roller 6, substantially as and for the purpose herein set forth.

No. 38,453.—W. H. PIERCE, of Somerville, Middlesex county, Mass., assignor to Himself and SAMUEL ADAMS, Jr., of Boston, Mass.—*Improvement in Lamps.*—Patent dated May 5, 1863.—A metallic handle extends from the collar of the lamp.

Claim.—First, providing the metallic collar of a lamp with a projecting portion or continuation, which shall form the handle of the lamp, substantially as set forth.

Second, the combination of a glass lamp body A, metallic collar B, handle C, substantially as set forth.

Third, fastening a metallic handle to a glass lamp by means of the collar, and without puncturing the glass, substantially as set forth.

No. 38,454.—CHARLES SPOFFORD and A. B. SOUTHWICK, of Ballardsville, Essex county, Mass., assignors to THE WHIPPLE FILE MANUFACTURING COMPANY.—*Improvement in Machines for Rolling File Blanks.*—Patent dated May 5, 1863.—The rollers which form the blank are grooved to correspond in shape with the finished file, and the metal is fed to them by an adjusted reciprocating carrier, which presents it at the proper time to the rolls.

Claim.—The rolls E and F', in combination with the carriage P, arranged and operating in the manner described for the purpose set forth.

No. 38,455.—WALES ALDRICH, of Cleveland, Ohio.—*Improvement in Breech-loading Fire-arms.*—Patent dated May 12, 1863.—A wedge-shaped block, the forward lower end of which is rack-shaped, slides up and down through the rear part of the breech, being moved by a toothed segment, to which the guard is attached. A tongue or spur projects from the forward part of the pinion, which, when the breech block is moved down, presses back the sliding piece L by means of the lip L'. The upper end of the sliding piece catches the rear end of the exploded metallic cartridge, and draws it out of the barrel. At the rear end of the chamber is a projection, which, when the chamber moves down, meets a like projection on the hammer and half cocks the same.

Claim.—First, the wedge-shaped body D, rack E, and pinion F, in combination with the rigid spur K and slider L, when these parts are constructed, arranged, and operated substantially as and for the purpose specified.

Second, the herein-described device for bringing the piece to a half-cock by the movement of the body D, as set forth.

No. 38,456.—CHARLES B. ANGELL, of Coventry, Kent county, R. I.—*Improvement in Registers for Horse Cars.*—Patent dated May 12, 1863.—This invention consists in a registering machine, by which the number of passengers entering and leaving the cars is indicated upon a drum, which is under the control of the proprietor alone.

Claim.—First, the step B attached to the shaft K, in combination with the lever g g g, arranged and applied substantially in the mode described, for the purposes set forth.

Second, the combination of the gates C with the wheels b, the racks c, or their equivalents,

with the beam *d* and the spring *l*, arranged substantially as described for the purposes set forth.

Third, the mode of unlocking the beam *d* by the rod *h'*, combined with the lever *k* and arm *k'*, acting on the spring *l*, or their equivalents, arranged substantially as described for the purposes set forth.

Fourth, the lever *h*, with its weight or spring, in combination with the lever *g*, shaft *K*, and levers *P* and *N'*, arranged substantially as described for the purposes set forth.

Fifth, the shaft No. 7, in combination with its arms or cranks connecting it with the racks and wheels, arranged substantially as described for the purposes set forth.

Sixth, the arrangement of the levers and rods 12, 5, 4, and 3, in combination with the spring 2, constructed substantially as described for the purposes set forth.

Seventh, the shafts *R* and *P'*, their cams *S* and *S'''*, their connexions with the beam *d* or shaft 7, arranged and applied substantially as described for the purposes set forth.

Eighth, the drums *Z* and *Y*, constructed and placed as described for the purposes specified.

Ninth, the mode of throwing the drum out of gear by the action of the shafts *U'* and *V'* and the levers *n* and *n'*, and the parts connected therewith, arranged substantially as described for the purposes specified.

Tenth, the guides *m* and *m'*, for the purposes set forth.

Eleventh, the combination of the levers *R* and *N'* with the rods *S'* and *T*, and their intermediate and appurtenant parts, arranged substantially as described for the purposes set forth.

Twelfth, the combination of the lever *P* with the springs, rod, wheel, and hammer connected therewith, arranged substantially as described for the purposes set forth.

Thirteenth, the combination of the movable step *B* with the drums *Z* and *Y*, in connexion with the gates *C*, through the mechanical contrivances described, or their equivalents, constructed and arranged substantially as set forth for the purposes specified.

No. 38,457.—JAMES S. and THOMAS B. ATTERBURY, of Pittsburg, Alleghany county, Pa.—*Improvement in Lanterns*.—Patent dated May 12, 1863.—The invention consists in attaching a reflector directly to and within the globe glass of a lantern.

Claim.—First, applying a metallic reflector to a lantern surrounded with glass, substantially as herein described.

Second, making the glass surrounding the lantern, or the lantern glass, the support for the reflector, substantially as herein described.

No. 38,458.—GARDNER T. BARKER, of Pittsfield, Berkshire county, Mass.—*Improvement in Animal Trap*.—Patent dated May 12, 1863.—The object of this invention is to construct a self-setting animal trap; and it is accomplished by an arrangement of a shelf, upon which the animal approaches a door, which swings away as he touches it, discovering a hole which he enters, and the door returning to its original position is ready for another victim.

Claim.—The combination of the swing door *B*, the buttresses or jambs *c* and *c'*, and the shelf with the entrance port *d*, the whole being arranged and applied together substantially in the manner and so as to operate as specified, the bait being applied to the door.

Also, the improved swinging door, as provided, with the bait recesses or chamber open in front, as described, or so made and provided with a lateral passage, as specified.

No. 38,459.—AUGUST BAUER, of Philadelphia, Pa.—*Improved Lubricating Composition*.—Patent dated May 12, 1863.—This composition is produced by mixing the oily substance obtained in the distillation of pitch at 500° Fahrenheit with glue water.

Claim.—The lubricating compound or grease produced as hereinbefore stated.

No. 38,460.—FRANCIS ROBERT BOETTNER, of Chicago, Ill.—*Apparatus for Working Ships' Pumps*.—Patent dated May 12, 1863.

Claim.—First, leading pipes from different parts of a ship or other vessel to one common chamber *C*, with which the pump or pumps or suction pipe of the pump or pumps is connected, substantially as and for the purpose herein specified.

Second, the employment within such chamber *C* of a valve or valves, so applied in relation to suitably arranged ports in combination with the pipes leading from different parts of the vessel, and so controlled by an oscillatory movable weight as to open communication between such chamber and the pipe or pipes whose mouths are covered with the bilge water, and to close communication between such chamber and the pipe or pipes, which, owing to the position of the vessel, have their mouths uncovered by the said water, substantially as herein specified.

No. 38,461.—FRANCIS BRANDON, of Albany, N. Y.—*Improved Machine for Planing Oval Mouldings*.—Patent issued May 12, 1863; antedated November 2, 1861.—The invention consists in using, in connexion with an oval chuck or lathe, a stationary and a sliding cutter, the cutting planes of which are at right angles to each other.

Claim.—The arrangement with each other and with the pattern *K* and eccentrically rotating face-plate *e* of the self-adjusting cutter *j* and the adjustable cutter *J*, the said cutters acting upon the work at right angles to each other, all in the manner and for the purposes herein shown and described.

No. 38,462.—E. K. BRECKENRIDGE, of West Meriden, New Haven county, Conn.—*Improvement in Window Sash Fastenings*.—Patent dated May 12, 1863.—This fastening consists of a pintle which traverses in a case or socket, made in two semi-cylindrical sections, so that it may be driven into a brace-bit hole and retained there without other fastenings, the said socket having a slot in which a projection on the pintle traverses, and a side slot into which the pintle being rotated the bolt will remain withdrawn until rotated in a contrary direction.

Claim.—A spring window fastener which has its pintle *C* provided with a projection or pin *k*, and its case or tube *B* made in two parts and provided with a slot *d*, and shoulder or recess *e*, as herein shown and described, so that the pressure of the sides of the orifice into which the tube is driven will suffice to keep the parts together in working order without riveting or fitting, and so that the pintle, on being withdrawn and partially rotated, will remain withdrawn until it is rotated in a contrary direction, all as set forth.

No. 38,463.—WILLIAM G. BUDLONG, of Providence, R. I.—*Improvement in Shoe Pegging Machine*.—Patent issued May 12, 1863; antedated June 30, 1862.—The invention consists in the manner of operating the awl and peg-driver, and regulating the descent of the latter, and the method of effecting the proper propulsion of the several parts through the medium of the main shaft and cams. The awl and peg-driver have motions vertically and laterally in the same planes in both directions and at fixed distances apart, so that while a hole is being made by the awl in the sole, a peg shall be cut from the peg wood and driven by percussive motion into the hole made by the previous descent of the awl. The awl is driven by the positive motion of a cam on the main shaft, while the peg is driven by the recoil of a spring against which the hammer is lifted at the return motion, and again freed by the disengagement of the toe from the cam. Its motion is arrested by a cushioning chamber which receives a plunger attached to the peg-driver shank.

Claim.—First, the arrangement of the peg-driver and the awl within the slides *b* and *c*, so that while they are capable of moving vertically, independently of each other, they shall have a lateral motion in unison, in the manner substantially as described.

Second, the employment, in combination with the peg-driver, of the retarder to control the force of the descent of said driver, substantially as described.

Third, the arrangement of the vertically and laterally moving slide plates, in combination with the cams, so placed as to operate upon said plates from within or between said plates, substantially in the manner described herein.

No. 38,464.—J. R. CAMERON, of Pittsburg, Pa.—*Improvement in Traction Wheels*.—Patent dated May 12, 1863.—The improvement consists of two disk wheels, to which are attached vibrating feet or blocks with upturned edges so as to catch the ground and vibrate, holding firmly in striking or leaving it; the triangular flanges on the plates or feet project within grooves in the face of the wheel, and are pivoted thereto.

Claim.—The use of vibrating feet *N* *N* *N* upon the periphery of a wheel, when constructed in the manner and for the purposes as herein set forth.

Also, turning up the edges of the plates so as to form a heel and toe, substantially in the manner as hereinbefore stated.

Also, the use of a double wheel in combination with the vibrating feet turned up at their edges, in the manner and for the purposes as herein previously stated.

No. 38,465.—LAZARE CANTEL, of New York, N. Y.—*Improvement in Trunks*.—Patent dated May 12, 1863.—The object of this invention is to bring a force to bear upon the hasp of a lock, which shall drag it down so as to bring an extra pressure upon the meeting surfaces of the lids, and make the joint water-tight; and this is done by means of a nut and screw, which depress the eye or staple into which the bolt of the lock enters.

Claim.—First, the screw *i* and nut *g*, in combination with the hasp or lock attached to the trunk, and acting as specified, to keep the joint together and form a water-proof trunk, as specified.

Second, the spring catch 7 in combination with the said hasp *l*, block *m*, screw *i*, and nut *g*, for the purposes specified.

No. 38,466.—WILLIAM CARR, of Bath, Maine.—*Improved Medicine for Piles*.—Patent dated May 12, 1863.—To a decoction of fir bark add five tablespoonfuls of pulverized hard-wood charcoal, two teaspoonfuls of pulverized rosin, and one grated nutmeg; mix, shake, and drink.

Claim.—The above described composition, as made of the ingredients and compounded in the manner set forth.

No. 38,467.—JOHN COLLUM, of Houghton, Mich.—*Improved Ore Washing Machine*.—Patent dated May 12, 1863.—The ore is admitted to the machine on inclined spouts, and is received on sieves. A rock shaft, vibrating above, has attached to it two plungers, which descend in their appropriate chambers, and drive the water, which is admitted by pipes, up through the meshes of the sieve. The action of these plungers is regulated by a thimble.

on the rod, which extends or contracts it. The machine is double throughout, and may operate on two classes of ores at the same time. The finer, heavier particles pass through the meshes of the sieve into the cistern below, the larger and lighter particles falling off at the end of the screen, and the floating dust held back by a board, whose edge descends a little below the surface of the water.

Claim.—First, the employment or use of a cistern B, divided into two compartments *b b*, in connexion with the screens D D and plungers E E, and arranged to operate as and for the purpose specified.

Second, operating the plungers E E, through the medium of the rockbar J, and adjustable connecting rod K, as set forth.

Third, in combination with the rockbar J, the plunger rods F F, springs H, and adjustable thimbles I, for the purpose set forth.

Fourth, the buttons *o* on the inclined spouts N N, when the same are used in connexion with the screens D D, as and for the purpose specified.

Fifth, the bars O O P P Q Q applied to the screens D D, to operate as and for the purpose herein specified.

No. 38,648.—GEORGE W. COOK, of St. Paul, Minn.—*Photographic Printing Frame.*—Patent dated May 12, 1863.—This invention consists in an attachment to the cover or lid of a photographic printing frame of two pairs of bolts which are driven outwards by a spring between each pair, so that they enter slots in the inside of the frame, and are readily withdrawn by thumb-pieces. The object is to bring a gentle and equable pressure to bear upon the negative glass or paper; the ends of the bolts are bevelled in accordance with the shape of the slot and enter therein more or less according to the thickness of the negative glass or paper.

Claim.—The construction and arrangement of the four bolts C C C C, in combination with the springs G G, and the frame A, and the lids B B, substantially as shown and described.

No. 38,469.—GUISEPPE MATEO COPPO, of Paris, France.—*Improvement in Fulling Machines.*—Patent dated May 12, 1864.—The exterior box is formed of cast-iron lined with lead, and inside of this is the wooden trough of the requisite shape; the copper lining of this is elevated a little distance so as to make a steam space between it and the wood; working in the box are two beaters which are hollow, so as to have an extended surface without great weight, and these are alternately raised by pins on a wheel which rotates between them, having pins on alternate points on the opposite sides of its rim.

Claim.—Constructing the trough of a fulling machine in layers or strata of the materials specified and arranged relatively to each other, substantially as described.

Also, the hollow formation of the beaters or mallets by which elongation and extent of acting surface thereof is secured without sacrifice of lightness, substantially as specified.

Also, the manner of employing heat by the introduction of a heated medium between the strata forming the trough, substantially as specified.

No. 38,470.—JOHN CRAM, of Boston, Mass.—*Improved Camp Table or Stool.*—Patent dated May 12, 1863.—This table or stool is so constructed that the legs may be readily folded together against the top or seat, so as to reduce its compass for transportation. The table or seat is supported by folding legs, one set of which is permanently journaled to cleats on the under side of the table or stool, and the other set is guided by projections in recessed grooves on the inside of the cleats to a position corresponding with the permanently journaled legs on the other side of the seat. The legs in their folded position are retained by a latch suspended from the under side of the seat.

Claim.—The improved camp table or stool, as made with the latching apparatus or its equivalent, and the recessed guide grooves arranged and combined, as described, with the table top and the two folding sets of legs, applied together, substantially in the manner and so as to operate as specified.

No. 38,471.—WILLIAM H. DOANE, of Cincinnati, Ohio.—*Improvement in Scroll Saw Mills.*—Patent dated May 12, 1863.—The saw is mounted upon a driving rod which slides in boxes, and is widened to form a yoke in which an eccentric revolves. The upper part of the saw is guided by a slot in a metal rod, which is supported inside of and enclosed by a cylindrical casing, which stands on flanged feet; between these feet the stuff is passed to the saw, and the enclosing tube is firmly attached, by a plate, pivot connexion and sleeve, to some permanent point.

Claim.—First, the metal guide rod E, in combination with the lower support *f* and the upper support *f*, or the equivalents thereof, substantially in the manner described.

Second, supporting and guiding the upper end of the saw *d* in the metal rod E, the latter being fixed within an adjustable tube F, substantially as described.

Third, the combination with the adjustable tube F of the flaring bell-mouthed bolder H, as herein described.

Fourth, the elastic clamping collar J, in combination with the adjustable tube F and metal guide rod E, as and for the purpose described.

Fifth, the combination of the tube F, elastic collar J, adjustable slotted plate J, and pivot connexion *k*, substantially as and in the manner described.

Sixth, making the upright yoke rod the driving rod for the saw, and guiding this rod in its motions by means of two or more guide boxes arranged above and below the yoke C', the whole being combined with the eccentric C and saw *d*, for giving a positive rectilinear motion to the guide rod, and dispensing with the pitman driver, substantially as herein described.

No. 38,472.—DANIEL DRAWBAUGH, of Eberle's Mills, Cumberland county, Pa.—*Improved Machine for Levelling the Faces of Millstones.*—Patent dated May 12, 1863.—These instruments are adapted to the different requirements of the bed stone and runner, and are methods of attachment of a central yoke, upon which a traversing adjustable tram may be hung. The attachment to the cock-head is by means of a central frame and yoke pivoted at the point of the cock-head, and with forks around its sides. The attachment to the runner is by a hooked rod around the balance rim, and a clamp to retain the central frame to which the tram is attached, and around which it revolves.

Claim.—First, the shape and construction of the arm E with its forked end G and adjustable screws J, so that the rod staff H may be regulated and adjusted on either side or at either end.

Second, the shape and construction of the adjustable key T, as arranged and fastened to the rim U of the upper stone or runner.

Third, the upright tramming frame A, as herein described, in combination with the movable-pointed dies N and circular bed-plates, for the purpose of regulating the tramming and to be held firmly to the cock-head M.

No. 38,473.—EZRA DURAND, of Chelsea, Washtenaw county, Mich.—*Improved Wardrobe.*—Patent dated May 12, 1863.—The side of the wardrobe is detachable from the body, and is drawn along the floor of the apartment, bearing with it one end of an extensible frame on the lazy-tongs principle, suitable for hanging clothes upon to dry.

Claim.—A wardrobe provided with an attached clothes-drying device, made and operating as herein shown and described.

No. 38,474.—THOMAS S. DWELLEY, of Charlestown, Mass.—*Improved Engine Piston.*—Patent dated May 12, 1863.—This piston has grooves around its periphery for an expansive metallic packing and a centralizing ring, which operates to centralize the piston head and its packing with reference to the cylinder and piston rod, and being made of fusible metal is readily removed and replaced without disturbing the packing rings.

Claim.—The improved piston, made not only with an angular space or groove encompassing and being within the periphery of the piston head, but having an annular or centralizer, cast or placed within such groove, and a packing, arranged substantially in the manner and for the purpose described.

Also, the combination of the auxiliary groove *f* and the retaining projections or arms *l l* with the packing ring groove and with the joint lap or breaker of the packing ring, the whole being arranged and so as to operate together, as specified.

No. 38,475.—RUFUS G. EMERSON, of Fairhaven, Carroll county, Ill.—*Improvement in Beehives.*—Patent dated May 12, 1863.—The invention consists of a front entrance board, having a concave or receding edge, and a groove and slider by which the size of the entrance orifice of the hive may be regulated.

Claim.—The application to beehives of a concave block or strip of wood or other material, constructed with an internal groove and sliding bar, substantially as delineated, and for the purpose specified.

No. 38,476.—F. A. H. GAEBEL, of New York, N. Y.—*Improvement in Locks and Keys.*—Patent dated May 12, 1863.—The object is to make a lock which shall be proof against the ordinary form of skeleton keys and yet involve no additional cost in the manufacture, and it consists in making peculiar protuberances on the inner sides of the back and front plates in combination with a key with oblique bits calculated to traverse the space between said protuberances.

Claim.—A key having two bits, when said bits are curved or stand under an oblique angle with the geometrical axis of the key, substantially in the manner and for the purposes herein described.

Also, in combination with a double key-bit, substantially as herein described, the annular concave *g*, and convex *d*, within the lock and in the line of the keyhole, substantially in the manner herein described.

No. 38,477.—D. C. GIBBS, of Fleetville, Luzerne county, Pa.—*Improvement in Saw-Mills.*—Patent dated May 12, 1863.—This is an improvement in muley saws, and consists in the construction and arrangement of the saw adjustments, the driving shaft, and the log carriage, which may be understood by reference to the claim and illustration.

Claim.—First, the arranging of the sill pieces B B' with the keys *c* and wedges *d*, substantially as shown, to admit of the adjusting of the driving shaft C, whenever required to maintain the horizontality of the same.

Second, the cross-head G, formed with a turned cylindrical bar i, and flattened ends or broad plates j j, in connexion with the plate I, and wooden, leather, or other suitable bearings k, and the guides H H, all arranged substantially as herein shown and described.

Third, the plates s s, formed or constructed as shown, and attached to the upper end of the saw K, in connexion with the plate r, guides L L, and the pendent bar M, having a longitudinal or vertical slot a in it to receive the plates s s, substantially as set forth.

Fourth, the bracket N, attached to the fender sill g, provided with a slot a', and wooden bars d' d' attached to it, as shown and described, to form adjustable saw-guides, as set forth.

Fifth, the movable or adjustable frame P, with saw-guides O O attached, in combination with the bracket N and guides d' d', arranged as herein set forth.

Sixth, the band and toothed wheel U, in combination with the wheel B', friction pulley A', provided with the leather or other suitable material g' in its periphery, the pulley A' being placed on an adjustable shaft W, which has a pinion k' placed on it, and the wheels U and B having a belt F' passing around them, which is rendered operative or inoperative by an idle pulley G', all arranged as shown, for communicating a feed movement to the carriage, and gigging back the same, as set forth.

Seventh, arranging the friction pulley A' so that it may slide on the shaft W, and moving said pulley on its shaft by the means herein set forth, when said pulley thus arranged and operated is used in connexion with the wheel B', for the purpose specified.

No. 38,478.—JACOB HAEGE, of Shiloh, St. Clair county, Ill.—*Improvement in Ploughs*.—Patent dated May 12, 1863.—The improvement consists in the method of adjusting the height of the handles relatively to the beam, which is accomplished by means of a screw pivoted to the rear end of the beam, and passing through a transverse brace on the handles; secondly, in the method of regulating the penetration of the plough by means of a brace rod which connects the standard to the beam and which is fastened to pivoted plates at those two points.

Claim.—First, raising and lowering or adjusting the handles B B, by means of the screw-rod D, attached to the beam A, and provided with a nut F, fitted within a cap or socket d, which is secured to a bar E, attached to the handles, all being arranged as and for the purpose herein shown and described.

Second, adjusting the beam A, for the purpose of regulating the penetration of the plough, by means of the screw-rod K, fitted in the plate J, and nut L, which are hung on pivots or trunnions, as herein set forth.

No. 38,479.—WILLIAM HAMILTON, of South Paris, Oxford county, Maine.—*Improvement in Excavating Machines*.—Patent dated May 12, 1863.—The excavator is so hung to the frame and the frame so attached to the axles that the carriage may be adjusted to a horizontal position while the wheels may be traversing an inclined surface.

Claim.—My improved land excavator, constructed not only with its front axle so made and applied to the body of the carriage or frame A as to enable the latter to be tilted laterally on it, but having one or both of its rear wheels applied to the carriage frame or body by means of a lever, or its equivalent, to operate substantially in the manner and for the purpose as specified.

No. 38,480.—ROBERT HINSHELWOOD and CHARLES A. A. DEERING, of New York, N. Y.—*Water-proof Cement for Leather, &c.*—Patent dated May 12, 1863.—The invention consists in a composition of gutta-percha (50 parts) dissolved in bi-sulphuret of carbon (500 parts) and gum shellac dissolved in alcohol, (50 parts,) the whole being mixed with turpentine, (100 parts.)

Claim.—A water-proof cement consisting of the ingredients herein described and mixed together in about the proportion and substantially in the manner specified.

No. 38,481.—GEORGE HOFMAN, of Scott Bar, Siskiyou county, Cal.—*Improvement in Mining Pick*.—Patent dated May 12, 1863.—The pick is retained within a slot in a head, by means of a notch on its convex side, and a wedge on its concavity. The shank is prolonged into a socket within which a handle is inserted.

Claim.—In combination with a removable eyeless pick or point, a metallic head composed of one piece and having wrought upon it a strap or mortise to receive the pick or point, and a tight socket to receive the handle, the several parts being secured to said head, substantially in the manner herein described and represented.

No. 38,482.—O. L. HOPSON and H. P. BROOKS, of Waterbury, Conn.—*Improvement in Buckles*.—Patent dated May 12, 1863.—The two prongs of the buckle are the ends of a single piece of wire, and are passed through holes in the central bar of the buckle, and lapped around and movable upon it to a sufficient degree to open and release the strap.

Claim.—A buckle, the prongs of which are made of one piece of wire, and being passed through holes in the centre bar of the buckle frame, so bent that the bar connecting the said prongs shall form with them a joint upon said central bar of the frame, all substantially as herein shown and described.

No. 38,483.—JOS. CHARLES HOWELLS, of Washington, D. C.—*Improvement in Hook-eyes for Wearing Apparel and other Purposes*.—Patent dated May 12, 1863.—The orifice forming the eye is partially covered, so that when the hook is inserted the latter is almost entirely protected by the cap.

Claim.—An eye provided with an embossed surface constituting a shield or guard for the security and protection of the hook, substantially as set forth.

No. 38,484.—WM. W. HUNTLEY and ALPHEUS BARCOCK, of Silver Creek, Chataqua county, N. Y.—*Improvement in Bran Duster*.—Patent dated May 12, 1863.—The slats of the revolving cylinder are armed with brushes, which are adjusted as to distance from the cloth by means of sliding and hinged arms on the brush shaft. Underneath the latter is a flour-discharging disk with scrapers on its under surface and a circular central opening leading to the flour-box.

Claim.—First, the disk flour-discharger, made fast on the brush shaft, arranged below the dusting cylinder and above the annular plate D of the casing, substantially as and for the purpose set forth.

Second, the combination of disk flour-discharger, annular plate D, and scrapers n n, substantially as and for the purpose set forth.

Third, the arrangement of the disk flour-discharger, adjustable levers or arms g g, sliding collar H, dusting cylinder E, and casing A, all united substantially as described.

No. 38,485.—A. INGALLS, of Independence, Buchanan county, Iowa.—*Improvement in Grain Drills*.—Patent dated May 12, 1863.—This seeder has two boxes, the rotating shaft in each being connected to the axle on that side. Underneath the seed box is a rod with plates under the seed openings. The dragging teeth are gauged by a roller on a rod attached to the shank, and are lifted out of contact with the soil by a lever and lifting plate.

Claim.—The revolving axles C, rod M, and plates m, the lifting plate J, and gauge wheels K, when all these parts are constructed, arranged, and operated as and for the purpose herein set forth.

No. 38,486.—SIMON INGERSOLL, of Stamford, Fairfield county, Conn.—*Improvement in Clutches*.—Patent dated May 12, 1863.—The rotation of the handle in causing the inclines to climb on each other elongates the stock, brings the requisite pressure on the tool, and by the friction between the two disks causes the revolution; the reverse motion liberates the disks and permits the free return of the handle for another effective stroke.

Claim.—The combination of the following parts, to wit: the inclined plates f f, disk d, stationary disk e, and nut h, or its equivalent, all arranged and operating together as a friction clutch, in the manner specified.

No. 38,487.—GUSTAVUS S. JASPER, of Boston, Mass.—*Improvement in Apparatus for the Manufacture of Cube Sugar*.—Patent dated May 12, 1863.—The sugar is placed in a hopper in which are revolving stirrers, and from thence falls into the moulds of an eccentric revolving wheel. Within this wheel are plungers connected to the central shaft, which, as the wheel revolves inside of and in contact with the casing, press the sugar into dense cubical masses. The wheel further revolving discharges these cubes on an apron or board to be removed to the kiln.

Claim.—An improved machine as not only constructed with the stationary journals I I, arranged eccentrically to its shaft L, but as having the moulds i i, &c., plungers f f, &c., and curved plate S, arranged and constructed substantially in the manner and so as to operate as specified.

No. 38,488.—FRED'K G. JENKINS, of New York, N. Y.—*Improved Cutter-head for Wood of Lead Pencils*.—Patent dated May 12, 1863.—The cutter-head being placed on a bench, the wood is supplied by a feed roller and the segment saws describing the larger circle cut into strips, the knives following make the groove to receive the lead, and the shorter knives plane the surface smooth.

Claim.—The arrangement of the plate B with the cap G, for the purpose of forming the mortise to receive the knives or cutters D, as herein shown and described.

Also, as new the use of segment saws set stationary in a revolving head for the purpose of grooving and separating the wood, as herein described.

Also, as new the combination of the several parts in one head for the purpose of planing, grooving, and separating at one and the same operation the wood for lead pencil cases.

No. 38,489.—BARTON H. JENKS, of Bridesburg, Philadelphia county, Pa.—*Improvement in Looms*.—Patent issued May 12, 1863; antedated December 14, 1861.—The rotary pattern wheel is provided with pins having one side bevelled, which act on the lever, and impart to it movements determined by their presentation; this motion is communicated to the tumbler and cam.

Claim.—First, the tumbler f in combination with the oscillating cam C, or an equivalent arrangement of the same, for the above-described purpose.

Second, pins of an equal length, having one side bevelled, in the manner shown, for the purpose of controlling the movement of shuttle boxes in power looms.

No. 38,490.—FRANK G. JOHNSON, of Brooklyn, N. Y.—*Improved Hook for Ox Chains*.—Patent issued May 12, 1863; antedated November 7, 1861.—This is a figure 8 or double hook to attach together two ends of a chain or two chains, and the peculiarity consists in a slotted and gravitating pivoted tumbler, which may be rotated by hand, so as to admit the introduction of the link into the hook by means of the slot, and prevent the accidental repassage of the link by the automatic movement of the slot out of range.

Claim.—The combination together of the hook A and the slotted and weighted tumblers B B', two or more, substantially in the manner and for the purposes herein set forth.

No. 38,491.—JOB JOHNSON, of Brooklyn, N. Y.—*Improvement in Explosive Projectiles*.—Patent dated May 12, 1863.—The invention consists of a cross-bar and screw fitted to retain the cap that closes the rear of the charge chamber, so as to fit the cap lightly to the shell without the risk of screwing in a cap; also in securing the percussion cap on the end of the axial rod by means of a spring tube.

Claim.—First, the cross-bar *g*, screw-spindle *k*, and internal flange *u*, in combination with the cap *f*, nut *l*, and soft metal ring *o*, fitted and acting in the manner and for the purposes set forth.

Second, the spring tube *r*, to hold on the detonating cap *s*, in combination with the rod *g*, and screw *t* that is driven in by the concussion, as set forth.

No. 38,492.—WESLEY L. JUKES, of Covington, Ky.—*Improvement in Lamp Chimneys*.—Patent dated May 12, 1863.—The chimney has longitudinal corrugations around its enlarged bulb. The object is to disperse the direct rays without the absorption incident to ground glass.

Claim.—As a new article of manufacture, the glass lamp chimney formed with longitudinal corrugations A, substantially as and for the purpose set forth.

No. 38,493.—GEORGE T. LEWIS, of Philadelphia, Pa.—*Improvement in Manufacture of Zinc*.—Patent dated May 12, 1863.—The improvement consists in pressing compactly the oxide of zinc alone, or mixed with the fuel, so as to permit a greater quantity to be placed in the muffles.

Claim.—Subjecting the oxide or other compound of zinc, either alone or mixed with the coal or other fuel, to pressure, or pressure and friction, before charging it into the muffles or retorts, substantially as and for the purpose herein specified.

No. 38,494.—WILLIAM A. LIGHTHALL, of New York, N. Y.—*Improved Refrigerator for Steam-Engines*.—Patent dated May 12, 1863.—This is an improvement on the inventor's patent of February 26, 1861, and consists in so constructing and arranging the diaphragm and division plates of the apparatus that the injection water—the water to be cooled—in both sections shall travel against or counter to the current of the external or cooling water.

Claim.—First, forming apertures in the diaphragm plate G, as shown, for the purpose of alternately passing the water to be cooled from one side of the apparatus to the other, as described.

Second, the arrangement and construction of the division plates *d d'*, as shown, whereby the water to be cooled is forced to pass through the different sections of the apparatus and through the apertures in the diaphragm plate, as described.

No. 38,495.—JAMES P. LONG, of Osage, Mitchell county, Iowa.—*Combined Harrow, Drill, Grass Seeder, and Roller*.—Patent dated May 12, 1863.—This consists of a combined machine for performing the operation of harrowing, drilling, seeding, and rolling ground. The various points are connected to a frame, which is supported in front on wheels, and on a roller at the rear.

Claim.—The combined machine, supported in front on wheels Q, and at the back on the roller R, and provided with the adjustable suspended harrow B, adjustable drill frame J K, and seeding apparatus F G H I, all arranged and operating as and for the purposes herein set forth.

No. 38,496.—JAMES W. MALOY, of Charlestown, Mass.—*Improvement in Machinery for Cutting Soles of Boots and Shoes*.—Patent dated May 12, 1863.—The invention consists in the employment of a rocking frame having two gauge bars, which, in connexion with the movements of a reciprocating bed carrying two sets of cutters, serve as rests or stop-bars for the edge of the leather; also in the employment of a yielding plate and a clearer, which operates in conjunction with the reciprocating horizontal movements of the knife-bed, which receives its motion from the cam, pin, and crank.

Claim.—The combination of the reciprocating bed L and platen B with the stop-bars *s s'*, the whole operating together and upon the leather to be cut, as above described.

Also, the yielding plate P when used with a horizontal knife-bed L, and for the purpose of keeping the leather from contact with the edges of one knife *d* as it is fed into the machine over to the other knife *d'*.

Also, the stationary clearer *p* when operating in conjunction with the reciprocating horizontal movements of the knife-bed, as described.

Also, giving to the knife-bed its reciprocating and intermittent motions by means of the cam *c*, pin *b*, and crank *k*.

No. 38,497.—WILLIAM MILLER, of Cincinnati, Ohio.—*Improvement in Hoisting Machines*.—Patent dated May 12, 1863.—The improvement consists of a platform which is raised by means of worm wheels working in racks on the vertical side timbers of the machine, these being actuated by a winch and gearing.

Claim.—In combination with the described (or equivalent) actuating mechanism H I and platform B, the arrangement of the worm racks D D' and worm wheels J J', the whole being combined and operating substantially as set forth.

No. 38,498.—WILLIAM C. OWEN, of Brooklyn, N. Y.—*Improved Attachment of Lantern and Reflector*.—Patent dated May 12, 1863.—The reflector is attached when required to the outside of the lantern, allowing the use of the whole circle of light when the reflector is unshipped.

Claim.—The combination of a lantern and reflector, when the latter is applied or arranged at the outer side of the former, substantially as herein set forth.

No. 38,499.—WILLIAM D. PARRISH, of Philadelphia, Pa.—*Improvement in Apparatus for Mixing Gases*.—Patent dated May 12, 1863.—The improvement consists in combining two meters so that the operation of one will transmit a positive motion to the other, and the relative quantity measured by them shall be adjusted to any desired proportion.

Claim.—The described mode of mixing gases in variable proportions, consisting in the employment of two meters of any ordinary construction for measuring gases, the said meters being so connected by the described mechanism, or any equivalent thereto, that the motion thereby transmitted and the relative quantities measured by the meters can be adjusted substantially in the manner and for the purpose herein set forth.

No. 38,500.—CHARLES H. PETERS, of Cincinnati, Ohio.—*Combination of Chamber Lamp and Lantern*.—Patent dated May 12, 1863.—The lamp is connected to the lower end of the glazed screen by means of pins which are inserted into and interlock with a groove in the base of the screen; and the air is admitted to the inside of the screen by means of openings made by punching up a portion of the metallic floor of the same; the piece thus protruding serving to deflect the incoming air from direct impingement upon the burner, and also to serve as a stay for the lower edge of the glass.

Claim.—First, the chamber or handled house-lamp A B, provided with studs C C' C'' projecting from the upper portion of the reservoir, and adapted to interlock within the gated-bottom of a lantern case F, the whole being constructed and adapted for the separate uses of a lantern and a house-lamp, as set forth.

Second, the described arrangement of the guards H and apertures I, for the double purpose of retaining the panes and of deflecting the indraft, substantially as set forth.

No. 38,501.—NATHANIEL PICKARD, of Rowley, Essex county, Mass.—*Improvement in Clamps for Raising Buildings*.—Patent dated May 12, 1863.—The clamp consists of a central standard with a flanged foot to be placed under the timber of the building and a boss on the back, underneath which is rotated the screw of the jack.

Claim.—My device or clamp, having its parts A B C constructed and arranged with respect to each other as described, and so as to operate in connexion with a jack-screw, in manner and for the purpose set forth.

No. 38,502.—GEORGE P. REED, of Roxbury, Mass.—*Improvement in Stop Watches*.—Patent dated May 12, 1863.—The improvement consists in arranging in the main train of a watch, or on the arbor of the second's hand, or its pinion, a mechanism by which the motion of that hand may be stopped without stopping the train or the other hands. The stopper consists of a slide provided with a retracting spring, and arranged so that it may be pressed endwise against the periphery of the collar or brake wheel, and the second's hand is set free by the withdrawal of the pressure.

Claim.—The combination of the friction spring *k*, the brake collar or wheel *i*, and the brake or stopper *l*, or their mechanical equivalent or equivalents, with the second's pinion *c*, and its arbor *g*, so applied that the pinion may rotate on the arbor, and relatively thereto, as described.

Also, the arrangement of the friction spring *k*, the brake stopper *l*, and collar or wheel *i*, with respect to each other and in or relatively to the main or regular train of a watch, as described.

No. 38,503.—R. W. SACKETT, of Worcester, Mass.—*Apparatus for Wetting Stamps, &c.*—Patent dated May 12, 1863.—This consists of a block revolving in a case partially filled with water, which block retains sufficient water upon its surface for the purpose of wetting the gum on the reverse of the stamp.

Claim.—A device for wetting stamps, envelopes, &c., consisting of a block A, or its equivalent, revolving in a case B, containing water, substantially in the manner shown and described.

No. 38,504.—J. C. SCHEMMANN, of Hamburg, Germany.—*Improvement in the Manufacture of Steel.*—Patent dated May 12, 1863.—The metal is taken from the puddling furnace when it has assumed a granular state, the carbon having mostly escaped, and is thrown into water. The granular steel is then enclosed in iron or steel boxes, brought to a welding heat and hammered into a homogeneous mass of required form, as a bloom or ingot.

Claim.—First, manufacturing steel in a granular and spongy state by withdrawing it from the puddling furnace at the stages hereinbefore described, and plunging it into cold water.

Second, manufacturing refined steel by enclosing the granular steel obtained, as hereinbefore described, in iron or steel cases, submitting the same to welding heat, and subjecting the cases and their contents to hammering, as hereinbefore described.

No. 38,505.—SOCRATES SCHOLFIELD, of Umpqua county, Oregon.—*Apparatus for Teaching the Art of Swimming.*—Patent dated March 12, 1863.—The invention consists of a float to be worn around the head with a pipe extending from the mouth and nostrils to a point above the head, so that the person may be able to breathe when the respiratory orifices are submerged, the float preventing the person from sinking.

Claim.—The use of either floats or breathing pipes, when constructed and arranged in such a manner that they may be raised out of the water and rendered useless by the proper motions of the wearer in the act of swimming.

No. 38,506.—H. R. SCOTT, of Plainwell, Allegan county, Mich.—*Improvement in Water Elevators.*—Patent dated May 12, 1863.—Two mitre wheels are placed on a shaft, and mesh alternately with corresponding bevel gearing on elevating drum shafts. The crank shaft has an endwise motion, so that the wheels can be made, without changing the direction of the crank motion, to revolve the drums in either direction.

Claim.—The combination and arrangement of the bevel wheels *b b c c*, oscillating shaft *a*, lever *k*, crank *o*, and drums *h h*, substantially as described.

No. 38,507.—SAMUEL J. SEELY, of Brooklyn, N. Y.—*Improvement in Constructing Cars.*—Patent dated May 12, 1863.—The doors are made of ridged sheet metal and run on hanger sheaves, and the seats are made with pivoted supports so as to let down into recesses in the floor. These adaptations are intended to fit the car for military service in transportation of troops or freight. The claim explains the other features of the invention.

Claim.—First, constructing the ends of metal cars of ridged sheet metal *d c c*, and of elliptical or curved form, and without joints at the corners, substantially as set forth.

Second, the arrangement of the angular guard *J*, or its equivalent, in combination with the car body, substantially as and for the purpose set forth.

Third, arranging the seat of a car substantially in the manner and for the purpose described.

Fourth, the construction of a car or other wheeled vehicle with round or elliptic ends and ridges of sheet metal *d c c*, angle iron and wood, combined in the manner and for the purpose herein described.

Fifth, the manner herein described of arranging the doors in combination with the shield or guard, for the purpose set forth.

No. 38,508.—J. M. SELDOMHIDGE, of Spring Valley, Greene county, Ohio.—*Improvement in Tram and Level for Mills.*—Patent dated May 12, 1863.—The rim from which the traversing level projects is adjusted to the central spindle by means of radial slides which impinge against its slides, and by standards, arch piece, and centre screw, which make an attachment to the point of the spindle.

Claim.—The combination of the centre screw *e*, and radial slides *g g* and *c*, for adjusting the instrument appropriately to the spindle, and the projecting arm *i*, for the purpose described.

No. 38,509.—ALFRED SOWER and MARTIN PAYNE, of Troy, N. Y.—*Improved Machine for Punching Railroad Rails.*—Patent dated May 12, 1863.—This invention is intended to punch the slots or holes in the foot flange of railroad rails while yet in a heated state, and consists of a rolling bed and a head at each end, in which are punches operated by cam levers.

Claim.—The rollers *G*, in the bed or bar *A*, in connexion with the two blocks *E E*, having the punches *f* attached, all arranged for joint operation as and for the purpose herein set forth.

No. 38,510.—JAMES H. SOREY, of Xenia, Clay county, Ill.—*Improvement in Corn-Planters.*—Patent issued May 12, 1863; antedated December 28, 1861.—This invention consists in a frame with runners in front to make the furrows, and rollers behind to cover the seed which

is dropped at the heel of the runners from seed boxes. The motion of the seed-slide is derived from cams on the inner side of one of the wheels which operate a spring and lever attached to the slide rod.

Claim.—The combination and arrangement of the cams *H*, grooves *Q*, slide *I*, spring *K*, lever *L*, slide *M*, and points *N*, constructed and operating together in the manner specified.

No. 38,511.—NICHOLAS SMITH, of Lansing, Alameda county, Iowa.—*Improvement in Apparatus for Measuring and Weighing.*—Patent dated May 12, 1863.—The measure is placed within a case, being supported therein upon springs of determinate strength. An arm from the measure, projecting through the case and carrying an index point, registers upon a graduated scale the height of the matter contained in the measure.

Claim.—A measure of capacity *B* fitted within a case *A*, and having springs *D*, one or more, applied to it, and also an index or indexes to travel over graduated plates *G* on the outer size of the case, all arranged substantially as and for the purpose herein set forth.

No. 38,512.—WILLIAM J. STEVENS, of Jersey City, N. J.—*Improvement in Expanding Screw Taps.*—Patent dated May 12, 1863.—The cutters are set radially in slots in a hollow mandril, and a conical screw spindle is driven down between them, expanding them to suit a larger orifice.

Claim.—As an improved article of manufacture, an expanding screw tap, made with a hollow body *A*, mortises *h*, nut-cutter *E*, conical screw spindle *D*, the nut *e*, and screw-head *C*, all as herein shown and described.

No. 38,513.—JAMES F. STILEMAN and ZABINA ELLIS, of Philadelphia, Pa.—*Improved Melting and Smelting Furnace.*—Patent dated May 12, 1863.—The improvement consists in the application to a cupola of a box, with an opening through which may be discharged the slag or scoria which flows into the box from the furnace, and another opening through which the molten metal is discharged from the box; the object being to prevent the accumulation of scoria or slag.

Claim.—A box *I*, of any convenient form, with its opening *m*, through which the slag is forced by the aid of the blast and tapping hole *h*, the whole being applied to a foundry cupola or other furnace substantially as and for the purpose herein set forth.

No. 38,514.—DANIEL M. SWARTZ and JONATHAN KREAMER, of Millheim, Centre county, Pa.—*Improvement in Harresters.*—Patent dated May 12, 1863.—The improvement consists in the method of guiding and operating the rear ends of the rake or reel handles, which is by arc-shaped guides in which they have their vertical motion; the guides being attached to the revolving frame, to which also the rakes are pivoted.

Claim.—In combination with a horizontally revolving rake or reel, that has also a rising and falling motion to accommodate itself to the platform and main frame, the frame *h*, with its guides *i*, for supporting and guiding the rear ends of the rake or reel stales or levers, substantially as and for the purpose described.

No. 38,515.—PHILO SYLLA, of Elgin, Kane county, Ill.—*Improvement in Rakes for Harresters.*—Patent dated May 12, 1863.—The rake head is attached to the ends of two arms which are revolved by a positive motion. The rear and shorter arm is attached to the rear end of the rake head, and the forward arm has a longitudinal motion in a slot in the rake head, or a guide on it, so that while the motion of the rear end of the rake head is in a circle, the forward end of the head describes an irregular oval, and the resulting motion of the head is approximately direct across the width of the platform.

Claim.—First, operating a rake for a harvesting machine by means of two rotating cranks of unequal lengths, and both driven by a positive motion, substantially as and for the purpose set forth.

Second, the so combining, with a rake shaft or handle, of two rotating cranks of unequal lengths, as that the said handle shall be united so as to move with the wrist pin of the short crank, whilst the wrist pin of the long crank traverses a slot or guide in or on said handle, thus causing one end of said handle to move in a true circle, whilst the other end describes an irregular ellipse, substantially as set forth.

Third, in combination with a rake driven by two rotating cranks of unequal lengths, having each a positive motion given to it, the setting of the crank shafts in a line oblique to the line of the finger bar, or cutting line of the machine, substantially as and for the purpose set forth.

No. 38,516.—SAMUEL TAYLOR, of East Cambridge, Mass.—*Improved Warp Brushes.*—Patent dated May 12, 1863.—The bristles are arranged in a bent plate and retained therein by a clamp, while the but ends are being dipped preparatory to being placed in the brush.

Claim.—The employment or use in the manufacture of brushes of a concave plate *E*, in combination with a flat plate or strip *F*, for the purpose of holding the bristles while dipping them in pitch or other suitable cement, substantially as herein shown and described.

No. 38,517.—THEODORE B. VOORHEES, of New York, N. Y.—*Improvement in Sink Traps*.—Patent dated May 12, 1863.—The box of the sink is placed on a tilting frame so as to discharge the water when it has accumulated a certain weight, and arrangements are made and described in the claim for packing around the box and lubricating the joint.

Claim.—In combination with the water-box of a sink, the valve bottom F attached to a shaft G, or its equivalent, arranged substantially as shown, so that the valve bottom F will descend or tilt under a given weight of water in the box, and return to its original closed position when all over a given weight of water has escaped from the box.

Also, the employment or use of the packing J K, applied to the valve or bottom F of the box E, and to the bottom edge of said box, for the purpose specified.

Also, the lubricating arrangement composed of the oil chamber g, grooves i i in the shaft G, and the tube h, or its equivalent, when combined and arranged with a sink to operate substantially as and for the purpose herein set forth.

No. 38,518.—WILLIAM E. WARD, of Port Chester, Westchester county, N. Y.—*Improvement in Machines for Making Bolts*.—Patent dated May 12, 1863.—This machinery is constructed for making bolts, which require a square shank, from cold iron. Square iron is taken of the size of the shank required, the head swaged, and the part on which the screw is to be cut drawn down to the required size by a pressure so applied as to prevent the disintegration or splitting of the iron. The devices are described at length in the claim.

Claim.—In machinery for forming carriage and other like bolts from square rods of iron, forming the first set of grooves of the rolling dies for a portion of their depth with the sides square, that is, at right angles with the axis of the rollers, or nearly so, and having a mode of operation such as herein described, in combination with other grooves of a semicircular or other equivalent form for the after rollings, substantially as described.

Also, the rolling dies with two or more sets of grooves, substantially as described, in combination with a sliding and rotating mandrel with jaws, substantially as described; the two or more sets of grooves in the rolling dies acting in succession on each blank, the mandrel being turned for each successive rolling, as described.

Also, in combination with the gripping jaws on the mandrel, the sliding stop, operated substantially as herein described, for forcing and holding the inner face of the head of the blank against the inner face of the gripping jaws, as described and for the purpose specified.

Also, the sliding shield plate, substantially as described, in combination with the rolling dies and the jaws on the mandrel, substantially as and for the purpose specified.

No. 38,519.—NATHANIEL WATERMAN, of Boston, Mass.—*Improved Table Waiter or Tray*.—Patent dated May 12, 1863.—This tray is made with a rim extending on three sides, and on the other the rim is bent downwards to fit the edge of the table on which it is placed.

Claim.—The improved tray made substantially as described.

No. 38,520.—WM. WATKINS, of Crete, Will county, Ill.—*Improvement in Tools for Cutting and Beveling Barrel Heads*.—Patent issued May 12, 1863; antedated October 11, 1862.—The adjustable pivot on the radial arms is centred on the barrel head, and the stock carrying the bevelling plane bit and the scribing cutter is revolved around the margin of the barrel head.

Claim.—The curved block D provided with the handle B and fitted with tooth E and knife H, when used in combination with the slotted arm C and adjusting screw pivot K, and operated in the manner and for the purpose set forth.

No. 38,521.—JAMES WATT, of Buffalo, N. Y.—*Improvement in Utilizing the Waste Heat of Puddling Furnaces in Generating Steam*.—Patent dated May 12, 1863.—The claim is sufficiently explanatory.

Claim.—The location of the boiler at the end of the furnace and on a horizontal plane therewith, so that the surplus heat and slag from the furnace may be directed into a fire chamber B' within the boiler, for the purpose and substantially as described.

No. 38,522.—JAMES WATT, of Buffalo, N. Y.—*Improved Apparatus for the Water Propulsion of Vessels*.—Patent dated May 12, 1863.—The invention consists of a wheel case or curb at the stern of a vessel, with conduits or water ways passing diagonally from the sides of the vessel and opening into the curb to supply the propeller with water.

Claim.—The application of the curb B and water-ways C to the stern of a boat or vessel, in combination with a screw propeller, for the purposes substantially as described.

No. 38,523.—GUSTAV WEDEKIND, of Philadelphia, Pa.—*Incombustible Paper Shades for Lamps*.—Patent dated May 12, 1863.—The paper is lined with mica, and the two materials bound together at their top and bottom edges by a band of metal.

Claim.—A paper shade, the whole interior surface of which is backed by mica, and the two layers of paper and mica are caught and held at the top and bottom thereof by a thin metallic strip or its equivalent, substantially as herein described and represented, and for the purpose described.

No. 38,524.—WM. C. WHITING and HENRY F. EDWARDS, of Worcester, Mass.—*Improvement in Fastening Tires on Wheels*.—Patent dated May 12, 1863.—Plates with pronged ends are placed between the tire and felloes, and the prongs so bent as to lap both and retain them in their relative positions.

Claim.—A metallic plate, with any number of prongs on either or both ends, introduced between the tire and felloe in the manner and for the purposes set forth.

No. 38,525.—HENRY C. WILLIAMS, of Lancaster, Pa.—*Improved Process of Finishing Leather*.—Patent dated May 12, 1863.—The leather is immersed in a solution compounded as follows: Sal. tartar 4 oz., pearlash 1 oz., potash 1 oz., sal. soda 4 oz., sal. ammoniac 4 oz., super. carb. soda 8 oz., borax 4 oz., Epsom salts 8 oz., sulph. soda 4 oz., water 20 galls.; for "high lined" hides half the quantity of salts.

Claim.—The process of treating leather (after the same has been subjected to the operation of tanning) substantially in the manner and for the purpose set forth.

No. 38,526.—WILLIAM W. W. WOOD, of Philadelphia, Pa.—*Improvement in Lubricators*.—Patent issued May 12, 1863; antedated May 3, 1863.—The invention consists of a detachable siphon, which, in the place of the usual lamp-wick, conducts the oil from the reservoir of the oil cup up and over the end of the central oil tube to be dripped down upon the journal to which the oil cup is attached.

Claim.—The use, substantially in the manner described, of the detachable siphon E, in connexion with an oil cup, for the purpose set forth.

No. 38,527.—SAMUEL WOOLSTON, of Vincentown, Burlington county, N. J.—*Improved Marine Camel*.—Patent dated May 12, 1863.—The invention consists of an elevated chamber above the deck, and arrangements of elevated pumps for discharging the contents of the water chambers, and valves in the keel for filling them.

Claim.—First, the above-described marine camel, having a spacious chamber elevated above the main deck, substantially as set forth.

Second, in combination with the above, the valves in the keel of the camel and the elevated pumps, the former for filling and the latter for emptying the chambers, substantially as described.

No. 38,528.—NELSON E. ALLEN, of Fox Lake, Wis., assignor to Himself and CHARLES B. WARREN, of same place.—*Improvement in Seeding Machine*.—Patent dated May 12, 1863.—This invention consists in the use of peculiar shaped cups or pockets secured inside the cylinder, below the hopper, being formed by a series of hubs provided with radial spiral flanges, and secured on a shaft which is worked by a pinion wheel at its end, a series of these cylinders being used. The upper part of the cylinder is covered by a cap with an oblong opening, through which the grain passes from the hopper into the cups. In the lower end of each conveying tube is a fluted cone, attached to it by a mortised bar on the outside, to permit its adjustment. The cultivator teeth are attached to bars, loosely fitted on a shaft, their forward end extending so far to the front as to allow the driver by depressing it to raise the teeth simultaneously or separately, to pass an obstruction.

Claim.—First, the spirally formed cups or pockets in the cylinders E, in combination with oblique openings in the stationary caps g, arranged to operate in the manner and for the purpose specified.

Second, the fluted cone or scatterer J attached to the tube I 2 by an arm h and screw i, so that it can be adjusted within the lower end of the tube, as and for the purposes specified.

Third, suspending the bars K, to which the cultivator teeth j are attached, from shaft l, so as to have them project a sufficient distance in front of the shaft to form pedals, by which either one of the cultivator teeth may be raised independently of the other, in the manner specified.

No. 38,529.—ALEXANDER BAIN, of New York, N. Y., assignor to WILLIAM H. ALLEN, of same place.—*Improvement in Calls for Telegraphs*.—Issued May 12, 1863; antedated December 11, 1862.—This invention is intended to be used to communicate by audible sounds with an operator at a distance, but is arranged in such a way that, at the usual speed of telegraphing, the vibrating magnet will not complete its circuit between each pulsation.

Claim.—The call composed of the reels of wire B B, the permanent magnet E, and the glass disk G, or its equivalent; the whole combined, applied, and arranged to operate substantially as and for the purpose herein specified.

No. 38,530.—ALEXANDER BAIN, of New York, N. Y., assignor to WILLIAM H. ALLEN, of same place.—*Improvement in Keys for Electric Telegraphs*.—Issued May 12, 1863; antedated December 11, 1862.—The object of this improvement is to render the operation of the key inaudible, or nearly so, to secure secrecy in the transmission of intelligence, and this is accomplished by causing the surfaces of contact, by which the circuit is opened and closed, to come together with a sliding instead of with a percussive action.

Claim.—First, providing the lever of a telegraph key with a plug *p*, of ivory or other surface of non-conducting material, operating with a sliding movement, in combination with an elastic arm *l*, or its equivalent, substantially as and for the purpose herein specified.

Second, in combination with the surface of insulating material *p* provided on the key and the arm *l*, or its equivalent, cushions of soft material *f g*, applied under the regular screw and hammer or other stops of the key, substantially as and for the purpose herein specified.

No. 38,531.—ABRAHAM COATES and MARTIN V. OSBORN, of Watertown, N. Y., assignors to Themselves and H. H. BABCOCK, of same place.—*Improvement in Water Engines.*—Patent dated May 12, 1863.—This engine is designed for raising water, and the improvement consists in the construction and method of operating the valve and piston. The valve is made of a flat plate, rotating in a cylindrical or conical flanged bearing, and is tripped by the vibration of the weighted lever-arm, which is moved by connexions from the reciprocating piston. When the valve is shifted a concussion is produced in the induction pipe by the striking of the water upon the valve and the change of direction, which lifts a puppet valve and forces a portion of water through a pipe into the air-chamber. The same force operating upon the piston drives it to the other end of the cylinder, and repeats the action by tripping the valve into the other position.

Claim.—First, the combination with the induction pipe of a water engine with the shifting valve *b* and with the air-chamber of the auxiliary pipe *L* and valve *K*, by which the concussion of the water upon the valve and piston is made to supply a portion of water to the air-chamber, substantially as and for the purpose set forth.

Second, the construction of the valve *b* of a single flat plate in combination with the conical or cylindrical heads or flanges *n n*, substantially as set forth.

Third, the combination of the flat valve *b* with a water engine, substantially as set forth.

No. 38,532.—GEORGE H. DRAPER, of North Attleboro', Bristol county, Mass., assignor to Himself and OSCAR M. DRAPER, of same place.—*Improvement in Chain Hooks.*—Patent dated May 12, 1863.—The hook is made with a hinge in the bow, which opens to receive the ring or link that is to be attached thereto, and then being closed is retained by a swivel ring or nut that is screwed down upon both the shank and tongue.

Claim.—The improved chain hook or connexion as made with its shank and movable tongue scarfed together in manner, and secured by a rivet or pin, arranged with respect to the scarfing, substantially as described.

No. 38,533.—ROBERT GLOVER, of Grayville, White county, Ill., assignor to Himself and DANIEL NEGLEY, of White county, Ill.—*Improvement in Harvesters.*—Patent dated May 12, 1863.—The improvement is in the method of constructing and supporting the frame, and also in the method of suspending the cutter bar therefrom.

Claim.—The arrangement of main frame *A*, supported on the single ground-wheel *B* and double-wheeled caster *C*, the tongue *D* being hinged in line with the axis of the ground-wheel, in the described connexion with the finger bar *F*, having a rolling drag bar *G*, supported by arm *I* and brackets *H J*, the whole being combined and adapted to operate in the manner set forth.

No. 38,534.—BARTON H. JENKS and JOHN SHINN, of Bridesburg, Philadelphia county, Pa., assignors to BARTON H. JENKS, of same place.—*Improvement in Power Looms.*—Patent dated May 12, 1863.—The object of this device is to prevent the breakage of the shuttle-box or other parts of the box motion in case the picker should be caught in the shelves of the box in the act of rising; in such a case the spring under the lever would "give." The other improvement is in the construction of the cam with steps, by which jarring is prevented. As the cam revolves it presses the stud pin, raising the lever, and in passing the step the inclined surface forces out the pin, and as the pin passes the top of the step the spring forces it in, and it rests on top of the step supporting the shuttle-boxes, when it is not desirable to make a full lift, as is often required in weaving plaids.

Claim.—First, making the lever *B* jointed as above described and for the purpose specified. Second, the raising cam *C* in combination with the moving pin *r*, or its equivalent, for the above described purpose.

No. 38,535.—GEORGE J. HILL, of Buffalo, N. Y., assignor to SANFORD, HARROUN & Co., of same place.—*Hand Stamp.*—Patent dated May 12, 1863.—The type or other salient devices are laid in the usual place on the bed, and a ribbon prepared with chemical ink is passed over the face of it from a discharging to a take-up spool. The impression is given by laying the paper on the ribbon, and bringing the plunger down with a sharp rap, when the impression of the salient letters will be impressed in ink upon the paper.

Claim.—The combination of a belt or strip of ink-prepared ribbon, with a bed for holding the "form" of types or plates and a stamping platen, the parts being so arranged that the ribbon may be run from spool to spool over the face of the type, and a succession of impressions printed without an inking apparatus, for the purposes and substantially as described.

No. 38,536.—CARLTON NEWMAN, of Pittsburg, Pa., assignor to Himself and EPHRAIM WORMSER, of same place.—*Improvement in Closing Fruit Jars.*—Patent dated May 12, 1863.—The neck sets down between the high shoulders of the jar, and a screw cap is placed over and brought down upon the gasket, which is interposed between the brim of the cap and the shoulder of the jar.

Claim.—So constructing or shaping the upper part around the neck of self-sealing jars or cans as that the shoulder of the jar shall incline gradually downwards from the circumference towards the neck, in combination with the use of a cap or cover screwed or otherwise fastened over the neck of the jar, with an elastic gasket interposed between the base of the cap and the shoulder of the jar, for the purpose of increasing the pressure on the gasket, between the shoulder of the jar and the base of the cap or cover, as the jar contracts in cooling, substantially as hereinbefore described.

No. 38,537.—TIMOTHY RAYMOND, of Brooklyn, N. Y., assignor to Himself and SAMUEL DIETZ, of New York, N. Y.—*Improved Burner for Kerosene Lamps.*—Patent dated May 12, 1863.—The invention consists of a catch, which works inside of the parapet of the burner, to retain the glass by impingement on its flat foot, and a spiral spring which draws the said catch against the glass and retains it in position.

Claim.—The combination of the lever 2 and the spiral spring 3 in the manner described, the parts being constructed, combined, and operating substantially as set forth.

No. 38,538.—DARWIN SHATTUCK, of Branchport, Yates county, N. Y., assignor to Himself and ALEXANDER F. WHITAKER, of Penn Yan, N. Y.—*Improvement in Machines for Threshing and Cleaning Clover and Grass Seed.*—Patent dated May 12, 1863.—The seed is threshed in a case between a rotating armed cylinder and a concave, and received in a shoe which has a riddle consisting of a series of inclined planes and a lower one with a flat top and hopper-shaped bottom which discharges the seed into the hulling cylinder, from whence it passes to the winnowing mill. By the rotation of the pivoted valve the seed is passed to the winnower without hulling.

Claim.—First, the conveyer *I*, when made and used as specified.

Second, the supports *M* for the concave, when made with the projections and held by the bolts as specified and used for the purpose set forth.

Third, the valve *N*, when used in combination with the cylinder *K* and concave *L*, to change the machine from threshing and hulling to threshing only, without changing or stopping any other part of the machine.

No. 38,539.—RICHARD A. STRATTON, of Philadelphia, Pa., assignor to Himself and CHARLES H. MILLER, of same place.—*Improvement in Adjustable Hangers.*—Patent dated May 12, 1863.—The improved device for hanging shafting from the ceiling, or otherwise, consists of a supporting stem and divided boxing which is opened to receive the shafting, and is adjustable above and below, so as to conform to the true line of the shaft by means of temper screws.

Claim.—The hanger, with its cylindrical or semi-tubular stem *d*, and its set screws *B* and *G*, in combination with the two portions *D* and *D'* of the box, the latter portion having a plate *i* adapted to and rendered adjustable on the stem of the hanger, and the whole being constructed and arranged substantially as and for the purpose herein set forth.

No. 38,540.—WILLIAM VAN WYCK, of New York, N. Y., assignor to ELIAS W. VAN VOORHIS, of same place.—*Purifying and Bleaching Wax.*—Patent dated May 12, 1863.—The wax is filtered through a mass of heated bone-black.

Claim.—The process herein described of purifying and bleaching wax, that is to say, first liquefying the wax, and while in that condition submitting it in a filter to the action of bone-black or other suitable decoloring material.

No. 38,541.—HENRY T. ROMERTZE, of Philadelphia, Pa.—*Improved Anatomical Bit for Horses.*—Patent dated May 12, 1863.—The construction of the bit is based upon the construction of the horse's head, and is clearly described in the claim.

Claim.—First, the construction of the two cheek-pieces, conformable, or nearly so, to the horse's cheek-bones, nearly on line with the upper lips of the nostrils, so that by stress upon the reins connected with the bars *d d*, pressure may be applied first to the cheek-bones for the ordinary control of the animal; or, in case of restive horses, a further pressure may be made upon the nostrils, all in the manner and for the purpose described.

Second, the straps *F* and *G*, constructed and arranged as described, in combination with the elastic cheek-pieces made to extend over the nostrils of the horse for the purpose of controlling by pressure the respiratory organs of the animal.

Third, the elastic cheek-pieces provided with the oblique or semicircular slots, in combination with the lever bars *d d*, constructed and arranged as described, and the bar *C*, made rigid or elastic, by which to control the animal by pressure upon the cheek-bones, and eventually against the nostrils.

No. 38,542.—W. B. ALLYN, of Washington, Ohio.—*Improvement in Rotary Engines.*—Patent dated May 19, 1863.—This engine is constructed with a stationary annular cam, provided with an induction and exhaust port, and situated between two concentric rotary cylinders in combination with sliding pistons common to both cylinders, and with stationary abutments, in such a manner that by the action of the steam on the sliding pistons a rotary motion is imparted to the shaft to which they are attached. Rock-shafts with arms which support the sliding pistons are combined with cranks and links in such a manner that the motion of each piston depends upon the opposite piston, and all their edges are brought in close contact with the inner surface of the cam and both cylinders.

Claim.—First, the stationary annular cam A, provided with ports *i i'*, and situated between the cylinders C C, in combination with sliding pistons D, common to both cylinders, and with stationary abutments *j*, all constructed and operating as and for the purpose herein shown and described.

Second, the rock-shaft *f* provided with arms *e*, in combination with cranks *g*, links *h*, and with the pistons D, constructed and operating as and for the purpose specified.

No. 38,543.—R. T. ANDREWS, of Plymouth Hollow, Litchfield, Conn.—*Improvement in Clocks.*—Patent dated May 19, 1863.—This invention consists in a novel construction and combination of the parts of the striking movement, whereby it is rendered simpler than the movements in common use and less liable to get out of order.

Claim.—First, the driving wheel B, furnished with a series of twelve pins *e1 e2 e3*, &c., which are arranged to act upon an arm of the stop shaft to bring the stop *m* or its equivalent into operation, substantially as and for the purpose herein specified.

Second, the combination on the same shaft *y* of the stops *m* and *r*, and the lifting arms *x* and *u*, substantially as herein set forth.

Third, the combination of the driving-wheel B, furnished with pins *e1 e2 e3*, the wheels *o* and *k* carrying the stop pins *l* and *q*, the two stops *m* and *r*, and the lifting arm *u*, the whole applied to operate substantially as herein specified.

No. 38,544.—WILLIAM ATKINSON, of Brooklyn, Kings county, N. Y.—*Improvement in Apparatus for Sewerage.*—Issued May 19, 1863; antedated October 26, 1862.—This invention consists of a floating vessel with compartments for the reception of sewerage matters, appliances for charging and discharging said receptacles, and for straining or filtering said matters from the product of sewerage or dredging.

Claim.—An apparatus whose principal elements consist of a floating vessel having one or more compartments or any portion of its interior constructed and arranged for the reception of such deposits of solid matter or of muddy water or water containing solid matters; a pump or pumps and pipes or other equivalent means of delivering such deposits or water into said compartments or space; one or more filters or strainers to provide for the escape of water from said vessel, and the retention of the deposits or solid matters therein, and suitable means of discharging the deposits of solid matters; the whole combined to operate substantially as and for the purpose herein specified.

No. 38,545.—JOHN BAMBER, of Rochester, Monroe county, N. Y.—*Improvement in Tea and Coffee Pots.*—Patent dated May 19, 1863.—This invention consists in placing a guard plate just below the orifice of the spout inside the vessel, so as to hold back the grounds in the act of pouring.

Claim.—The application of the ledge or guard plate *l*, as and for the purpose set forth.

No. 38,546.—JOHN BEAL, of Berlin, Sangamon county, Ill.—*Improvement in Flour Packers.*—Issued May 19, 1863; antedated August 15, 1862.—This improvement consists in an elevating platform on which the barrel stands, and which is raised by a weighted compensating cone, in connexion with the shafting and packing device.

Claim.—The arrangement of the compensating cone K with the shaft I, platform E, cylinder B, and packer D, as and for the purpose herein shown and described.

No. 38,547.—JACOB BICKHART, of Harlan, Allen county, Ind.—*Improvement in Stack Covers.*—Patent dated May 19, 1863.—This invention consists in a cap or flat cover with hanging boards nearly of a triangular figure (the apex removed) attached thereto and to each other by hooks to form a protection for grain or grass stacks.

Claim.—A cover for hay and grain stacks, composed of a cap A, having sides C connected to it by hooks or hinges so constructed as to admit of the sides being readily attached to and detached from the cap, and the sides composed of one or more pieces and arranged so as to be connected together at their edges and form close joints, substantially as and for the purpose herein set forth.

Also, the pin B in combination with the cap A and sides C C, for the purpose herein set forth.

No. 38,548.—THOMAS S. BLAIR, of Pittsburg, Pa.—*Improvement in Railroad Rails.*—Patent dated May 19, 1863.—The invention consists in producing a steel surface upon an iron rail by carbonizing it on the wearing surface, and rolling, tempering, and straightening it.

Claim.—The production of a railroad rail, part of steel and part of iron, without welding by carbonizing a portion of the top of the rail, then rolling down the blisters, tempering and straightening the same, substantially in the manner and for the purpose described.

No. 38,549.—DOUGLAS BLY, of Rochester, Monroe county, N. Y.—*Improvement in Artificial Legs.*—Issued May 19, 1863; antedated July 20, 1862.—This improvement refers to an artificial ankle joint, which is made transversely to the foot in the appropriate position.

Claim.—The improved transverse bearing *a b*, constructed, arranged, and combined with the foot and leg, substantially in the manner and for the purposes shown and described.

No. 38,550.—DOUGLAS BLY, of Rochester, N. Y.—*Improvement in Artificial Legs.*—Patent dated May 19, 1863.—These improvements mainly relate to the artificial ankle joint, and consist of a means of adapting the leg to the varying requirements of different stumps, placing the axis of the ankle joint at right angles to the line of progression of the wearer, a stationary axis with its central flange and held in position by tension rods and the non-elastic flexible tendons.

Claim.—First, expanding and contracting the artificial limb by means of the vertical or longitudinal overlapping edges *c*, or equivalent, in such a manner as to adapt the same to the size of the mutilated extremity of the natural limb, substantially as herein set forth.

Second, the arranging or placing the axis *e* at right angles with line of progression of the wearer, when the longitudinal diameter of the foot is at an angle, more or less, with said line.

Third, the stationary axis *e*, intermediate with the foot and ankle portion of an artificial leg, in combination with the groove of the ankle turning in such a manner that the motion and friction comes on the superior surface of the axis, so as to clear it of dirt and prevent wear, substantially as herein set forth.

Fourth, in combination with the axis thus arranged the central flange *h*, or its equivalent, for retaining the parts C & B in their normal relations to each other.

Fifth, in combination with the axial bolt *e* and flange *h* the connecting rods *j j*, or their equivalents, as herein described.

Sixth, the flexible non-elastic vulcanized India-rubber tendons, substantially as described.

Seventh, the constant coaptation of the wearing surface of the joint with an axial bolt, by means of yielding springs, in combination with tendons binding the parts together, in the manner set forth.

Eighth, the bevelling of the groove *f* in the ankle piece, to facilitate lateral motion of the angle, as herein described.

No. 38,551.—JAMES BLYTHE, of Lafayette, Tippecanoe county, Indiana.—*Improved Bed Bottom.*—Patent dated May 19, 1863.—This improvement consists of a pair of longitudinal and a cross pair of transverse bands, attached to their appropriate head, foot, and sides by eyelet screw, snap, and buckle, to form a bed bottom for mattresses.

Claim.—The application and combination of the buckle D and the strap C to the band X, the press-snap B, and eye-screw A, in manner as above described, by and through which the bands forming the bed-gearing are attached to the bedstead, and can readily be fastened and unfastened.

No. 38,552.—JOHN BOLES, 2d, of Boston, Mass.—*Improvement in Truss Bridges.*—Patent dated May 19, 1863.—The truss is formed with an arched beam, upper and lower chords, vertical ties, and a double series of concentric and overlapping circular braces.

Claim.—The combination and arrangement of the top and bottom chords, vertical tie-rods, and overlapping or overlapping and interlocking annuli, as described.

Also, the combination and arrangement of the top and bottom chords, vertical tie-rods, overlapping or overlapping and interlocking annuli and an arched beam, the whole being substantially as described and represented.

No. 38,553.—ELI BRAZELTON, of St. Louis, Mo.—*Improvement in Centrifugal Pumps.*—Patent dated May 19, 1863.—This centrifugal pump consists of a vertical propeller wheel, rotating in a cylinder, with a double casing of concentric cylinders above, between which is the discharge, and within the inner one of which is the supply fed through a pipe and orifice in the outer one. The peculiarity of the invention consists in a water lock, which forms a kind of a joint, to prevent leakage across from supply to discharge, without taking the course through the wheel which delivers the water on the upper side near its periphery.

Claim.—The water-lock *j k* in combination with the revolving disk B of a centrifugal pump, constructed and operating substantially in the manner and for the purpose herein shown and described.

Also, the arrangement of the outer casing A and inner cylinder D with respect to each other, so that the inner casing forms a part of the water-way, being connected with the supply pipe through the outer casing, as shown and described.

Also, the arrangement of a vertical propeller wheel B having an annular opening extending all around on the periphery of the top side of the wheel for the upward or vertical discharge of the water through a water-way in the outer casing, as specified.

No. 38,554.—ANDREW BRIGGS, of Lawrence, Mass.—*Improved Composition for Welding Steel*.—Issued May 19, 1863; antedated August 8, 1862.—The composition is formed of borax 4 oz., sal ammoniac 1½ oz., prussiate of potash ½ oz., clay ½ oz., rosin ½ oz., alcohol ½ pint, water ½ pint; mix and bring to a heat sufficient to boil. In using, sprinkle it on the steel to be welded, then beat and hammer as usual.

Claim.—The composition of matter consisting of the above-named ingredients, substantially as described and for the purpose set forth.

No. 38,555.—EDWARD T. BRIGGS, of Salem, Essex county, Mass.—*Improved Window Shade Fixture*.—Patent dated May 19, 1863.—The object of this invention is to construct a window shade winding roller, which shall, on the downward draught of the shade, draw upon a spring, which shall be sufficient to wind it up when the weight is removed; this is accomplished by placing within a hollow roller, which is suspended at both ends, in the usual position relatively to the window, a central axis made fast at one end to the point of suspension on the frame and at the other to a permanent disk in the roller; to this shaft near the said disk there is attached a spiral spring, which again is fast to a disk traversing in a thread on the central axis; around this thread is another spiral spring, and following it a loose disk impinging on a stationary disk, so that as the roller is forcibly rotated the springs are brought into action, and the force being removed their recoil re-winds the shade.

Claim.—The stationary block B, shaft a, helical spring c, and revolving nut E, in combination with the screw-thread e, shaft a, helical spring i, loose revolving disk F, and stationary nut H, the several parts being constructed and arranged to operate in the manner and for the purpose set forth.

No. 38,556.—GEORGE N. BRUSTER, Factoryville, Tioga county, N. Y.—*Improvement in Alarm Locks*.—Patent dated May 19, 1863.—This lock is so arranged that when locked if any attempt be made on the knob or by key from without an alarm will be sprung. The alarm lever is so connected with the cross-head on the shaft of the door-knob, and also with the lever operated by the impact of the key, that any motion through either source, the handle or the key, will spring the alarm.

Claim.—Combining an alarm lever L with a lock in such a manner that it can be operated upon the key of said lock through the medium of either single or double sets of lever and sliding connexions, substantially in the manner herein set forth.

Also, arranging the rocking lever U and sliding arm V, or their equivalents, in such a position relatively to the latch-bolt F and lock-bolt G of any suitable lock, as that the outward and inward movements of the lock-bolt will respectively connect and disconnect the alarm lever with the latch-bolt.

Also, combining with each other the several parts and movements of an alarm lock as hereinbefore described, when said parts or movements are formed and arranged substantially in the manner and for the purpose herein set forth.

No. 38,557.—LEWIS ROSS BUDD, of Oskaloosa, Mehaska county, Iowa.—*Improvement in Percussion Cap Holder for Priming Fire-arms*.—Patent dated May 19, 1863.—This invention consists of two circular disks, one fast to the handle and the other rotating on a central bolt; to the moving disk is attached an elastic annular slotted band; the caps are fixed in an annular space around the interior of the chamber and fed to the discharging orifice by the motion of the movable disk, whence they are extracted by being pressed upon the nipple of the gun and gently withdrawn.

Claim.—A revolving cap-setter, arranged and operating as herein described and for the purposes set forth.

No. 38,558.—ALONZO BURNHAM, of Montague, Franklin county, Mass.—*Improvement in Animal Trap*.—Patent dated May 19, 1863.—This trap consists of two chambers, with a gravitating door between; in the outer one is a revolving trapper on a horizontal axis, which is actuated by a spring and made to revolve so as to bring one of its wings to bear on the catch by which it is retained. An animal coming in at the door and stepping on the trigger releases the trapper, and its motion drives the animal towards the inner chamber, into which it escapes by the aperture, and the trapper being again retained by the catch is ready for another victim.

Claim.—An improved trap, having its rotary trapper D, the chamber C thereof, the sweep m at the front of such chamber, the entrance passage or passages l, the catch lever n, and the auxiliary trapping chamber B, with the throat d, and gravitating gate or door e, combined or arranged and made in manner and so as to operate substantially as hereinbefore specified.

No. 38,559.—JAMES E. CHENEY, of Rochester, N. Y.—*Improvement in Filter and Cooler Combined*.—Patent dated May 19, 1863.—It consists of an outer tub, with an inner chamber, with the intervening space filled with filtering material; the top of the upper chamber has a pan fitting into it and upon it a lid; a cover surmounts the whole. A faucet and pipe afford communication with the inner chamber for drawing water.

Claim.—A reservoir, open at the top and extending through the packing, having in combination therewith the fan C, the pan cover D, the outer cover E, and the air space intermediate between the said covers, all as and for the purposes shown and described.

No. 38,560.—SETH L. COLE, of Burlington, Vt.—*Improved Apparatus for Distilling Pine Wood, &c.*—Patent dated May 19, 1863.—The apparatus consists of a furnace retort, a basket frame to contain blocks of wood to be placed in the retort and the cover luted down; then by the application of heat the turpentine is distilled immediately from the wood, condensed in the refrigerator, and collected; the tar exudes at the bottom pipe of the retort.

Claim.—The above-described apparatus, as described and set forth in the drawings and specifications, for extracting the oil or spirits of turpentine directly from wood by means of a furnace arranged and combined with a retort, a gas receiver, refrigerator and condensers, a distilling or refining apparatus, and skeleton cylinder or iron basket in which the wood is placed and conveyed into the retort. The several parts of said apparatus to be used in combination with each other for the purpose of extracting oil or spirits of turpentine directly from wood, and saving the residuum or tar from the same, in the manner and as set forth and represented in the drawings hereto attached and substantially as described in the above specifications.

Also, the retort with the open cone-shaped bottom, constructed and operating as herein set forth and described.

No. 38,561.—ROBERT CORNELIUS, of Philadelphia, Pa.—*Improvement in Gas Regulators*.—Patent dated May 19, 1863.—The gas enters at one end of the chamber, and in seeking an exit presses upon a puppet valve which is suspended over the exit passage in a raised valve seat; the stem of this valve passes down and rests upon a diaphragm plate of mica of sufficient elasticity to bend under accumulative pressure and partially close the opening by the proximity of the valve to its seat, impeding the flow of gas; on the pressure being removed the mica is restored to its level plane and the exit passage for the gas enlarged.

Claim.—The employment in gas regulators of a thin mica disk or plate which operates by its elasticity to regulate the passage of gas.

No. 38,562.—ROBERT CORNELIUS, of Philadelphia, Pa.—*Improvement in Lighting Gas by Electricity*.—Patent dated May 19, 1863.—The apparatus consists of a metallic bell lined with fur or wool and with a hard rubber handle; also an interior bell-shaped piece of hard rubber with a metallic pedestal and foot. The act of raising the metallic bell generates frictional electricity, and the bell being brought into contact with the insulated chain attached to the burner develops a spark over the latter, thus lighting the gas.

Claim.—First, the combination of the cylindrical or bell-shaped metallic piece A, the cylindrical or bell-shaped hard rubber piece C, and the fur or woollen lining of the metallic piece arranged and operating as above described.

Second, the employment of a combination of silk and fur to form a lining to this metallic piece C.

Third, the combination of the metallic bell-shaped or cylindrical piece A, the bell-shaped or cylindrical hard rubber or non-conducting piece C, and the metallic foil or its equivalent within the same, and the fur or woollen lining of the metallic piece A.

Fourth, the connexion of the metallic bell A with the pedestal D, at the outer circumference of the pedestal.

No. 38,563.—ROBERT CORNELIUS, of Philadelphia, Pa.—*Improvement in Lighting Gas by Electricity*.—Patent dated May 19, 1863.—This electrophorus consists of two metallic tubes with closed outer ends united at their open ends with a central hub of hard rubber making a single tube, in which a smaller enclosed tube slides longitudinally. The lining of the metallic tubes is of wool and silk, and the inner sliding tube is made of metal with a rubber outer casing. The lighting point is attached near the burner by an insulator, and the chain at the other extremity by an insulating thread. The inner cylinder is caused to move in the air-tight outer tube, and to generate frictional electricity, which by contact with the chain produces a spark at the lighting point above the burner.

Claim.—First, a double electrophorus substantially as above described for lighting gas and other inflammable materials.

Second, an air-tight electrophorus constructed and operating substantially as above.

Third, the metallic tube with the interior sliding piece, substantially as above described.

Fourth, the non-conducting piece B, for uniting the metallic tubes A and A'.

No. 38,564.—ZEPHANIAH B. COTANT, of Greenwich Station, Huron county, Ohio.—*Improvement in Apparatus for Clipping Bolts and Rivets*.—Patent dated May 19, 1863.—This consists of a pair of jaws, one member on the end of a lever or handle, and the other jointed thereto, being operated by a cam lever which has its bearings in links from the joint of the jaws and a stirrup from the under side of the lower jaw, the latter being adjustable by a screw to regulate the length of the movement.

Claim.—In combination with the jaws B and E, the stirrup H and screw K, for the purpose set forth.

Also, the general construction and arrangement of devices described forming the improved bolt and rivet clippers or cutters.

No. 38,565.—GEORGE COWING, of Seneca Falls, N. Y.—*Improvement in Machine for Finishing Metallic Surfaces*.—Patent dated May 19, 1863.—This machine consists of a series of jointed tubes which carry within them rollers and bands to operate a finishing wheel at the end of the series. The machine may be fastened by its base to the floor, side, or ceiling, and doubled back, or introduced into any position so as to impinge upon the desired surface.

Claim.—The series of joints and pulleys, as described, in combination with a swivel or swivels, substantially as and for the purposes herein set forth.

No. 38,566.—WILLIAM JOSEPH CURTIS, of Tufnel Park Road, Holloway, Middlesex, England.—*Improved Screw Propeller*.—Patent dated May 19, 1863.—The propeller is included in a space between the stern post and the rudder, and the rear bearing of the propeller is in the rudder, which is enabled to move freely on its bearings by the end of the screw shaft being attached by a compound joint within the hollow boss to which the propeller arms are attached. The axis of the rudder and the centre of gravity and of vibration of the screw are coincident.

Claim.—The arrangement of the compound joint within the hollow boss of the propeller, substantially as herein shown and described.

No. 38,567.—CELADON L. DABOLL, of New London, Conn.—*Improved Wick Tubes for Lamp Burners*.—Patent dated May 19, 1863.—This tube is made of a flat piece bent over so as to form edges within which a straight piece fastened at its lower end may move so as to spring inward with a definite pressure against the wick. The enclosing piece has its sides prolonged so as to form bearings for the shaft of the wick raiser.

Claim.—The form and manner of constructing the tube for lamp burners for kerosene and other oils and fluids, as substantially set forth in the above specification.

No. 38,568.—LIONEL TOBERT D'EPINEUIL, of Paris, France, and JAMES M. LETTS, of Washington, D. C.—*Improvement in Iron Street Crossings*.—Patent dated May 19, 1863.—The invention consists in constructing the ditch at the intersections of streets with a metallic lining at bottom in a base of masonry and a grated metallic covering. The end for the flow of water, &c., is grated to exclude large refuse and the lower end is left open.

Claim.—The construction of street crossings, combining for the purpose the ditch D D, and the grooved and perforated metal plates *pp*, in the manner and for the purpose herein described.

No. 38,569.—RICHARD B. DOUTY, of Shamokin, Northumberland county, Pa.—*Improvement in Coal Screens*.—Patent dated May 19, 1863.—The bars of this screen are tapered.

Claim.—As an improved article of manufacture a screen having its bars A of taper form longitudinally or in the direction of their length, as herein set forth.

No. 38,570.—JOHN DU BOIS, of Williamsport, Pa.—*Improvement in Machines for Driving Piles*.—Patent issued May 19, 1863; antedated May 13, 1863.—A double-socketed cap is placed upon the pile, whose upper end occupies the lower socket, and a plug to receive the blow upon the upper socket, the extending flanges of the socket moving in guides on the uprights of the machine.

Claim.—The double conical-shaped socket and head to protect and guide the pile while being driven, in the manner and for the purpose specified.

Also, the arrangement, mode of securing and operating the socket punch E for driving piles below the surface, substantially in the manner as herein set forth.

No. 38,571.—JOHN DU BOIS, of Williamsport, Pa.—*Improvement in Metal-Plated Shoe for Carriages*.—Patent issued May 19, 1863; antedated May 15, 1863.—The improvement consists of a broad shoe or runner, on which the fore and hind wheels of a carriage or wagon are placed to prevent their sinking while traversing miry places.

Claim.—The flanges *bb* and their fastenings, clamps *cc* and keys *ee*, when combined with a broad runner, and constructed to operate substantially as described and for the purposes set forth.

No. 38,572.—JACOB ELY, of Manheim, Lancaster county, Pa.—*Improved Window Sash Fastener*.—Patent dated May 19, 1863.—This improvement consists in a slotted plate to be fastened to the casing of the window, having in its rear a tumbler actuated by a spring; the tooth of the tumbler passing through the plate engages with holes in the stile of the window sash, and the tumbler is retracted at will by a plunger at the side.

Claim.—The arrangement and construction of the oblong plate A with its flanges or brackets *aa* and *bb*, attached flat-spring E in combination with the bolt B, made and held by a pivot between *bb*, having either a straight arm C or elbowed arm C C, with a thumb-plate D, and operated by a flat spring E resting on the arm C, in the manner and for the purposes specified.

No. 38,573.—JOHN FARREL, of New York, N. Y.—*Improvement in Safes*.—Patent dated May 19, 1863.—The invention consists in making the plates or sides of safes of alternate strips of hard and soft metal narrower than the diameter of the bit or boring tool, so as to form an obstacle to the forcible entry by means of drills, which will, under the pressure required to penetrate the harder material, become imbedded in the softer, and check the bit against the salient edges of the chilled iron or steel.

Claim.—The method of rendering safes, chests, or vault doors burglar-proof by plates or blocks composed of alternate strips or bits of hard and soft metal, arranged substantially as herein described, so as to resist the action of drills or other cutting instruments, on the principle herein specified.

No. 38,574.—JOHN EDWARDS, of New York, N. Y.—*Improvement in Rolls for Ladies' Hair*.—Patent dated May 19, 1863.—This roll is made with tapering ends, and is stiffened by a wire.

Claim.—A hair roll tapering towards its ends and having a wire or its equivalent within, substantially as described.

No. 38,575.—DANIEL FITZGERALD, of New York, N. Y.—*Improvement in Biers*.—Patent dated May 19, 1863.—This consists of a frame and lowering straps, worked simultaneously by gearing to lower a coffin evenly into a grave.

Claim.—First, the combination of the two side windlasses, placed opposite, sustaining at each end one strap C, and geared to move with perfect equality, so that the coffin may not turn over but be lowered safely into the grave, in the manner substantially as above described. Second, disengaging the two cross straps, at one side, by unfastening them and drawing them up on the other side by continued turning of the crank, in the manner described.

Third, the adjustable pulleys F on the shaft, adapting the bier to a long or a short coffin, constructed substantially as above described.

No. 38,576.—SAMUEL H. FOLSOM, of East Cambridge, Middlesex county, Mass.—*Improvement in Shears for Clipping Horses*.—Patent dated May 19, 1863.—This invention consists of a pair of shears, to which a supporting back and guide is attached, so as to enable the operator to shear close and preserve the hair of a uniform length, the comb supporting and holding the hair nearly to the point where it is cut.

Claim.—The shears in combination with back and guide B and comb *d*, which are made to operate substantially in the manner specified.

No. 38,577.—WILLIAM GEE, of New York, N. Y.—*Improvement in Apparatus for Drawing Soda Water*.—Patent dated May 19, 1863.—The invention consists of a double valve, so arranged as to have a small hole to draw enough water and with force to mix well the sirup, then a large hole to fill the glass without the aid of a second glass or vessel.

Claim.—A valve B, and parts A D E F, and opening C, in combination with valve H and its parts; forming a double soda-water valve, for the purpose herein described.

No. 38,578.—JOHN B. GHORMLEY, of Bellefontaine, Ohio.—*Improvement in Cattle Pumps*.—Patent dated May 19, 1863.—The water is pumped by the vibration of the platform upon which the watering troughs are placed, the platform being occupied and traversed by the stock while seeking water or drinking.

Claim.—The combination and arrangement of the vibrating or swinging platform C, troughs F F', pump H, pipe or spout *q*, and conducting spouts *rr'*, substantially as herein described and for the purpose specified.

No. 38,579.—JOHN GIBBS, of Brooklyn, E. D. N. Y.—*Improvement in Fixtures for Window Curtains*.—Patent issued May 19, 1863; antedated March 18, 1862.—This invention is used to hold and lighten the cords by which the window curtain is operated, and consists of a fixed piece attached to the casing, a slide which moves therein, and a gravitating detent which projects a flange through both the sliding and the fixed pieces to retain them in their relative positions.

Claim.—The combination of the fixed plate 1, slide 2, carrying the pulley, and detent 4 extending through the slide 2 into or against the plate 1, the whole being constructed and operating substantially as herein above set forth.

No. 38,580.—ISAAC GREGG, of Pittsburg, Pa.—*Improvement in Machines for Heating Untempered Clay for Bricks and Tiles*.—Patent issued May 19, 1863; antedated April 9, 1862.—The clay is fed into a cylinder through a hopper, and gradually fed to the discharging point at the other end by a revolving spiral flange on a central shaft. A furnace and flue underneath the cylinder heat the contents.

Claim.—The heating of crude or untempered clay, preparatory to its being pressed into bricks, tiles, or other articles made of clay, by means of an apparatus A, consisting of a cylindrical box *a* and spiral *b*, or their equivalents, constructed and operated as described, substantially as and for the purpose herein set forth.

No. 38,581.—LOWRE GREEN, of Great Bend, Susquehanna county, Pa.—*Improvement in Ploughs*.—Patent dated May 19, 1863.—The improvements are in the construction of the plough: 1st, the stud between the main frame and mould-board; 2d, the locking arrangements of the cutter at its upper and lower ends; 3d, the general arrangement in which the main frame furnishes points of attachment for all the working parts.

Claim.—First, the brace-rod *b*, cast solid on the extension head or main frame *G*, and having its opposite end provided with a dovetail to fit into the socket *S'* on the inside of the mould-board *D*, as and for the purposes set forth.

Second, the coulter *J* provided with the slot *O* and bolt *V* in its upper end, and the lugs *d* near its lower end for receiving and holding the point of the share *S* when used in combination with said share *S*.

Third, the arrangement and combination of the extension head or main frame *A*, mould-board *D*, share *S*, coulter *J'*, lugs *d*, brace-rod *b*, and slot *S'*, as and for the purposes set forth.

No. 38,582.—PERRY HARDER, of Danville, Montour county, Pa.—*Improved Composition for Pavements, &c.*—Patent dated May 19, 1863.—Composed as follows: forty gallons coal tar; twenty pounds mineral paint or pulverized iron ore; half a bushel dry slacked lime, to an equal amount of coal ashes or iron cinders. This is spread on the ground and sprinkled over with sand and cinders which are rolled in till it will absorb no more, when it is left to dry.

Claim.—The composition for pavements, substantially as herein set forth.

No. 38,583.—JAMES HIGGINS, of 59th regiment, Illinois volunteers.—*Improvement in Ventilating Top Piece for Tents*.—Patent dated May 19, 1863.—The invention consists of a central pipe for the apex of tents for ventilation or for the passage of a stove-pipe, and is supported by flanges which catch into sockets on the tent poles.

Claim.—The cylinder or pipe, in combination with the flanges, socket staples, tenons and sockets and hoop, for the support and ventilation of and a flue for stove-pipes and tents, substantially as set forth in the specifications.

No. 38,584.—GEORGE F. JOHNSON, of Philadelphia, Pa.—*Improvement in Locomotive Boilers*.—Patent dated May 19, 1863.—The invention consists in injecting a jet of steam from the rear of the fire-chamber towards the fire-box.

Claim.—A jet or jets of steam introduced into the combustion chamber of a coal-burning locomotive boiler at the rear of the said chamber, when the jet or jets are directed toward the fire-box, as set forth, for the purposes specified.

No. 38,585.—JOHN L. KITE, of Philadelphia, Pa., assignor to JAMES S. MASON & Co., of same place.—*Improvement in Metal Boxes*.—Patent dated May 19, 1863.—The strip has two longitudinal slits near one end and the strip between raised to form a staple; a portion of the hoop at the other end is partially severed by a transverse cut, and this is inserted into the aforesaid staple to complete the circle of the hoop.

Claim.—Connecting together the ends of a metal strip *A* by a tongue *b*, formed at one end of the strip, into a staple-like projection *d*, formed on the opposite end of the strip, substantially as and for the purpose herein set forth.

No. 38,586.—ERNEST J. KNOWLTON, of Lyon, Oakland county, Mich.—*Improvement in Ladders*.—Patent dated May 19, 1863.—This ladder consists of two sides with single post extension with hounds pivoted upon the upper round and the central post extending so as to lap upon the second round from the top where the single post is extended in line with the double. The upper or single post is provided with rounds and is capable of being bent over so as to form a letter A supported ladder. A two-legged table is so constructed that the top may lie upon one round, while the legs are stepped upon the round below.

Claim.—First, the adjustable single-footed standard *a*, pins *r*, braces *b*, and pin *d*, in connexion with the front part *i*, substantially as and for the purposes described.

Second, the table *h*, with the cleats *j* and *u*, and furcated legs *k*, substantially as and for the purposes described.

Third, the variations made by the two top rounds *d* and *m*, both fitting loosely in the sides *i*, and the second *m*, being placed about one inch one side of the line of the remaining rounds.

Fourth, a joint in the centre of the ladder formed by the adjustability of the two upper rounds of lower part *d* and *m*, and the lapping of the notch *f*, at the lower end of the extending part *a*, on to the third round *g*.

No. 38,587.—H. R. LADD, of Orwell, Ashtabula county, Ohio.—*Improvement in Churns*.—Patent dated May 19, 1863.—The revolver dasher consists of four arms on each end with connecting bars and radial slats passing from the latter to the sleeve enclosing the axial shaft which is introduced endwise into the side of the churn and screws into a socket in the sleeve.

Claim.—The shaft *D*, sleeve *G*, arms *J*, and bars *K*, when used in combination with the beaters *L* and *M*, these several parts being constructed, arranged, and operated as and for the purpose set forth.

No. 38,588.—HARMON W. LADD, of New York, N. Y.—*Improvement in the Manufacture of Imitation Gilt Mouldings*.—Patent dated May 19, 1863.—Explained by the claim.

Claim.—The method herein described of producing foil-covered mouldings, which method consists in having each sheet or piece of foil made to cover the entire face of the moulding; then pressing and stretching the foil upon the moulding, and then pressing the foil with quicksilver, all in the manner herein described.

No. 38,589.—JOHN LIGHTFOOT, of Accrington, Lancashire, England.—*Improvement in Dyeing and Printing a Black Color on Fabrics with Aniline Compounds*.—Patent dated May 19, 1863.—The improvement consists in the production of a black dye by staining the fabric with an aniline salt mixed with metallic salts as a mordant. To a gallon of water add four ounces chlorate potash and a combination of aniline and hydrochloric acid; to this add a pint of acetic acid, and eight measured ounces of perchloride of copper, and four ounces sal ammoniac. Steep the fabric in this solution, wring out, and dry. The rapid development of the black may be hastened by processes described in the specification.

Claim.—The use of certain metallic salts, or their oxides, as herein stated, either alone or combined with chlorate of potash, and then mixed with a salt or salts of aniline, or any analogous homologous or isomeric compounds, either singly or mixed together, as well as the process or series of processes, as previously described, for the production of a black dye or stain.

No. 38,590.—E. R. LONGHEAD, of Cincinnati, Ohio.—*Improvement in Machines for Boring and Mortising Blind Stiles*.—Patent issued May 19, 1863; antedated December 11, 1861.—This machine is intended to bore the holes in the stiles for the slats of Venetian shutters or louvers. The bit has a reciprocating as well as an oblique vertical motion, so as to make two rows of holes at different heights relatively to the stile which is fed along on its edge. A cutter revolving on an inclined shaft removes the wood included between the holes and forms a mortise.

Claim.—First, forming by machinery oblique mortises in blind stiles, &c., by the conjoint operation of a boring bit and a rotating cutting tool, substantially as specified.

Second, communicating to the boring bit *G* a horizontal reciprocating motion in connexion with an oblique vertical motion by means of the reciprocating guide frame *H'* and guides *H*, in the manner substantially as specified, for the purpose of boring a double row of holes, as set forth.

No. 38,591.—CURTIS O. LUCE, of Brandon, Vt.—*Improvement in Skates*.—Patent dated May 19, 1863.—The foot is supported upon plates pivoted to the blade and retained by straps which lie in recesses in the plate and are pierced by pins projecting upwards from the plates which keep them from shifting.

Claim.—First, the recesses *d d* in the upper surface of the plate *C* in combination with the strap-holes *e* and spurs *e*, substantially as and for the purposes herein specified.

Second, the heel-strap *H* and heel-plate *F* when used in connexion with the adjustable plate *C* and the straps *E E'*, for the purpose herein specified.

No. 38,592.—WM. A. MACK, of Seville, Medina county, Ohio.—*Improvement in Sewing Machines*.—Patent dated May 19, 1863.—The improvement consists in the method of attaching the upright and horizontal pivoted levers by which the shuttle is actuated so as to have a motion and be capable of extension at the joints as the ends of the levers move in arcs. The shuttle is actuated by the horizontal pivoted lever and moves in a curved and angular trough. The feed wheel is actuated by a shaft and gripe wheel, on which latter is a gripper which receives an intermittent motion from a lever which is vibrated by a crank on the main shaft.

Claim.—First, the universal joint formed by the union of the arms *J* and *K* with the socket *L*, these several parts being constructed, arranged, and operated as and for the purpose specified.

Second, the shuttle *N* in combination with the curved shuttle race *M*, having an angular trough, when both the shuttles are constructed, arranged, and operated substantially as set forth.

Third, the arm *P'*, gripe *P*, spring *R*, and wheel *O'*, when these parts are constructed, arranged, and operated substantially as and for the purposes specified.

No. 38,593.—ISAAC B. MAHON, of Marion, Ohio.—*Improvement in Cultivators*.—Patent dated May 19, 1863.—The improvement is in the beams and handles, which are made of flat bars of the shape and construction indicated in the claim and illustration.

Claim.—The construction and arrangement of the bars *A A* and *B* placed vertically edgewise and welded together at their front ends, and braced by a thin cross-bar *C* placed vertically edgewise, in combination with the forked handle braces *G G*, each formed in one piece, in the manner and for the purposes herein specified.

No. 38,594.—WM. N. MANNING, of Rockport, Mass.—*Improvement in Escapements*.—Patent issued May 19, 1863; antedated February 28, 1862.—The teeth on the escape wheel

pass through oblique notches in the edges of the circular pallets and are temporarily detained by contact with the faces of the pallets, which are attached to an oscillating vertical balance shaft.

Claim.—The employment of the obliquely notched disks C C in combination with each other and with the balance-wheel shaft *b* and escape-wheel A, in the manner and for the purpose herein shown and described.

No. 38,595.—ERNST MARX, of New York, N. Y.—*Improvement in Patient Elevators.*—Patent dated May 19, 1863.—The invention consists of a vertically adjustable suspended frame, with a raising section for the support of the body in an inclined position and a falling section for the change of posture of the lower limbs; it also has an arrangement of movable straps, &c., for the purpose of raising the patient to adjust the bed and other appliances recited in the claim.

Claim.—First, a patient elevator consisting of a rising and falling frame A, with head-piece E, and foot-piece D, standards C, endless screw *g*, worm wheel *f*, and adjustable straps F, all combined and operating in the manner shown and described.

Second, the toothed sectional arc *l'* and pinion *l'*, in combination with the head-piece E and frame A, constructed and operating in the manner and for the purposes specified.

Third, the employment or use of the strap carrier G in combination with the removable straps F and elevating frame A, constructed and operating substantially as and for the purpose described.

No. 38,596.—J. B. McCORMICK, of St. Louis, Mo.—*Improvement in Harvesters.*—Patent dated May 19, 1863.—The improvements are, firstly, in the rake arms, which are made extensible through slots in the central rake-shaft, and which work in a concave platform upon which the grain falls from the cutters; and, secondly, in a series of fixed inclined bars to which the wheat is passed from the platform by the revolving rake, and where it is automatically drawn into a gavel by the teeth on the transversely moving endless belt and presented to the binder.

Claim.—First, a reel for harvesters provided with one or more sliding rake-heads E, operated substantially as shown, or in any equivalent way, in combination with a curved or concave platform C, endless apron H, and binder's platform S, as and for the purpose specified.

Second, the fixed inclined bars *r* placed over the apron H, the teeth *o* on said apron, in combination with the binder's platform J, arranged as and for the purpose set forth.

No. 38,597.—RUFUS NUTTING, of Randolph, Orange county, Vt.—*Improvement in Carriage Hold-back.*—Patent dated May 19, 1863.—This hold-back hook is made so as to be adjusted back and forth on the shafts or tongue of the carriage to adapt it to the different lengths of horses so as to place them in their proper relative places with regard to the carriage. It consists of a hook-plate and spring, and fits into holes in a plate which is attached to the under side of the tongue or shafts.

Claim.—First, the adjustable hold-back A I K F and H, or its equivalent, in combination with the spring B, or its equivalent, for thills or shafts, for the use of one-horse teams or poles for two-horse teams, substantially as described.

Second, the chafe-plate D, or its equivalent, in combination with the hold-back A I K F and H, substantially as described and for the purposes set forth.

No. 38,598.—WM. P. PATTON, of Harrisburg, Pa.—*Improved Carpet Nail or Tack.*—Patent dated May 19, 1863.—This tack is formed of a piece of sheet metal by punching out two sides of a V-shaped plate and allowing the tongue to extend downwards to form the shank and point.

Claim.—The construction of carpet tacks of sheet metal, substantially in the manner herein set forth and described.

No. 38,599.—ISRAEL PECK, of Southold, N. Y., and WM. H. H. GLOVER, of New York, N. Y.—*Improvement in Presses.*—Patent dated May 19, 1863.—The apparatus consists of a revolving table with press boxes having perforated sides and placed in recesses around its circumference. Beneath the table is a stationary trough whose sides agree in the curvature of the table; the bottoms of the boxes are pivoted for discharging the contents and rest upon ribs projecting up from the bottom of the trough; as the table is revolved the boxes are filled and brought serially under a suitable pressure.

Claim.—First, the combination of rotating boxes, constructed substantially as and for the purposes set forth, with a press and trough, as above specified.

Second, the employment of the boxes *c*, as above described, having a bottom constructed and used as set forth, and with double sides, the interior being perforated, all as herein made known.

No. 38,600.—TREAT T. PROSSER, of Fond du Lac, Wis.—*Improved Stopper for Fruit Jars.*—Patent dated May 19, 1863.—This stopple is introduced inside the mouth of the jar, and consists of a pair of flanged metallic disks of the shape of a segment of a sphere and

fitted base to base; around their edges is an elastic ring, and a pressure being applied to these disks expands their circumference and presses the ring against the insides of the jar.

Claim.—First, the two uniform elastic metallic disks, flanges *a a*, and shoulders *s s*, in combination with the quadrangular elastic ring *r*, the whole operated by the nut *c* and screw *b*, substantially as set forth.

Second, the stopple, as above described, in combination with a jar, can, or other vessel having a slightly conical or flaring mouth, as set forth.

No. 38,601.—JAMES B. RANKIN, of Astoria, Queens county, N. Y.—*Improvement in Carriage Covers.*—Patent issued May 19, 1863; antedated April 2, 1863.—This cover is suspended from a frame above the carriage seat, and is raised by a number of cords running in pulleys, and secured at different points on the lower edge of the cover.

Claim.—The suspended cover, constructed substantially as described, and provided with cords and pulleys, all arranged to operate as and for the purpose herein set forth.

No. 38,602.—JACOB REESE, of Pittsburg, Pa.—*Improvement in Oil Stills.*—Patent dated May 19, 1863.—The invention consists in the method of mounting the still upon the transverse brick partition walls, so that the joints of the rings shall not be exposed to the fire, while the vapor is collected in separate chambers, each provided with a goose-neck, and the chambers separated by partitions which extend down below the oil level.

Claim.—The use of partition fire-walls in still furnaces, each having a gutter or air-flue in its upper surface, so situate in relation to the still that the seams or joints of the still shall be situate over the gutter or flue, while the wall on either side of the gutter is in close contact with the surface of the still, in the manner and for the purposes hereinbefore described.

Also, the use, in combination with the guttered fire-walls enclosing the joints of the still, of air-flues, for the purpose of passing a current of cool air along and over so much of the joint and rivets of stills as are situate in that part of the still which is situate within the fire-chamber of the furnace, and thereby preventing the opening of the joints, and carrying off any oil which may leak from the still.

Also, the use of two or more goose-necks in a single still, where the still is so constructed as that a separate vapor space is formed for each goose-neck, while the fluid distillate is allowed to pass freely between the compartments thus formed.

Also, the use, in stills, of partitions extending below the lowest level of the fluid to be distilled, so as to separate the vapor in each compartment from that in the adjoining compartments, and afford a free passage between the compartments of the fluid to be distilled, for the purpose of allowing of the use of two or more goose-necks or vapor pipes in one still, substantially as described.

No. 38,603.—GEORGE M. RHOADES, of East Hamilton, Madison county, N. Y.—*Improvement in Mill Picks.*—Patent issued May 19, 1863; antedated December 14, 1862.—The head of this pick is constructed in two parts, with a depression to receive a blade and rings to retain the parts in position. A leather protecting shield is attached to the handle.

Claim.—The above-described mill pick as a new article of manufacture, said pick being provided with the tapering sectional head, the nipple and rings, and the arms for the shield, constructed, adjustable, and used in the manner and for the purposes specified.

No. 38,604.—WAYNE H. RICE, of Windsor, Conn.—*Improvement in Self-loading Firearms.*—Patent dated May 19, 1863.—The magazine occupies a chamber under the barrel, like a ramrod case, and the cartridges are fed down into the chambered breech-piece, which slides in a vertical slot at the rear of the barrel. The motion is given by the downward retraction of the lever-guard, and a single cartridge having slipped into the chamber, the others are arrested by a detent on the upper side of the lever, and the chamber is thrust home by a vibrating dog pivoted to the lever.

Claim.—The arrangement or combination of the lever-guard D, with its extended arms *i*, detent *d*, dog *e*, with the slide C, substantially in the manner as and for the purposes described.

No. 38,605.—THOMAS F. ROWLAND, of Greenpoint, Kings county, N. Y.—*Improvement in Drilling Bolt-holes in Turrets of Gunboats.*—Patent dated May 19, 1863.—Upon a central vertical shaft in the turret is a frame adjustable vertically extending horizontally across the turret, and carrying on one end an engine, and on the other a drill stock and gearing, the drill being radial with the structure, and driven by a bolt from the counter-balancing cylinder, crank shaft, &c.

Claim.—First, the employment, for drilling or reaming holes in the turrets of war vessels or in other circular structures radial to the centre thereof, of a drilling or reaming machine secured to and adjusted on a shaft, which is arranged centrally within the turret or structure, with the axis of the drill or tool stock perpendicular to the axis of said shaft, substantially as herein described.

Second, the driving of the drill or tool stock of a machine, so applied upon a central shaft within a turret, or other circular structure, by means of an engine attached directly to the framing of the machine, substantially as herein specified.

Third, the arrangement of the so-applied engine upon the frame of the machine, on the opposite side of the shaft to that on which the drill or tool stock is applied, for the purpose of balancing the frame upon the shaft, substantially as herein set forth.

No. 38,606.—CHRISTOPHER RYMES, of Charlestown, Mass.—*Improvement in Hydraulic Presses*.—Patent dated May 19, 1863.—The improvement consists in making a screw shank to the piston and nut working therein, so that the piston may be retained at the required height by screwing down the nut on to the top of the cylinder.

Claim.—The arrangement or combination of the screw *b* and nut *c* with the hydraulic press cylinder *F*, piston *G*, and platen *A*, substantially in the manner and so as to operate therewith as hereinbefore specified.

No. 38,607.—ORAN W. SEELY, of Syracuse, N. Y.—*Improved Method of Moulding Brick*.—Patent dated May 19, 1863.—The object of this improvement is to expel the air from the clay in the process of moulding. The mould being supplied with clay, the double piston is moved forward so as to press the clay almost to the size of the intended brick, the pins perforating the clay to a corresponding extent. The inner piston is now quickly withdrawn to give a chance for the escape of the remaining air, while the outer piston brings a final pressure upon the clay.

Claim.—The above-described method of perforating the bricks made of dry clay, and expelling the air therefrom at the instant the final pressure is applied, by means substantially as described.

No. 38,608.—THOMAS SHAW, of Philadelphia, Pa.—*Improvement in Crank Motion*.—Patent dated May 19, 1863.—A spring is attached to the crank wrist, and to a permanent point, in such a way as to be at its greatest contraction at the dead centre nearest to said point, and tend to throw the wrist past and at its greatest elongation at the dead centre farthest from said point, so as to draw the wrist past said centre, thus laying up a power in the spring to pass said centres.

Claim.—The combination of metallic springs *E* with crank *B* and arm *C*, in manner and for the purpose herein set forth.

No. 38,609.—BENJAMIN D. SKIDMORE, of New York, N. Y.—*Improvement in Window Sash Fasteners*.—Patent dated May 19, 1863.—A nosing or catch-piece is placed on the upper sash, and a latch on the upper part of the lower sash, which is retracted and projected by a handle, lever, and spring.

Claim.—The combination of the side bolt *D*, spring *D'*, lever *E*, and pendent rod *F*, all arranged in connexion with the case *C* and nosing *e*, to operate as and for the purpose set forth.

No. 38,610.—ROBERT STEWART, of Elmira, N. Y.—*Improvement in Cut-off and Regulator Valves*.—Patent dated May 19, 1863.—The invention consists of a lever, operated by a dog on a sliding bar attached to a lever connected with the governor, pivoted to the axis of the circular valve plate, and terminating in a spring which is attached to a point above. The action of the valve is regulated by the bite obtained by the dog on the lower end of the lever, and the bite is increased or diminished by the raising of the lower lever by the rod from the governor. When the valve lever is released from detention by the dog, the ports are closed by the spring which brings the lever to a vertical position and the valve to its central position.

Claim.—First, the arm *e* composed of spring *l* and pin *f*, and this arm, thus constructed, in combination with a cut-off valve.

Second, the lever *j* and dog *g* operating as described, and these also in combination with each other, for the purposes set forth.

Third, the combination of the arm (as described in claim first) and the lever *j* and dog *g*, (as claimed in claim second,) operating substantially in the manner and for the purposes hereinbefore specified.

No. 38,611.—ROBERT STEWART, of Elmira, N. Y.—*Improved Cut-off and Valve Gear*.—Patent dated May 19, 1863.—The invention consists of a method of operating the valve gear so as to cut off at a point determinable by the speed of the governor. Attached to the valve plate is a vertical lever which is vibrated by a dog on a reciprocating plate. The lifting of the governor rod raises this plate so that it moves to a greater or lesser distance before the lower end of the lever is disengaged from the dog, the lever, as soon as the detention is removed, resuming its vertical position under the influence of a spring.

Claim.—First, the pin *G* working in sleeve *F*, in combination with crank *C*, in the manner and for the purposes set forth.

Second, the dog *e* and guards *o o*, in combination with lever *I*, constructed and operating substantially as set forth.

No. 38,612.—E. ST. JOHN, of Elmira, N. Y.—*Improvement in Railroad Chairs*.—Patent dated May 19, 1863.—This is a strengthening bar fitting between the upper and the foot flange of the rail, retained in position by a plate which laps around the base of the rail and up as far as the bar extends, the bar and sustaining plate spanning the space between the ties at the junction of two rails.

Claim.—The employment of the sustaining bar *B*, extending over two cross-ties *D*, and supported by the bed piece *C*, in combination with rails *A A'*, constructed and operating as and for the purpose shown and described.

No. 38,613.—JEROME L. TARBOX, of Wyoming, Pa.—*Improvement in Smoothing Irons*.—Patent dated May 19, 1863.—The iron is heated by gas through a flexible pipe which communicates by a hollow handle with a tube and burners in the interior of the iron. Holes in the side supply air for the combustion of the gas.

Claim.—The handle *B*, in combination with a revolving smoothing iron and the casing *J*, when arranged to operate as herein described and for the purposes set forth.

No. 38,614.—EDWARD TRENHOLM, of Washington, D. C.—*Improvement in Grain Dryers*.—Patent dated May 19, 1863.—The invention consists of a blower and pipe to introduce a current of air into the grain in the bins of a granary; the branch pipes are detachable from the main pipe, and are provided with stop-cocks to direct the blast into any bin, and each pipe has a perforated distributing chamber or coil at its end.

Claim.—The combination of the fan *B*, or other substantially equivalent means of producing a forced current of air, the detachable branch conductors *C C'*, the perforated mouth *D E* or *F*, and the stop-cocks or valves *G H*, when the said parts are constructed and arranged and operate as herein described, to deliver forced currents of air in any required parts of a body of grain or other substance, and admit of ready separation and removal to facilitate the insertion and removal of grain.

No. 38,615.—THEODORE C. WEEKS, of Boston, Mass.—*Improvement in India-rubber Soles for Boots and Shoes*.—Patent dated May 19, 1863.—The improvement consists in providing the soles with protruding tacks for the attachment of the sole to the upper, and the means is fully explained in the claim.

Claim.—In the manufacture of India-rubber soles for boots and shoes that have tacks imbedded in them by which they are fastened to the upper, first passing the tacks through a metallic tack-head holder, and vulcanizing the tack-holder and the tacks imbedded in the rubber, with the points of the tacks protruding therefrom, substantially as described.

No. 38,616.—HORACE B. WHITLOCK and CHARLES E. TOAN, of Plymouth, Marshall county, Ind.—*Improvement in Forming and Double Seaming Stove Boilers*.—Patent dated May 19, 1863.—This appliance consists of two semicircular formers united by an extension rod, which occupies what may be called the major axis of the elongated ellipse, the usual form of stove boilers; side pieces unite the ends of the semicircular portions, and the whole is used in turning up the flange and hammering down the seam around the bottom and top of the boilers.

Claim.—The above-described machine for the uses and purposes above specified, except the right-and-left extension screw, and the application of the same, or its equivalent, for the uses and purposes above specified.

No. 38,617.—N. P. WHITTLESEY, of West Meriden, Conn.—*Improved Cap for Fruit Jars, &c.*—Patent dated May 19, 1863.—Explained by the claim.

Claim.—A cap for sealing fruit cans, &c., having a flat top, slightly tapering sides and corrugated flange edge, substantially as described.

No. 38,618.—R. A. WILDER, of Cressona, Schuylkill county, Pa.—*Improvement in Draw Springs for Railroad Cars*.—Patent dated May 19, 1863.—The spring consists of wooden slats raised from the surface of the end frame of the car by blocks under the ends of the slats, so that the shank being fastened by a nut behind them, they oppose an elastic resistance to a draught upon the hook.

Claim.—The combination of the wooden spring *a* and draw-bar *b b*, constructed and operating substantially as described.

No. 38,619.—ERASTUS WILKINS, of Warner, Merrimack county, N. H.—*Improved Foot-REST*.—Patent dated May 19, 1863.—The cushioned foot-rest is supported on a horizontal shaft, so as to be adjustable to the required inclination, and the shaft is adjusted vertically by means of racks and pinions in the standards.

Claim.—First, the arrangement of a shaft *a* with one or two pinions *b* gearing in toothed racks *c*, in combination with the cushion *A* of a foot-lounge, constructed and operating in the manner and for the purpose substantially as herein shown and described.

Second, making the cushion *A* of a foot-lounge adjustable in a vertical and self-adjusting in a horizontal direction, as and for the purpose specified.

No. 38,620.—T. S. WILLIAMS and P. S. PAGE, of Boston, Mass.—*Improvement in Lamp for Railway Cars*.—Patent dated May 19, 1863.—The body or oil chamber of the lamp is set in a case, with springs that press against its sides to keep it steady, and projections upon which it is supported, allowing the overflow and drip from the lamp to pass into a chamber below.

Claim.—In combination with a lamp or lamp fountain O, a case or socket A, provided with the springs B and an oil receptacle or drip-chamber at its lower end, as and for the purpose specified.

Also, in connexion with the spring B and drip-chamber, the projections c, arranged as shown, to support the lamp or fountain, and still admit the waste oil or overflow to pass into the drip-chamber, as herein described.

No. 38,621.—PETER WRIGHT, of Dudley, Worcestershire, England.—*Improvement in Vices*.—Patent dated May 19, 1863.—The horizontal foot of the sliding jaw is fitted to a corresponding socket in the standard of the stationary jaw, the sliding jaw being advanced and retracted by the usual screw and screw socket.

Claim.—The combination of the slide box A, the T-shaped bar and sides or jaws, with the box F, when constructed, arranged, and operated as described.

No. 38,622.—ELIAS and ARCALOUS WYCKOFF, of Elmira, N. Y.—*Improvement in Revolving Railway Pilot*.—Patent dated May 19, 1863.—The improvement consists in a pair of vertically revolving rollers preceding and driven by the forward truck-wheels and with their oblique axis pivoted forward to a sliding block, which, as it is projected forward by a lever, throws the roller guards out of gear, and vice versa.

Claim.—The vertically revolving pilot rollers D D, driven from the truck-wheel B B of the locomotive, or in an equivalent manner, and having their axes placed at such an angle that they can be thrown out of gear by a single forward movement of their contiguous journals, substantially as herein set forth.

Also, the cam-toothed gear k l, by which the pilot rollers may be thrown in or out of gear by an easy rolling motion, when at the highest speed, without the liability of stripping the teeth, substantially as herein specified.

Also, in combination with the sliding support C, the set screw G with its shoulder u, the gauge slot s, and lever H, arranged substantially as described.

No. 38,623.—GEORGE W. BOLLEN, of St. Louis, Mo., assignor to Himself and MICHAEL MADDEN, of same place.—*Improvement in Slide Valves for Steam Engines*.—Patent issued May 19, 1863; antedated January 26, 1862.—The valve is worked between cheeks, which are provided with steam and exhaust openings, connected with the ports of the steam cylinder, and the cheeks are fastened to a plate which covers the ordinary valve seat, the holes in the plate conforming to those in the valve. These parts are all enclosed in the steam chest, and the valve works steam-tight between the cheeks.

The lap, lead, travel, and expansion are the same as in an ordinary three-ported valve, but as there is no opening under the valve there is no pressure downward more than may be imposed upon it to keep it tight.

Claim.—The combination of a valve and cheeks arranged as described, with a valve seat formed by the plate a, in the manner and for the purpose specified.

No. 38,624.—JOHN BRIGGS, of Louisville, Ky., assignor to J. J. HAIR, of same place.—*Improvement in Tobacco Presses*.—Patent dated May 19, 1863.—This is an appliance to be placed around a box in which tobacco is being packed, and consists of a hinged frame or skeleton casing, which being laid around the box, the hinged section is closed and hooked and then tightened by nuts on the shanks of the screw hooks.

Claim.—The skeleton hoops E E', formed with welded eyes e e', and connected by rods F F', in combination with the box A A' A'' and casing C C', constructed in the manner and for the purposes herein described.

Also, the hooks G G, or other substantially equivalent adjustable and readily detachable fastening employed to connect the ends of the hoops E E' at any required distance asunder.

No. 38,625.—ROBERT CRUIKSHANK, of Salem, Washington county, N. Y., assignor to Himself, DANIEL B. COLE, and W. H. ARCHIBALD, of same place.—*Improvement in Milk Racks*.—Patent dated May 19, 1863.—It consists of a four-sided rack, forming a frustum of a pyramid, and is constructed of inclined posts and ties with horizontal slats forming shelves for the milk pans.

Claim.—The inclined strips A A, connected by cross strips a a, and having the ends of horizontal slots B fitted in them, and all arranged as herein shown and described, to form a new and improved milk rack.

No. 38,626.—PEARSON EMBREE, of West Chester, Pa., assignor to Himself and JONATHAN SPEAKMAN, of same place.—*Improvement in Harvesters*.—Patent dated May 19, 1863.—The

invention consists of a revolving apron on which the grain falls, and an inclined board against which it impinges, it being thereby turned so as to be forked off the machine and laid in a gavel at right angles to the track.

Claim.—The inclined platform W and endless apron G, combined with and arranged on a harvester, for turning the severed stalks and laying the same in swaths on the ground, substantially in the manner described.

No. 38,627.—R. R. FENNER, of Paxton, Ford county, Ill., assignor to Himself and W. H. PATTON, of same place.—*Improvement in Corn Planters*.—Patent dated May 19, 1863.—The seed dropper is operated by a part pinion on the main driving-wheel shaft, which gives an intermittent motion through the pinion, shaft, and slide bar to the seed-discharging wheels, which are mounted on shafts operated by arms. The motion of the slide bar and the amount of seed dropped is regulated by stops.

Claim.—Operating the seed-discharging wheels J by means of the arms L, attached to the shafts K of the wheels, the adjustable stops r r, and slide bar O, as set forth.

Also, the part pinion X, sliding pinion U on the shaft T, the crank t and pitman Y, when all are arranged specifically as shown, for operating the slide bar O.

No. 38,628.—JEREMIAH R. FOGG, assignor to SAMUEL ADLAM, Jr, of Portland, Maine.—*Lamp Chimney Adjuster*.—Patent dated May 19, 1863.—The lamp chimney is supported upon a base plate which is supported upon the burner. The base plate has attached to it a rod or strip which passes through the floor of the burner and extends into the reservoir; this is capable of being slipped up so as to support the chimney obliquely above the burner while the lamp is being trimmed or lighted.

Claim.—First, the application to a lamp of a thin elastic strip of metal adapted to guide the cone or chimney to one side of the vertical axis of the lamp and to support the chimney in an elevated position, substantially as described.

Second, combining with the base of a removable deflector a thin strip of spring metal arranged in the relation to the vertical wick tube d, substantially as described.

No. 38,629.—ISAAC GREGG, of Philadelphia, Pa., and HENRY MOSER, of Pittsburg, Pa., assignors to ISAAC GREGG, aforesaid.—*Improvement in Brick Machine*.—Patent dated May 19, 1863.—This is an improvement on the brick machines of Isaac Gregg, patented in 1848 and 1850, in which the clay is pressed into the moulds of a reciprocating frame by means of a roller acting in combination with cutters in a hopper, and in which the bricks are expelled from the moulds by lifters forcing up the pistons, being operated by the reciprocating movements of the mould frame. The object of the present improvement is to diminish the friction and wear of the mould frame resulting from the fall of sand and grit of the clay; to insure the complete retraction of the pistons after expelling the bricks; to apply the dynamic pressure of the moulds to the side edges of their contents; to dispense with the use of the dust formerly used to prevent adherence of the pistons, and to provide an effective means of discharge for the bricks. The devices are described at sufficient length in the claims.

Claim.—First, the employment of the parallel V-grooves a' a', along in the under side of the mould frame A, in combination with the correspondingly bevelled supporting wheels B B and counter-pressure wheels c c, the same being arranged to operate together, substantially in the manner described and set forth for the purposes specified.

Second, giving to the pistons D of the moulds a positive downward motion by means of the flanges d', or their equivalents, on their stems, in combination with the two retaining plates e' e' on the lifter E, and the hook a'' on the frame A, substantially as described, for the purpose specified.

Third, in combination with the mould frame A, and pistons D, operating as described, arranging the moulds therein so that their narrower sides shall form their mouths for receiving the clay, and the action of the pistons D be directly upon the lower side edges only of the bricks, in pushing the latter out of the moulds, as described and set forth for the purposes specified.

Fourth, in combination with the sweep F, the oil box f, and the lubricating roller or brush f4, the same being constructed and arranged to operate together, substantially in the manner described and set forth, for the purposes specified.

Fifth, operating the lubricating sweep F, in the manner described, by means of the cam G, the same being connected together by means of the vibrating lever H, or its equivalent, and arranged substantially as set forth.

Sixth, the employment of the sliding box K for the crank wrist-pin, in combination therewith and with the connecting rods L L and lever L', arranged in relation to the crank I, cam wheel G, and mould frame A, in the manner described and for the purpose specified.

No. 38,630.—LEWIS PATRIC, of Victor, Ontario county, N. Y., assignor to Himself and HENRY REED.—*Improved Oat Separator*.—Patent issued May 19, 1863; antedated March 25, 1863.—The invention consists of two perforated revolving cylinders, into the inner one of which the mixed oats and wheat are fed from a hopper; the wheat, by its size, shape, and gravity, is screened through the perforations of both cylinders, while the oats are discharged at the lower end of the inclined cylinders.

Claim.—The employment of the double perforated cylinders D and E, constructed and arranged substantially in the manner herein specified, for the purpose of separating oats from wheat, as set forth.

No. 38,631.—WILLIAM P. PATTON, Harrisburg, Pa., assignor to Himself and H. A. BOYLE, of same place.—*Improved Clothes Dryer.*—Patent dated May 19, 1863.—An upright bracket is fastened to the wall and a horizontal rail attached to it; at the end of this rail are upright axes, on which are journaled vibrating rods and washers alternately, so that the rods may all shut together, as in clasping the fingers.

Claim.—The combination and arrangement of the rail A, bracket B, the fingers a, washers b, and studs c, substantially as and for the purpose specified.

No. 38,632.—COURTLAND F. PHELPS, of Boston, Mass., assignor to Himself and ELISHA STONE, of same place.—*Improved Hat Brush.*—Patent dated May 19, 1863.—This invention consists of a light hat brush with a spring stem fitting in a longitudinal groove in the back of the brush and a cushioned knob on the end of the stem, so as by the longitudinal expansion to retain the brush inside the crown of the hat.

Claim.—The improved brush, or combination of the brush and the spring holder, or its equivalent, the latter being for the purpose specified.

No. 38,633.—BURTON SANDERSON, assignor to E. C. MERRILL & COMPANY, Derby Line, Orleans county, Vt.—*Improved Bit or Boring Tool.*—Patent dated May 19, 1863.—This tool consists of a tapering pod-bit with a rounded end, and with both edges of the pod sharpened.

Claim.—An improved boring tool, as made, not only in the tapering form described, and with its smaller end of a concavo-convex shape, but with its cutting edge extending entirely around the part A, in the manner as set forth.

No. 38,634.—ALBIN WARTH, of Stapleton, Richmond county, N. Y., assignor to Himself and W. A. LILLIENDAHL, of New York, N. Y.—*Improved Marline Spike.*—Patent dated May 19, 1863.—The spike has a hollow or grooved face, so that a strand may be passed through the loop without withdrawing the spike.

Claim.—The arrangement of one or more cavities a in the surface of a marline spike, constructed and operating substantially as and for the purpose herein shown and described.

No. 38,635.—J. H. WEAVER and D. M. MEFFORD, of Chillicothe, Ohio.—*Improvement in Churns.*—Patent issued May 19, 1863; antedated January 21, 1862.—A volute spring with its base on the churn lid and its truncated top attached to the dasher shaft acts as an inverted cup to return the cream which may be splashed out, and also as a spring to lift the dasher.

Claim.—The volute spring C, when constructed of flat metal of suitable kind, and when arranged around the dash rod so as to form with the stop d a cup to prevent the escape of cream as well as to assist in raising the dasher, substantially as set forth.

No. 38,636.—A. C. WILLIAMS, of Albany, N. Y., assignor to SHEAR & PACKARD.—*Improvement in Stoves.*—Patent dated May 19, 1863.—An opening or window is formed in the front and sides of the fire-box and protects it with a hollow bar grating furnished with air from the outside.

Claim.—The arrangement of a hollow grate placed and fitted to the stove, as described, in combination with the glazed window or door, substantially as described, as and for the purposes set forth.

Also, the employment of a guard plate, made either as a part of or independent of the ordinary grate, in combination with the vertical hollow grate and the glazed window, the subject-matter of the first claim, substantially as described and for the purposes set forth.

No. 38,637.—ADDISON C. FLETCHER, of New York, N. Y.—*Heating Air and Condensing Exhaust Steam.*—Patent dated May 19, 1863.—The air is heated for the supply of the furnace and the steam from the cylinder by the former being caused, under the impulse of a blower, to circulate in a chamber which is occupied by vertical parallel flat chambers to which the steam is admitted from the cylinder.

Claim.—The employment for the heating of air for the supply of a furnace and the condensation of exhaust steam for the return of its water of condensation to a steam boiler of an apparatus composed of a series of flat vertical and parallel radiators A combined with steam and water boxes C D, a casting B, and a blower H, the whole being arranged as herein specified.

No. 38,638.—JOHN LEE, of Bolivar, Tuscarawas county, Ohio.—*Improvement in Breech-loading Ordnance.*—Patent dated May 19, 1863.—The breech-pin of the gun is of a truncated wedge-shaped form and slides vertically in a slot in the gun; it is raised and lowered by a segment-toothed wheel which engages with a rack on the breech-pin. The cartridge being placed in a recess on the top of the breech-pin, the latter is depressed until the charge is in range with the bore, when a rack-rammer from the rear drives the charge home, and the breech-piece is raised ready for firing.

Claim.—The breech-pin A, constructed and operated substantially as described, in combination with the segmental pinion D and rack-rammer C, for the purposes set forth.

No. 38,639.—ELLEN F. PUTNAM, of New York, N. Y.—*Improvement in Stocking Supporters.*—Patent dated May 19, 1863.—The supporter consists of a waist-belt and elastic straps to the tops of the stockings.

Claim.—The stocking supporter composed of the waist belt a, tapes or straps b b, and elastic straps c c, extending down the sides of the person and taking the tops of the stockings, as and for the purposes specified.

No. 38,640.—ADOLPH MILLOCHAU, of New York, N. Y., assignor to Himself and ALFRED BERNEY, of same place.—*Improved Paint Oil.*—Patent dated May 19, 1863.—This oil is produced from the acid residuum remaining after the purification of petroleum. To the said residuum add forty per cent. of water and agitate it, to wash out the acid; after settling, the water is decanted. Caustic soda is then added to neutralize the remaining acid. After the mixture has settled the super-natant oil is drawn off for use.

Claim.—As a new product, or article of manufacture, the paint oil, of a character substantially as described, produced from the acid residuum remaining after the purification of petroleum or coal oil, or other bituminous oils, in the manner set forth.

No. 38,641.—ADOLPH MILLOCHAU, of New York, N. Y., assignor to Himself and ALFRED BERNEY.—*Improved Process of preparing Oil as a Substitute for Linseed Oil.*—Patent dated May 19, 1863.—This is an improvement upon the inventor's patent of March 17, 1863, and consists in subjecting the liquid, after it has been treated with the alkali and afterwards allowed to settle, to one or more distillations, when it is permitted to stand for ten hours and is then decanted.

Claim.—The combination of these two methods, the whole together constituting a new and useful process for making a fine, clear, and limpid paint oil from the acid residuum remaining after purification of petroleum, coal oil, or other bituminous oils, substantially as described.

No. 38,642.—RICHARD VOSE, of New York, N. Y., assignor to METALLIC CAR-SPRING COMPANY.—*Improvement in Car Springs.*—Patent dated May 19, 1863.—The helical spring is formed on a rod tapering to one or both ends, so as to give a graduated resistance.

Claim.—A compound spring formed of a helical or spiral coil of elastic metal imbedded in a mass of elastic India-rubber or gutta-percha, substantially in the manner and for the purpose herein set forth.

No. 38,643.—SAMUEL STRONG, of Washington, D. C.—*Improvement in Breech-loading Fire-arms.*—Patent dated May 19, 1863.—The piece is provided with a solid plug and a stationary nipple with a tube passing through both, when it is desired to use the arm as a muzzle-loader. A lever is pivoted to the solid portion of the breech-piece, which is operated by the trigger in the act of retracting the hammer, so as to withdraw the plug or cartridge case, as the case may be. The breech-piece is hinged and vibrates transversely to the axis of the piece.

Claim.—First, the combination of the solid plug with the hinged breech-piece, the centrally placed stationary nipple, and a mechanism for removing the plug, substantially in the manner described, for the purpose of converting the breech-loading into a muzzle-loading fire-arm.

Second, the lever I, pivoted to the solid portion of the breech-piece and vibrated by the trigger when the hinged breech-piece is thrown back to remove the cartridge cup or plug, substantially as described.

No. 38,644.—SAMUEL STRONG, of Washington, D. C.—*Improvement in Breech-loading Fire-arms.*—Patent dated May 19, 1863.—The cartridge shell retractor is attached to the hinged recoil block, and by the opening of the latter a pin is introduced behind the flange of the cartridge, which loosens and partially extracts it. A hinged lever operates to prevent the falling of the hammer when the recoil block is raised.

Claim.—First, the cartridge catch F, Fig. 5, with its lateral spring c operating and arranged in combination with a recoil block E and a flanged metallic cartridge, substantially in the manner and for the purpose herein set forth.

Second, the arrangement and combination of a vibrating lever P, or its equivalent, with the recoil block E and hammer H of a breech-loading gun, substantially in the manner and for the purposes herein set forth.

Third, the arrangement and combination with each other of the carriage retractor F with its lateral spring c, recoil block E, annular catch G, vibrating lever P, breech-piece A, and hammer H of my improved breech-loading fire-arm, as herein described, for the purpose herein set forth.

No. 38,645.—E. H. ASHCROFT, of Boston, Suffolk county, Mass.—*Improvement in Breech-loading Fire-arm.*—Patent dated May 26, 1863.—The particular object of this improvement is to provide a method of securely locking the sliding piston at the rear, closing or forming the breech, and its construction is such as to adapt it for mounted service, being easily loaded while slung at the side.

Claim.—The method of locking the piston C by means of the hooked levers E E and lugs F F, or their equivalents.

Also, the combination of the barrel A, lugs F F, levers E E, piston C, slide D, and spring J.

No. 38,646.—DANIEL M. AYER, of Lewiston, Androscoggin county, Me.—*Improvement in Roofing.*—Patent dated May 26, 1863.—The invention consists in steeping the cleansed cloth in a boiling decoction of cutch 20 pounds, sulphate of copper 2 pounds, water 100 gallons; it is afterwards drained and placed in a solution of bichromate of potash 2 pounds, water 100 gallons, at 150° Fahr. It is then washed and sized in a composition of starch and hypochloride of zinc. The roof is covered with a composition of boiled linseed oil 1 gallon, red lead 1 pound, asphaltum 1 pound, which is boiled, and fire-proof paint added to give the required consistency.

Claim.—First, the preparation of the cloth, substantially as and for the purpose set forth. Second, the composition for covering the cloth, substantially as described.

Third, the roof constructed of the materials and in the manner set forth.

No. 38,647.—HIRAM BARBER, of Juneau, Dodge county, Wis.—*Improved Band Cutter for Threshing Machines.*—Patent dated May 26, 1863.—This invention consists of a circular cutter on an arbor, which is journaled to vibrating arms attached to the frame of the separator; the cutter being raised by a treadle and protruded through a slot in the feed board to cut the band at the impulse of the feeder.

Claim.—The placing the band cutter on an arbor underneath the apron on which the machine is fed, working in a slot in it, revolved by a band from a pulley on the cylinder shaft, the arbor running in adjustable levers connected with the treadle *a* by the rods M and N, or by other equivalent mechanical devices, whereby the feeder can raise or lower the cutter at his pleasure, arranged substantially as and for the purposes specified.

No. 38,648.—F. H. BARTHOLOMEW, of New York, N. Y.—*Improvement in Valves for Water Closets.*—Patent dated May 26, 1863.—The improvement consists in the arrangement in combination with any ordinary pan-actuating mechanism of a diaphragm and valve suitably located in a chamber, by which the weight of the body opens the passage for the issue of water into the pan.

Claim.—The valve G and diaphragm J, or its equivalent, placed within a suitable cylinder or box F, in combination with the pan B and the lever E, or other pan-actuating mechanism, arranged to operate substantially as and for the purpose herein set forth.

No. 38,649.—FRANCIS BUSCHNAGEL, of Wenham, Essex county, Mass.—*Improvement in the Manufacture of Water Pipes from Bitumen, Pitch, &c.*—Patent dated May 26, 1863.—This invention consists in rolling upon a core a composition of hair or other fibrous material saturated with melted pitch, tar, or asphaltum, &c.

Claim.—The compound of hair or other fibrous substance and bituminous substances, in the proportions above described, and the process of manufacture above described.

No. 38,650.—PHILIP BLAKE, of New Haven, Conn.—*Improvement in Draught Clip-ties for Carriages.*—Patent dated May 26, 1863.—This improvement consists in the construction of a clip-tie, prolonged under the end of the thill joint, giving support to an elastic presser to prevent rattling.

Claim.—The combination of an elongated clip-tie with an elastic presser, when constructed and fitted to produce the result substantially as herein described.

Also, the combination of the cap with the elastic presser, when so constructed and used that the cap will insure the entire equilibrium of the presser, as well as prevent it from wearing, substantially as herein described.

No. 38,651.—J. W. BOOKER, of Fairmount, Vermillion county, Ill.—*Improvement in Cultivators.*—Patent dated May 26, 1863.—The invention consists of an arrangement of the parts, providing for equable draught, balancing the weight, regulating depth, and sustaining the weight when the ploughs are raised out of the ground.

Claim.—The plough-beams E E connected to the main frame A, as shown, in combination with the uprights I I, provided with the stirrups K K, the handles G G attached to the plough-beams, and the curved rods L L, all arranged for joint operation as and for the purpose herein set forth.

No. 38,652.—GEORGE R. ERAYTON, of Providence, R. I.—*Improvement in Mode of Attaching the Heads of Bolts, Rivets, and Nails.*—Issued May 5, 1863; antedated April 18, 1863.—The invention consists in dovetailing the shank within the head by forcing the former to expand within a dovetailed recess in the latter.

Claim.—The method of dovetailing together two pieces of metal to form a bolt, screw, spike, or rivet, by forcing the shank into and expanding the end of the same within the head, substantially as herein described.

No. 38,653.—JOHN C. BRIGGS, of Concord, N. H.—*Improvement in Bridges.*—Patent dated May 26, 1863.—This improvement consists in stiffening the truss by the crossing of inclined ties, combined with inclined braces, with an additional stepping piece above the sills at each end to bolt the braces into, and an end brace or post mortised to the under side of the upper sill and projected laterally to a secure step on the foundation. It also relates to a method of laying board roof by laying blocks under the edges of the board and depressing the centre by nailing, forming a shallow trough.

Claim.—The interlocking or crossing of inclined ties in the middle part of a span, combined with inclined braces, essentially as described and shown by the drawings.

Also, the pieces *a a* combined with the braces and cords, as described.

Also, the method described of laying roof-boards by putting a block under each edge of the board and drawing down the middle with nails, so as to form a shallow trough of each board.

Also, the combination of the end braces *e b e b* with the cords and adjusting bolts *f f*, essentially as described.

No. 38,654.—JEREMIAH COOK, of Palmersville, Alleghany county, Pa.—*Improvement in Lifting Jacks.*—Patent dated May 26, 1863.—This machine consists of a step or base, on which is erected a slotted standard; in this is a vertically adjustable bar with notches and a dog to maintain it at its elevation; this forms the fulcrum for a lever, whose handle end is provided with a link, which catches into teeth on the standard to maintain said end at its point of depression—a spring drawing it into the notch.

Claim.—The combination of the hook-catch H, ratch G, and spring *h*, with lever D and notched fulcrum-bar C, substantially as and for the purpose herein specified.

No. 38,655.—ROWLAND CROMELIEN and WILLIAM R. CRISP, of Washington, D. C.—*Improvement in Omnibus and Car Registers.*—Patent dated May 26, 1863.—This improvement consists of a turnstile placed at the door of a car, which is rotated by a person passing and the partial revolution registered by suitable gearing and thread working a needle on a dial plate; the special points of novelty consisting in the hollow shaft carrying the arms of the turnstile in such a way arranged as not to mar the beauty of the car, and in the method of locking the turnstile, so as to render it immovable except under the release of the conductor.

Claim.—The hollow shaft B, No. 1, to carry arms of turnstile, in combination with lock-plate D, Nos. 1 3 4, and the latch E, Nos. 1 3 4, and connecting-rod F, Nos. 1 and 2, thereby preventing its use only at the will of the party in charge.

Also, the arrangement of the turnstile in the interior of the car without injuring the appearance or destroying any part of the same.

No. 38,656.—OWEN R. L. and M. P. A. CROZIER, of Paris, Kent county, Michigan.—*Improvement in Hand Lights for Protecting Plants.*—Patent issued May 26, 1863; antedated October 12, 1862.—This hand frame consists of a box with glass sides and roof and a back with a pointed foot to be driven into the ground for support; its cover is hinged so as to be readily elevated, and the sides of the frame around the glass are pierced with ventilation holes; the exterior is painted black for absorption of the rays of light, and the interior white for reflection; an additional cover and flap are provided to sit by the hand light for protection and support.

Claim.—First, the ventilation of our hand lights without exposing the plants.

Second, the attachment of the cover so that it may be opened and closed with facility.

Third, the coloring of the exterior and interior surfaces, so that the former shall absorb and the latter reflect heat.

Fourth, the construction of an instrument as a complement of the hand light, and to be set by plants to guard them from sun, cold winds and frosts, all in the manner and for the purpose herein specified, or any other substantially the same.

No. 38,657.—CELADON L. DABOLL, of New London, Conn.—*Improvement in the Construction of Glass Chimneys for Lamps.*—Patent issued May 26, 1863; antedated March 1, 1863.—The bottom flange is corrugated so as to admit the passage of air underneath it.

Claim.—The plan of corrugating or otherwise forming the lower edge, rim or flange of glass chimneys in such manner as to admit the atmospheric air inside and under the bottom of the chimney, for the purpose hereinbefore described.

No. 38,658.—J. D. DALE, of Rochester, N. Y.—*Improvement in Sewing Machines.*—Patent dated May 26, 1863.—This is an improvement in running stitch sewing machines, and consists in a lever and a spring clip for holding the needle while the cloth is pulled off the needle preparatory to another effective motion.

Claim.—The arrangement of the lever L and spring clip C in relation to the other parts of the machine, substantially in the manner described, whereby the needle is held and the cloth released by a simple motion of one hand, the other hand being left at liberty to draw off the cloth from the needle.

No. 38,659.—WILLIAM DEERING, of Louisville, Ky.—*Improvement in Hay Presses*.—Patent dated May 26, 1863.—The follower rises vertically into the hay box, being guided by slides in the latter, which traverse grooves in the follower. The pressure is given by a letter T toggle below, in which a rope is attached to the end of the longer upper arm.

Claim.—The guides or slides M M, with the grooves g g, in combination with the hay box B and follower F, in the manner described and for the purposes set forth.

No. 38,660.—WILLIAM M. DICKINSON, of Goshen, Elkhart county, Ind.—*Improvement in Beehives*.—Patent dated May 26, 1863.—The outer case of the hive is filled with boxes, of which the three central ones extend from the top to the bottom, and are appropriated to the brood. On each side are a series of honey boxes surmounted by a feed box divided into three chambers; these all communicate by apertures, and the hive is suspended by hooks, the shanks of which are surrounded by cups to be filled with water to prevent the passage of insects.

Claim.—First, the feed boxes J K, each constructed with compartments E' F' G" and apertures D D, in combination with the brood box F and apertures I I, arranged to operate in the manner and for the purpose specified.

Second, the brood boxes F G H, in combination with the honey boxes c and feed boxes J K, the whole arranged so as to communicate with each other in the manner and for the purpose specified.

Third, suspending the hive by hooks E, which are enclosed by cups or vessels to be filled with liquor, in the manner and for the purpose specified.

No. 38,661.—GEORGE DOUGLASS, of Scranton, Luzerne county, Pa.—*Improvement in Car Springs*.—Patent dated May 26, 1863.—This improvement consists in the method of securing the springs together at the centres and ends.

The springs are secured at their centres to seats whose recessed sockets conform to the shape of the salient curve of the springs, and are there fastened by a bar and bolts. At the ends the leaves of the springs are fitted into recesses on the upper and lower sides of the boxes, and are there secured by bolts and washers.

Claim.—First, the employment or use, in connexion with a steel spring, of seats A A, constructed and applied to the spring, substantially as and for the purpose herein set forth.

Second, the end pieces B, provided with recesses to receive the eyes a at the ends of the leaves b b in connexion with the bolts c and washers d, all arranged substantially as herein set forth.

Third, the seats A A, provided with the lips a a, and attached to the spring by means of the bolts c c and bars g, in combination with the end pieces B B, having the ends of the leaves b secured in them by the bolts and washers, as described.

No. 38,662.—GEORGE W. DOWNS, of New York, N. Y.—*Improvement in Hemming and Tucking Guides*.—Patent dated May 26, 1863.—This machine is mounted upon a plate to fit into the race of a sewing machine. The cloth is folded over by the usual snail-shaped folder, and passes between rollers which compress it on its passage to the needle; the cloth in passing catches upon the burred end of the upper conical roller, and thereby gives it its motion, while the lower roller is moved by the interposed cloth. The rollers have their bearings in spring supports, which rise to allow for the thickness of the cloth.

Claim.—First, the employment, in combination, of the two rollers in the manner described, for the fold of the hem to pass between, and be more perfectly held and smoothed with the least friction, while one or both of said rollers are held in spring supports, for the purpose explained.

Second, making these rollers, but particularly roller a, conical, to more effectually perform the office of tucking, as explained.

No. 38,663.—OREN EDSON, of Franklinville, Cattaraugus county, N. Y.—*Improvement in Device for Operating Churns*.—Patent dated May 26, 1863.—The invention consists in the arrangement of an oscillating frame connected to the dasher of a churn, in combination with an inclined adjustable bar, to which a weight is suspended to counterbalance the weight of the frame and dasher.

Claim.—The combination of the hinged adjustable weighted bar E and hook f with the oscillating frame C and dasher-rod D, in the manner and for the purpose herein shown and described.

No. 38,664.—ANDREW A. EVANS, of Boston, Suffolk county, Mass.—*Improvement in Paper Shirt Collars*.—Patent issued May 26, 1863; antedated May 15, 1863.—The collar is made of parchment paper and coated with bleached shellac varnish.

Claim.—A shirt collar made of parchment paper and coated with varnish of bleached shellac, substantially as described and for the objects specified.

No. 38,665.—WILLIAM H. FIELD, of Taunton, Mass.—*Improvement in Nail Machines*.—Patent dated May 26, 1863.—The machine has an oscillating cutter-head and operates on

the nail rods, which are fed to it by the grooved rollers through the sliding guide-bars. The bar which is attached to the cutter-head guide lies in grooves in the sliding guide-bars securing the proper presentation of the rods so as to be cut without waste; the front end of one plate is made to feed the last end of the preceding one.

Claim.—First, the combination of the grooved feed rolls c d c d, and the sliding guide-bars a a', to operate substantially as and for the purpose herein specified.

Second, combining the sliding guide-bars with the cutters by means of bar p attached to the oscillating cutter frame, substantially as and for the purpose herein set forth.

No. 38,666.—JONAS M. FRINK, of Coral, McHenry county, Ill.—*Improved Furnace for Burning Bagasse*.—Patent dated May 26, 1863.—On one side of the usual furnace is a hopper with an inclined grated floor, and in this hopper the bagasse is placed and the feed-hole closed by a swinging valve. The bagasse is fed down the incline by shafts with rotating arms, which latter project between the bars of the grating and push it towards the furnace. The space underneath the inclined grating forms a heated air chamber for the supply of the fire, and determines the volatile results of the combustion of the bagasse towards the chimney.

Claim.—The revolving or vibrating arms D D E, arranged and operated in combination with the inclined grate B, substantially as and for the purposes herein specified.

Also, the separate hot-air chamber G, in combination with the ash pit a and grate B, for the purpose herein set forth.

No. 38,667.—JONAS M. FRINK, of Coral, McHenry county, Ill.—*Improvement in Preparing Bagasse for Fuel*.—Patent dated May 26, 1863.—The cane is crimped by being passed between deeply-toothed or "winged" rollers, after passing between the pressure rollers which have removed the saccharine liquid.

Claim.—Crimping the stalks of bagasse between winged rollers C C, or their equivalent, so as to prepare them for burning, substantially as herein specified.

No. 38,668.—CHARLES D. GIBSON, of New York, N. Y.—*Improvement in Head-Light Reflectors*.—Patent dated May 26, 1863.—Explained by the claim.

Claim.—The construction of a cylindrical, curved head-light reflector, lined with several pieces of looking-glasses, or their equivalents, and arranged in regular series around the interior of the case or box, so as to reflect the rays of the light to different and distinct points, substantially as set forth and described.

No. 38,669.—GEORGE W. GILBERT, of Radnor, Delaware county, Pa.—*Improvement in Carriage Wheels*.—Patent dated May 26, 1863.—The spokes are clamped between a plate and a washer which are sustained by a flange on the axle-box and a nut, respectively; being further supported by a bolt to each spoke which passes through the face plate.

Claim.—The axle-box B with its flange B', nut E, and washer F, in combination with the plate A and the spokes D, fitted to each other and to the box, as described, and secured to the spokes by bolts a a, the whole being constructed and arranged substantially as and for the purpose herein set forth.

No. 38,670.—JAMES T. GILMORE, of Painesville, Lake county, Ohio.—*Improvement in Machinery for Dressing or Working Stone*.—Patent dated May 26, 1863.—The object of this improvement is the dressing of stone, particularly hurr blocks, to a perfect surface before receiving the "dress" for laying out and cutting the main and subordinate furrows, or new surfacing an old stone; also for dressing building stone, or fluting columns, or making mouldings. The rotary cutter, which runs on its edge, has diamonds fixed to its periphery, and is capable of rectilinear, rotary or compound motions, as the frame in which it is suspended is attached to a central axis which answers to that of the eye of the runner.

Claim.—First, the placing of a diamond or diamonds, or other hard-cutting points, on the periphery or sides of a wheel or disk, or anything equivalent thereto, and operating said wheel or disk, at any required speed, by rotary motion, or by rotary, rectilinear, and reciprocating motion simultaneously applied, as and for the purpose set forth.

Second, the manner of rotating the cutter-wheel A' by means of the pulleys B E E' C and H; also the mode of giving rectilinear and reciprocating motion to the said cutter-wheel by means of the divided nut U, screw K, bevel wheels N N' and O, pulleys S and H, vibrating hanger Q, and shipper rod T; also the dovetailed arm C and tight screw C' for attaching said arm to the slide block D, and adjusting the cutter-wheel; the said several parts being combined, arranged, and operated substantially as shown, and for the purpose specified.

Third, the mechanical parts for supporting and connecting the said rotary cutter, together with the parts for controlling its movement, as stated, to the arm of the patented millstone dresser, herein referred to, so that the said cutter will conform to the position and movements of the said arm, as herein described and for the purpose set forth.

No. 38,671.—WASHINGTON L. GILROY, of Philadelphia, Pa.—*Improvement in Rolling Shoes for Replacing Cars*.—Patent issued May 26, 1863; antedated March 13, 1863.—This consists of a flanged plate with a roller to be attached to the lower edge of the railroad car wheel, so as to enable the latter to travel transversely to replace it on the track.

Claim.—The employment of a portable shoe, combined with a rolling support or base, the same being constructed and applied to operate substantially as described and set forth for the purpose specified.

No. 38,672.—ELLIOTT P. GLEASON, of New York, N. Y.—*Taper-holder for Lighting Lamps.*—Patent dated May 26, 1863.—This consists of a light rod with a spring catch in the end to hold a lighted friction match by which it may be introduced at the top of the chimney and reach the wick.

Claim.—The within described taper-holder for lighting lamps, &c., without removing the chimney, as a new article of manufacture.

No. 38,673.—WILLIAM H. GOEWEY, of Albany, N. Y.—*Improvement in Stoves.*—Patent dated May 26, 1863.—The fire-pot is enclosed in a tight casing, and consists of a pan and cap with an intervening space occupied by three hollow annular bars which receive air from the outside and eject it into the fire; the air tubes which pass through the furnace also emit air to the flame.

Claim.—The hollow, double V-shaped rings *j* of the fire-pot, provided with the air openings *e e*, said rings being of such shape as to protect the air openings from obstruction by ashes, substantially as herein set forth.

Also, the fire-pot *C*, composed of the unbroken base and top *A k* and the intermediate hollow air rings *j j*, provided with discharge openings *e e*, said rings being separated by the spaces *p p*, for the passage of products of combustion, arranged and operating substantially as and for the purposes herein specified.

Also, in combination with the division rings *j j* thus arranged, the induction air-tube *l* communicating with all of them, substantially as described.

Also, in combination with the open-sided fire-pot *C* and close combustion chamber *A*, the perforations *r r* in the sides of the air tubes *a a* for igniting the gas and heating said air tubes, substantially as set forth.

Also, the combination and arrangement of the open-sided fire-pot *C*, combustion chamber *A*, air-heating chamber *A'*, with tubes *a a* having perforations *r r*, open base *M*, and register top *N*, in base-burning stoves, substantially as and for the purposes described.

No. 38,674.—CHARLES GOODYEAR, Jr., of New York, N. Y.—*Improvement in the Manufacture of Elastic Rubber Straps.*—Patent dated May 26, 1863.—This invention has reference to the making of apron or dasher straps of carriages of rubber or of rubber over elastic fabrics, and also to the lapping the end over and ornamenting the edge so as to imitate the construction and appearance of a stitched leather strap.

Claim.—The production, as an article of manufacture, of straps for the apron and dasher of carriages provided with the ordinary hook and eye, combining a certain degree of elasticity with strength and durability, the whole being coated with a cement or varnish impermeable to water, substantially as herein set forth.

Also, the formation of straps for aprons and dashers of carriages and for other like purposes of an extensible fabric, in combination with a vulcanized elastic rubber compound cemented upon one or both sides of the strap, substantially as set forth.

Also, the method of finishing the edge of straps, made of an extensible fabric, coated with a vulcanized rubber compound, by forming, previous to vulcanization, a cemented lap edge, and by indenting the surface to produce the effect of stitching, substantially as herein set forth.

No. 38,675.—H. A. GORGE, of Brooklyn, N. Y.—*Improvement in Ventilators for Shop Windows.*—Patent dated May 26, 1863.—The object of the improvement is the ventilation of store windows, and the prevention of the condensation of moisture on the inside of the windows in cold weather, by the equalizing the temperature on the inside and outside of the glass. This is effected by creating heat near the top of the window, which rarefying the air promotes its escape through the ventilating pipe, and draws in a current of cold air from the bottom of the window sill; the sliding door which fits over the perforated opening regulates the ingress of the air from the outside, and the sliding damper which covers the holes at the top performs the same office in regard to the egress at that point.

Claim.—First, the inclined plate *V*, in combination with holes *m m' m''* and passage *P*, to divert the current of incoming air directly upon the inside of the window, substantially in the manner described.

Second, the combination of ventilating tube *C*, ventilating burner *W*, and air-register *J*, or their equivalents, constructed and operating together, substantially as and for the purposes described.

Third, the combination of ventilating tube *C*, ventilating burner *W*, and inclined plate *V* with passage *P* and holes *m m' m''*, or their equivalents, constructed and operating together, substantially as and for the uses set forth.

No. 38,676.—C. G. GRABO, of Greenfield, Wayne county, Mich.—*Improvement in Cultivating Machine.*—Patent dated May 26, 1863.—This invention consists of a smooth-faced

roller in a frame, and a rotary cultivator in a frame behind, hinged to the preceding one and supported at the rear end by a caster wheel. The cultivator consists of bars with teeth, and is revolved by belts from the roller and runs in a contrary direction to the same. The belts are tightened by the adjustment of the cultivator in its journal bearings. The teeth are secured to the roller by means of a plate which sets over them, and holds them by their heads while the shank protrudes.

Claim.—In combination with the rotary cultivator and hinged cultivator frame, as herein described, the adjustable journal boxes *G*, for regulating the tension of the ropes and belts by which the cultivator is rotated, substantially in the manner herein set forth.

Also, securing the teeth of the cultivator to the body of the same, substantially in the manner and for the purposes herein described.

No. 38,677.—C. G. GRABO, of Greenfield, Wayne county, Mich.—*Improvement in Drain Ploughs.*—Patent dated May 26, 1863.—The coulter which project downwardly from the beam are of a V-shape, and stand on each side of a line perpendicular to the beam. The gauge of depth is given by means of the draught rod in the vertically adjustable clevis bar.

Claim.—The application to mole ploughs of a V-shaped coulter, when the two shanks of said coulter form such an angle with each as to stand respectively to both sides of the perpendicular line drawn from the apex of the triangle to the plough beam, substantially in the manner and for the purposes herein described.

Also, in combination with a V-shaped coulter, as herein described, the draught-rod *7* and regulator *2*, substantially in the manner and for the purposes herein set forth.

No. 38,678.—EDWARD C. HARRISON, of New York, N. Y.—*Improvement in Dampers.*—Patent dated May 26, 1863.—This invention consists of a valve that closes and a damper that partially closes the opening in the fire-back above the grate, both of them hinged on one pintle.

Claim.—The combination of the valve *C* and damper *E*, arranged substantially in the manner and for the purpose herein set forth.

No. 38,679.—HUGH HAWKINS, of Lockhaven, Clinton county, Pa.—*Improvement in Water Elevators.*—Patent dated May 26, 1863.—The windlass is polygonal in section, fitting the links of the chain to which the buckets, with a valve in their bottoms, are attached. As these buckets reach a proper altitude, a tripping lever strikes the cam-block and raises the valve by which the water is discharged into the hinged trough on the spout.

Claim.—First, the combination of the angular or sprocket pulley *B*, chain *C*, buckets *E*, lever *K*, and cam-block *H*, all constructed and operating substantially as and for the purposes set forth.

Second, the described combination of the hinged trough *G* with the buckets *E* and trough *F*, for the purpose specified.

No. 38,680.—EDWARD P. HOUSE, of Washington, D. C.—*Improved Mode of Securing and Operating Window Blind Shutters and Slats.*—Patent dated May 26, 1863.—On a shaft projecting from the inside of the house through the window casing is a cogged wheel which engages a similar wheel on the shutter to open and close it, or by means of the flanged sleeve on the shaft to hold it in position. The slats are vibrated by means of the wheel which engages a forked arm and a lever.

Claim.—First, the combination of the cogged arm or plate *F*, the cogged wheel *M*, and the shaft *K*, all constructed and operating as herein described, to open or close a shutter or door by the turning of a knob *N* within the house.

Second, the combination of the lever *H*, pin *I*, and forked arm *J* with the wheel *M*, operating, as herein described, to open or close the slats by a partial revolution of the same knob which opens and closes the shutters.

Third, the flanged sleeve *O o'*, attached by a screw-thread to the knob *N*, and employed in the manner explained to secure either or both the sashes at any desired points.

No. 38,681.—DANIEL C. HYDE, of New York, N. Y.—*Improvement in Gauging Rods for Liquor Casks.*—Patent dated May 26, 1863.—In the centre of the four-sided gauging rod is a glass tube open at each end and visible through a slot in each side of the rod, which slots are graduated. A valve on the top of the tube closes that end so as to prevent the escape of the liquor from the lower end when used in measuring the depth.

Claim.—The combination and arrangement of a transparent indicating tube, with any suitably graduated scale, or series of scales, for the purpose of ascertaining and measuring the liquid contents of casks or other vessels, substantially as herein set forth.

Also, the combination of a suitable valve *O*, or its equivalent, with the end of a transparent indicating tube *A*, substantially as and for the purpose herein set forth.

No. 38,682.—G. JENKINS, of Queensburg, Warren county, N. Y.—*Improvement in Fruit Press.*—Patent dated May 26, 1863.—The fruit is discharged from a hopper upon an endless apron, which, charged with the fruit, passes between two rollers, the upper one of which is covered with an elastic material. The fruit adhering to the apron is removed by a scraper.

Claim.—First, having the upper roller B' covered with leather, India-rubber, or other suitable yielding material *b*, when said roller thus covered is used in combination with the endless apron D' and roller B, for the purpose specified.

Second, the scraper F when applied to the endless apron D' underneath the roller B, as and for the purpose specified.

No. 38,683.—WM. JOHNSON, of Milwaukee, Wis.—*Improvement in Discharging Ordnance.*—Patent issued May 26, 1863; antedated February 9, 1863.—The hammer vibrates in a case or box attached to the rear of the cannon, and is operated by a cord which passes out to the hand of the gunner; it strikes against the end of a percussion pin which occupies the axis of the breech-plug and impinges upon the cap at the rear of the projectile. A secondary means of igniting the charge is provided above the former by means of a priming tube and nipple with an auxiliary hammer.

Claim.—First, the hammer D arranged in a box C attached to a breech pin or plug A, and in relation to a percussion pin B passing through the said plug and operated by a cord L and spring catch on hook *k*, as herein specified.

Second, the secondary ignition device consisting of a passage *m*, nipple *r*, and secondary percussion pin G, either with or without the tube *s* and nipple *p*, said pin G being constructed and applied relatively to the principal percussion pin B, to operate substantially as herein specified for the purpose set forth.

No. 38,684.—JOHN F. JONES, of Rochester, N. Y.—*Improvement in Cylinder Moulds for Making Paper.*—Patent dated May 26, 1863.—The object is to remove the water from the interior so as to cause the pulp to adhere to the surface of the cylinder, and this is accomplished by introducing a pipe through the axis of the journal which draws off the water.

Claim.—The cylinder mould having one or both cylinder heads constructed with a hollow journal *a*, an inner hub *c*, and arms or braces *i i*, the whole combined with each other and with a shortened shaft B, substantially as and for the purpose herein specified.

No. 38,685.—ELISHA E. LEE, of Cambridge, N. Y.—*Improved Composition for Soap.*—Patent dated May 26, 1863.—Five pounds bleaching compound, two pounds fuller's earth, one pound boiled potatoes, six ounces Indian meal, one tablespoonful high wines, half a tablespoonful spirits turpentine, one ounce alum, six ounces sal soda—to be mixed with a gallon of water.

Claim.—The combination of materials set forth in the above specification, forming a new and valuable soap.

No. 38,686.—GEORGE H. LEWIS, of Providence, R. I.—*Improvement in Printing and Ornamenting India-rubber.*—Patent dated May 26, 1863.—The invention consists in the use of the vulcanized rubber as a material on which to print, and in fixing a transferred impression by the process of pressing between heated metal plates incorporating the ink with the fabric.

Claim.—First, printing and transferring printed matter, engravings, &c., upon the soft compound of vulcanizable India-rubber or allied gums, substantially as described.

Second, fixing printed matter, engravings, &c., indelibly upon surfaces of India-rubber or allied gums, substantially in the manner specified.

No. 38,687.—E. E. MATTESON, of Nevada, Cal.—*Improvement in Centrifugal Water Wheels.*—Patent issued May 26, 1863; antedated March 12, 1863.—The arms of the centrifugal pump work in a circular casing, and the inlet orifices are provided with valves which are operated by rods connected by a rocking arm to a clutch-box and lever on the main shaft; the pump is thrown out of gear by a toggle lever which lowers the journal-box of the multiplying pinion.

Claim.—The combination of the centrifugal wheel or hollow arm with the gates or valves, together with the sliding rods, elbows, and clutch, with its connecting rods and lever, and the movable and stationary collars, substantially as shown and described.

No. 38,688.—CHARLES MCBURNEY, of Roxbury, Mass.—*Improvement in Moulds for Vulcanizing Rubber Soles for Boots and Shoes.*—Patent dated May 26, 1863.—The object of this invention is to produce a vulcanized India-rubber sole and heel in one piece, with the holes necessary for the pegs and nails formed therein, which is accomplished by making a mould in which the vulcanized sole is to be cast partly of soft metal, in which the pins are secured by casting the soft metal around them.

Claim.—The within described method of constructing moulds for vulcanizing India-rubber soles for boots and shoes, by casting soft metal around the heads of the pins *b*, or their equivalents, in the manner substantially as set forth.

Also, the method herein described of casting a mould partially of soft metal, with or without the pins or projections, for the purpose of vulcanizing other articles as set forth.

No. 38,689.—THEODORE J. MCGOWAN, of Cincinnati, Ohio.—*Improvement in Pumps.*—Patent dated May 26, 1863.—The invention consists of an air chamber above the valve cham-

ber by which the jar caused by checking the flow of the water is avoided and the return motion caused by the expansion of the body of air as the suction of the water under the piston commences.

Claim.—The chamber L when arranged and combined with water passages, valves, and an air-chamber F of a double or single acting pump, to operate in the manner as and for the purposes herein set forth.

No. 38,690.—JOHN MCKILLOP, of Brooklyn, N. Y.—*Improved Varnish for Pictures.*—Patent dated May 26, 1863.—Digest eight ounces of gelatine in sixty ounces of water, add the yolk and glair of five eggs mixed in eighteen ounces of water, heat and mix thoroughly, strain, and add three-tenths of an ounce of potash dissolved in water.

Claim.—The varnish or coating composed of gelatine, eggs, potash, and water, in about the proportions herein specified.

No. 38,691.—SILAS MERRICK, of New Brighton, Beaver county, Pa.—*Improvement in Railroad Car Ventilators.*—Patent dated May 26, 1863.—This invention consists in inserting in the sides of the car a series of boxes divided vertically in front by a parting strip, back of which a valve or damper is pivoted, so as to play back and forth, to be adapted to the direction in which the car is moving. The front is furnished with doors so as to close the opening entirely when required, and to regulate more closely the current passing through the box.

Claim.—First, the combination with the ventilator box A and parting strip B of the deflector C, one end of which is pivoted immediately back of the parting strip, substantially in the manner described.

Second, the combination of the ventilator-box A, parting strip B, and deflector C, with adjustable valves or doors D D', substantially in the manner herein described, for the purpose of regulating the ventilation as set forth.

No. 38,692.—CHARLES N. MORRIS, of Cincinnati, Ohio.—*Commercial Label.*—Patent issued May 26, 1863; antedated February 9, 1863.—These labels are made of wood, boiled to remove the sap, dried, treated with a solution of caoutchouc, and then faced with a solution of Paris white and benzole.

Claim.—A commercial tag or direction label, prepared in the manner and for the purpose substantially as set forth.

No. 38,693.—DAVID P. MUNROE, of Plympton Station, Plymouth county, Mass.—*Improvement in Water Elevators.*—Patent dated May 26, 1863.—The improvement consists of a revolving case containing a ratchet and also a ratchet wheel on the windless shaft with suitable pawls, so that it may be revolved continuously in a direction to raise the bucket, and by throwing it in the other direction made to act as a brake to the descent of the bucket.

Claim.—The arrangement of the case E, with ratchet teeth *a* and pawl *b*, in combination with the oscillating double-armed winch F, ratchet wheel D, and drum A, all constructed and operating in the manner and for the purpose shown and described.

No. 38,694.—JOHN G. MURDOCK, of Cincinnati, Ohio.—*Improvement in Hydrants.*—Patent dated May 26, 1863.—The piston on the end of the hollow and discharging piston rod fits within an open-mouthed cylinder and is operated by the crank-handle, which lifts the piston off its seat on the nozzle of the pipe and at the same time covers the waste aperture in the side of the barrel.

Claim.—The wasting open-mouthed barrel A B W, nozzle D, valve G, gaskets I J, and ventages *ic ic*, when combined in the manner described with a moving water-way shutting against the pressure, all as herein described and for the purposes set forth.

No. 38,695.—DAVID S. OGDEN, of New York, N. Y.—*Improvement in Means for Making Cement Pipes, &c.*—Patent issued May 26, 1863; antedated February 23, 1863.—The invention consists in a series of moulds formed by plates of an angular or zigzag shape, so that when placed together they make a series of hexagonal moulds similar to the cells of a honey-comb, and the pipes are removed therefrom by the separation of the plates. The cores are slightly conical and are forced into the moulds after the latter are filled with clay, and the consolidation of the plastic material at the ends is secured by a perforated hopper-plate, that also acts to hold the moulds down to their place while the pipe is being made.

Claim.—First, a series of hexagonal moulds formed by the angular or zigzag plates *m m* set together in the manner specified, so that the moulds can be taken apart with facility for the removal of the pipe, as set forth.

Second, a core set and moving on the line of the centre of the mould for perforating the cement or material contained in said moulds and forming pipe, as set forth.

Third, a core provided with a taper or conical end to compress the material in the mould in the manner set forth, as said core is forced through the mould, as and for the purposes specified.

Fourth, a perforated hopper-plate *q* in combination with the moulds *m* and cores *o o* substantially as and for the purposes set forth.

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Fifth, the movable tubes *u u* on the cores *o o*, as and for the purposes specified.

Sixth, the movable sheet metal lining *v v* in combination with the moulds *m m*, for the purposes and as set forth.

Seventh, the movable sheet *w*, of metal or other material, in combination with the moulds *m m*, as and for the purposes set forth.

Eighth, the movable sheet *7*, of rubber or other suitable material, applied at the base of the cores *o o*, for the purposes and as specified.

Ninth, the arrangement of the screws *d d d d*, nuts *f f f f*, and screw pinions *g g* on the shaft *h*, in combination with the follower *e* and cores *o o*, as and for the purposes set forth.

Tenth, the slings *r r* and cross-bars *s s* in combination with the hopper-plate *g* and moulds *m m*, as and for the purposes specified.

No. 38,696.—JOHN W. ROCKWELL, of Ridgefield, Fairfield county, Conn.—*Improvement in Currycombs*.—Patent dated May 26, 1863.—The card and currycomb are set back to back and the handle is made adjustable, so as to be at a convenient angle with either, or else put straight into a triangular block whose faces are armed with a card and comb respectively. The method of attachment, &c., are explained in the claim.

Claim.—First, the combination of a card and currycomb by fastening the card and the bars of the comb to either side of a wood or metal stock or back, being either flat or triangular.

Second, the mode of fastening the bars of the comb, the stock, and the card together, by extending the ends of the bars of the comb over the ends of the stock and bending them on to the ends of the card, thereby securing all together and saving the labor and expense of riveting.

Third, providing the blanks *D* with the points *i i*, as herein described and for the purpose set forth.

Fourth, attaching the blanks *D* to the block *H* by means of the points *i i*, in the manner above set forth.

Fifth, an adjustable handle held to the socket by a set screw or spring, or by a joint or any device by which, in using a flat stock or back, the handle can be adjusted for using either comb or card as desired.

No. 38,697.—JOHN ROW, of Mantorville, Dodge county, Minn.—*Improvement in Wagon Brake*.—Patent dated May 26, 1863.—The hold-back straps are connected to a lever on the end of the tongue, and by the vibration of said lever the rod connected therewith operates the brake.

Claim.—The arrangement of the lever *C* hinged to the front end of the draught pole *A* and connecting with the hold-back straps in combination with the hinged lever *E*, draught chains *H H*, and sliding brake *F*, constructed and operating in the manner and for the purpose substantially as specified.

No. 38,698.—G. E. RUTLEDGE, of Dayton, Ohio.—*Improvement in Paper-making Machinery*.—Patent issued May 26, 1863; antedated November 21, 1861.—The pulp in which the sieve cylinder rotates is caused to move in a current in the same direction with the motion of the cylinder to obviate the tendency of the fibres to be laid parallel by the dragging of the periphery of the cylinder through the pulp.

Claim.—Causing a current in that portion of the fluid pulp in which sieve cylinder *B* rotates in a direction corresponding therewith, by which the periphery of the cylinder and the fluid pulp in which it rotates are relatively at rest, for the purpose herein set forth.

No. 38,699.—ADDISON M. SAWYER, of Fitchburg, Worcester county, Mass.—*Improvement in Igniting Time Fuze of Shells*.—Patent dated May 26, 1863.—This invention consists of a detonating primer which moves in an open socket in the apex of the pointed projectile and is intended to ignite the time fuze on the instant of discharge by the motion of the ball and the inertia of the primer.

Claim.—The employment, in combination with a time fuze, of an open socket and a detached fulminating primer, or their equivalents, co-operating as described for the purpose of igniting the time fuze by the discharge of the gun, substantially as described.

No. 38,700.—JOHN SEBO, of Wilmington, Del.—*Improvement in Hospital Bedsteads*.—Patent issued May 26, 1863; antedated April 8, 1863.—The invention consists of a movable seat with an arrangement by which the part under the person can be withdrawn, and a chamber raised by a winch and cord, or lowered and withdrawn.

Claim.—The adjustable seat *P*, as arranged and operated by the windlass *S*, for the purposes set forth.

No. 38,701.—E. F. SOUTHWARD, of Boston, Mass.—*Improvement in Knapsacks*.—Patent dated May 26, 1863.—The object of this invention is so to construct the knapsack that without increasing in weight or bulk it can be adapted as a litter, bed, hammock, or shelter tent. To accomplish this there are attached to the case a flexible flap or blanket of sufficient length

for these requirements, which, when put away for transportation, is rolled up and fastened on the top of the case. Pouches within the blanket are to be used for stowing away apparel or to be filled with straw, &c., when used as a litter or bed. Along the edge of the blankets are eyelets by which it may be fastened to poles.

Claim.—So combining the knapsack and water-proof blanket with a yoke and straps as that the said blanket may be rolled up on top of and held down on to the knapsack by the said yoke, substantially as set forth.

Also, the combination of a knapsack water-proof blanket and eyelets, or their equivalent, under such an arrangement that the same may be attached to a frame, poles, or muskets, thereby forming a litter upon which the wounded may be supported or transported from place to place, substantially as herein set forth.

No. 38,702.—CHRISTOPHER M. SPENCER, of Boston, Mass.—*Improvement in Magazine Fire-arm*.—Patent issued May 26, 1863; antedated January 3, 1863.—The magazine and barrel are connected by a swinging breech-piece which, at proper points of its vibration, make the passage for the cartridges continuous. This breech-piece is swung by a sliding plate and pin working in a cam groove, and the same plate actuates the inner plate and cartridge-drawing hook which brings forward the charge.

Claim.—First, combining a magazine in the stock of a fire-arm with the barrel thereof, by means of a breech-piece *B*, swinging from points near its rear end, and having provided in it a passage *C C* which forms a continuation of the magazine, substantially as herein specified.

Second, operating the swinging breech-piece by means of a slide *D*, pin *h*, and groove *e f g*, applied and operating substantially as herein set forth.

Third, combining the plate *H* carrying the cartridge-drawing hook *k* with the slide *D*, which operates the breech by means of a pin *h*, slot *n o*, groove *e f g*, slots *m m*, and guide pins *l l*, the whole applied and operating substantially as and for the purpose herein specified.

No. 38,703.—DAVID STEINBERG, of San Francisco, Cal.—*Improvement in Bases for Artificial Teeth*.—Patent dated May 26, 1863.—The improvement consists in the insertion of bars for securing and strengthening the vulcanized rubber or other material employed as a base.

Claim.—The application of the bars *A B B*, substantially as set forth and for the purposes described herein.

No. 38,704.—STEPHEN R. STINARD, of Canandaigua, N. Y.—*Improvement in Omnibus and Car Registers*.—Patent issued May 26, 1863; antedated March 13, 1863.—By this arrangement the opening of the door is under the control of the driver, and the passage of persons in and out of the vehicle is registered upon a dial by means of a spring step, actuating levers and rods, which communicate with a ratchet and pawl arrangement behind a dial plate.

Claim.—First, the arrangement of the spring bolt *b*, lever *D E* or *D'*, and connecting rods and arms *d e e' g g'*, in combination with the door *C C'* of a street car or omnibus, constructed and operating substantially as and for the purpose shown and described.

Second, the arrangement of the lip *i*, projecting from the inner surface of the door *C*, in combination with the spring step *F*, and registering apparatus *G*, constructed and operating substantially as and for the purpose herein specified.

No. 38,705.—JEPHTHA A. WAGENER, of Pultney, Steuben county, N. Y.—*Improvement in Sewing Machine Guides*.—Patent dated May 26, 1863.—This appliance is stamped out of a sheet of metal and confined on the bed of the sewing machine by a thumb-screw. At its forward termination by the needle, it consists of a plate, over which the folded fabric passes, having a flat spring bearing upon the surface of the latter, so as to smooth it and present it properly to the needle as the feeding device draws the fabric along.

Claim.—A sewing machine guide, constructed substantially in the manner and for the purpose described.

No. 38,706.—RANSOM WALLING, of Royalton, Cuyahoga county, Ohio.—*Improvement in Wine and Cider Presses*.—Patent dated May 26, 1863.—The press consists of a frame, a box lined with perforated sides, and a follower moving horizontally on ways, being drawn by chains which are attached to its outer end and passing on each side of the box to the shaft of a wheel, which is rotated by a rope on its periphery passing to a winch. The follower is guided by grooves on its sides which slide on guides in the interior of the box.

Claim.—First, the combination with the chest *N* of the follower *S* and inside partition *Q*, arranged to work in joint operation with guides *19 19* and grooves *20 20*, for the purpose set forth.

Second, in combination with the foregoing, the vat *12* and spout *z*, connected together as described, and for the purpose specified.

No. 38,707.—G. E. & E. W. WATSON, of McLean, Tompkins county, N. Y.—*Improvement in Water Wheels*.—Patent dated May 26, 1863.—The buckets have swinging valves in the apertures, which are opened and closed by the action of the governor.

Claim.—First, the swing buckets *e e* in combination with the rods *f f*, collar *i*, and governor *g g*.

Second, the operating said collar *i* and buckets *e e*, when the wheel is in motion directly, by means of a governor upon the shaft of the wheel.

No. 38,708.—C. WHEELER, jr., of Poplar Ridge, Cayuga county, N. Y.—*Improvement in Harrowers*.—Patent dated May 26, 1863.—The improvements are in the ledger plate against which the knife edge works, and in the manner of securing it; also, in the protuberances on the finger bar, by which it affords a support for the back part of the cutter.

Claim.—First, in combination with a scalloped cutter, having the knife bar on its under side, the ledger plate secured at its front end against lateral and vertical movement by locking with the guard finger, while its back end is secured by the shank *f* locking under the finger bar, substantially as described.

Second, in combination with the ledger plate, secured by the shank *f* locking under the finger bar, the elevations *b* of the guard finger, as a bearing for the back part of the cutter, substantially as described.

No. 38,709.—NORMAN WIARD, of New York, N. Y.—*Improvement in the Construction of Ordnance*.—Patent dated May 26, 1863.—The devices in this gun are designed to secure the continued expansive force derived from the evolution of the gases resulting from the ignition of the powder, through the whole length of the bore of the gun, and for this purpose the powder chamber is of a greater diameter than the bore, and the breech is provided with re-inforces and arrangements for compensation for unequal expansion by heat.

Claim.—First, the chamber *M*, or an equivalent enlargement at the breech of a slightly expansible lining *A*, in combination with the means of compensating for unequal heating and resisting great strain, substantially as represented by *B H H'* and *H2*, for the purpose above set forth.

Second, in guns with a lining *A* having a swell and chamber at its breech, the employment of the piece *B*, of a material more expansible by heat than *A*, between the lining *A* and the exterior shell *H*, or its equivalent, for the purpose herein set forth.

Third, allowing independent longitudinal expansion of the piece *B*, by means of the washers *C D*, &c., made elastic substantially as described.

No. 38,710.—J. H. WITHEY, of Winchester, Scott county, Ill.—*Improved Sugar Evaporator*.—Patent dated May 26, 1863.—The front part of the furnace has two evaporating pans which run transversely of the furnace on rollers, one being over the fire at a time. In the rear, and at a higher level, is another pan which is used for bringing the liquid to a boil and removing the scum, after which it is run into the evaporators. The direction of the heat of the furnace is managed by dampers and an auxiliary furnace.

Claim.—The arrangement and operation of the damper *e* in connexion with the defecating and evaporating pans *A* and *B*, for the purposes set forth.

Also, in combination with the evaporating pans *B*, the arrangement of the adjustable roller frames *r*, operating substantially as described for the purposes set forth.

Also, the arrangement and operations of the dampers *d* and *d'*, where two sets of evaporating pans *B* are used, for the purposes set forth.

No. 38,711.—PHILANDER ANDERSON, of Norwich, Chenango county, N. Y., assignor to Himself and P. K. BRONSON, of same place.—*Improvement in Water Elevators*.—Patent dated May 26, 1863.—This invention consists in a ratchet pawl and friction flange movement for retaining the barrel of the windlass in position at will, or allowing it to revolve in the descent of the bucket at a speed under the control of the operator.

Claim.—The pin *c* attached to the head of the crank *C*, or its equivalent, and the cam recess *m* of the ratchet ring *R*, in combination with the friction flange *a*, spring *s*, pin *e*, and pawl *P*, substantially as and for the purposes specified.

No. 38,712.—DAVID MCKINLEY, of Philadelphia, Pa., assignor to Himself and CHARLES H. MELLOR, of same place.—*Improved Rotary Cutter for Planing Machine*.—Patent dated May 26, 1863.—This cutter is made of one piece of steel of a suitable shape, and a recessed central portion; portions of the disk being cut away from the edge towards the apex so as to leave as many cutting edges as may be required.

Claim.—The rotary cutter formed from a steel block or disk having a concavity or recess, and having portions cut away so as to leave two, three or more cutting arms and open spaces between the said arms *b*, the said spaces communicating with the recess, all substantially as set forth for the purpose specified.

No. 38,713.—JAMES S. MERRILL, of Poland, Androscoggin county, Me., assignor to Himself and GEORGE W. HORNER, of Minot, Me.—*Improvement in Coffin Lids*.—Patent dated May 26, 1863.—The inscription plate is placed with its major axis in line with the hinges and the cover extending beyond it; the lid is recessed to a corresponding degree.

Claim.—A coffin cover and lid, as made with an inscription plate projection *a*, and a corresponding recess *b*, arranged with reference to the inscription or its plate *C*, the cover *A*, the lid *B*, and the hinges *D D* thereof, substantially in manner and for the purpose as hereinbefore described.

No. 38,714.—ANTONIO MEUCCI, of Clifton, Richmond county, N. Y., assignor to Mrs. ESTERRE MEUCCI, of the same place.—*Improvement in Preparing Hydro-carbon Liquids to serve as a Vehicle for Paints*.—Patent dated May 26, 1863.—The object is to render the hydro-carbon liquid siccative and colorless, which is accomplished by treating it with hypochloro-nitric acid and a certain quantity of starch to produce a reaction. The consistency is improved by adding linseed cakes, the gummy matter on which is dissolved by the petroleum.

Claim.—First, the employment or use in treating petroleum or other hydro carbon liquids of hypochloro-nitric acid, substantially in the manner and for the purpose described.

Second, mixing petroleum, kerosene, or other hydro-carbon liquid, after treating the same with hypochloro-nitric acid, with linseed oil, linseed or linseed cakes, substantially as and for the purpose set forth.

No. 38,715.—RUFUS PORTER, of Melrose, Middlesex county, Mass., assignor to THOMAS F. WELLS, of Roxbury, Mass.—*Improvement in Air Pumps*.—Patent issued May 26, 1863; antedated October 2, 1862.—This invention consists of an annular series of pump pistons working in upright cylinders around a central cam cylinder. The pistons work in slots in a circular guide, and pivoted to each of them is a roller which runs on the lower edge of the cam groove.

Claim.—First, the operating of a concentric series of pump pistons by means of a central cam cylinder, the axle of which is parallel to the rods of said pistons, substantially as shown and described.

Second, the axle pivots *c*, constructed as herein described, in combination with piston rods *D* and pulleys *F*.

Third, the combination of the cam cylinder *H* with a concentric series of air-pumps, constructed and arranged substantially in the manner and for the purpose herein set forth.

No. 38,716.—SAMUEL STRONG, of Washington, D. C., assignor to Himself and JEROME B. WOODRUFF, of same place.—*Improvement in Brick Machine*.—Patent dated May 26, 1863.—The bricks are made of untempered pulverized clay, and subjected to pressure in the mould by means of a plunger which drives it into the gradually decreasing space formed by the slipping of the inclined planes on each other. After passing a certain point the bottom of the mould is retracted, and a descending arm operates a plunger from above, which discharges the brick on to a weighted platform which, receding under the weight, drops it to the attendant to be carried away.

Claim.—The construction and arrangement of the expanding and contracting mould by the action of the sliding wedges *e e* and the plunger *D*, operating in the manner as herein described for the purpose set forth.

Second, the balanced trap door *u* for receiving and discharging the brick after it is liberated from the mould, in combination with the slide *b* and plunger *R*, substantially as herein specified.

No. 38,717.—JAMES TOMLINSON, of Pickering, Ontario county, province of Canada West, assignor to Himself and ANDREW GAGE.—*Steam Coiled Hoops*.—Patent dated May 26, 1863.—The hoop splint is coiled and steamed, and cut into lengths for use.

Claim.—As a new article of manufacture, a hoop splint prepared in helical form by coiling and steaming, and adapted to be cut into hoops of any length, all as herein shown and described.

No. 38,718.—F. M. WATSON and H. H. CLOUGH, of Warner, Merrimack county, N. H., assignors to Themselves and B. H. WATSON, of same place.—*Improved Foot-Rest*.—Patent dated May 26, 1863.—The foot-rest is fastened to a horizontal arm which slides out from the chair in guides, and the rocking-rest is likewise made vertically adjustable by the supporting screw in the socket.

Claim.—The arrangement of a vertically adjustable or hinged bench or cushion *C* on the top of a standard *E*, in combination with the horizontal arm *c* and guide-ways *d*, secured to the frame *B* of a chair, all constructed and operating in the manner and for the purpose substantially as herein shown and described.

No. 38,719.—CHARLES R. ANDERSON, of St. Louis, Mo.—*Improvement in Railroad Car Trucks*.—Patent dated June 2, 1863.—The objects of this invention are to make a more substantial car truck without increasing its height; to bring the tractive force nearer the plane of the rails without diminishing the diameter of the wheels; to combine with a depressed bolster support a central key-head; coupling and bearing for the bolster and car-body; also, to provide better supports for the ends of the bolster.

Claim.—First, arranging the supporting beam C for the bolster D below the plane of the bottom of the truck frame, and making said beam a fixture with A, and a support for the ends as well as the centre of the bolster, substantially as described.

Second, supporting the ends of a centrally pivoted bolster D, suspended upon pivoted quadrants F F, which admit of a longitudinal movement and a depressed beam C, substantially as described.

Third, the application of the centre pivot bearing, consisting of plates G G', cylindrical box G'', and a vertical key-head d d' in a car truck, constructed substantially as herein described.

Fourth, making the base and side bearing for the hollow centre pivot, an oil cup for lubricating the pivot, and also a chamber for keeping said pivot in place, substantially as described.

Fifth, a truck frame for railroad cars consisting of two side beams A A, transverse beams B B, depressed transverse bolster support C, and the tapering bolster D, arranged and operating substantially as herein described.

Sixth, the combination of plates G G', quadrants F F, and beams C D, all arranged substantially as described.

No. 38,720.—J. B. ATWATER, of Chicago, Cook county, Ill.—*Improvement in Instruments for Describing Ellipses.*—Patent dated June 2, 1863.—This instrument is intended to describe ellipses of any given size by means of a traversing pencil impinging on an elliptical flange, secured to a rod fixed at its foot in the centre of the ellipse to be described. The size is determined by sliding the elliptical disk up or down and the pencil point retained upon the paper by a spiral coil.

Claim.—First, the shaft A in combination with the slide G, the ellipses F, and the curved spring f, the whole arranged in the manner and for the purpose herein specified.

Second, the base B in combination with the centre point I and the spiral spring K, the whole arranged in the manner and for the purpose herein specified.

No. 38,721.—CYRUS AVERY, of Tunkhannock, Wyoming county, Pa.—*Improvement in Rotary Engines.*—Patent dated June 2, 1863.—This invention consists in a combination of parts intended to reduce the friction due to the working of the valve and the revolving cylinder.

Claim.—The circular plate F in combination with the valve J and slot L, or its equivalent, for the purpose specified.

No. 38,722.—JOHN BAIRD, of New York, N. Y.—*Improvement in Valves for Steam-Engines.*—Patent dated June 2, 1863.—This invention consists in constructing two slide valves running side by side, or a divided main slide valve, both being worked by gear when the engine is "hooked on," and one of them being provided with hand-gear, avoiding the difficulty of working the whole main slide by hand or the expense of constructing separate small valves with their appropriate seats and passages.

Claim.—A divided slide valve for a steam-engine, operating substantially as specified, or, in other words, two slide valves working side by side, both capable of being moved and moving when the engine is hooked on, and one capable of being moved independently by hand, the two working under a mode of operation substantially as hereinbefore set forth.

Also, in combination two valves operating substantially as specified when one has less or more lap or lead than the other either on exhaust or steam, substantially as described and for the purpose specified.

No. 38,723.—HENRY H. BEACH, of Philadelphia, Pa.—*Improvement in Grain Dryers.*—Patent dated June 2, 1863.—The invention consists in the arrangement and construction of the parts of the dryer, the grain being compelled to pass down a series of perforated inclined planes, subject, during its passage, to the effects of a hot blast, which passes in at the sides and through the perforated inclines. The interior is further divided by shelves which, projecting from alternate sides, serve to direct the current of air, the foot of the lowest incline having a place of exit and a door.

Claim.—First, a series of inclined planes which the grain is caused to traverse in strata of uniform thickness, or nearly so, and on which the grain is caused to change its position by regulating the openings which form the communication between the planes, substantially as described, the planes being heated or perforated for the passage through them of a hot blast.

Second, in combination with the said inclined planes, arranged as set forth, the sliding plate d', or its equivalent, for the purpose specified.

Third, the structure separated into the within-described hot-air compartments and exhaust compartments by the horizontal plates and inclined planes herein set forth, for the purpose specified.

No. 38,724.—JOSEPH B. BOOTH, of Portsmouth, Va.—*Improved Hydraulic Propeller.*—Patent dated June 2, 1863.—This invention consists of a method of propelling vessels by the combination of cylinders breaking the dead points and working pistons in a series of propelling cylinders which discharge in the wake of the vessel.

Claim.—The construction and combination of the cylinders and pistons, the crank shaft and intermediate shaft, and the pinions and cranks, substantially as and for the purpose specified.

No. 38,725.—ROBERT BRAGG, of San Francisco, Cal.—*Improvement in Unloading Freight or Merchandise.*—Patent dated June 2, 1863.—This improvement consists in a skid or discharging plank, having ways traversed by an endless chain with cross-bars, and operated by a crank and pinion, by which freight may be raised or lowered with facility.

Claim.—The plank A having ways c c attached to one or both sides, in combination with the endless chains B B connected by cross-bars f arranged or applied to the plank, substantially as and for the purpose herein set forth.

Also, the guards or side straps a a applied to the plank A when used in combination with the ways c c, endless chains B B, and cross-bars f, as herein described.

No. 38,726.—ALFRED BRIDGES, of Newton, Middlesex county, Mass.—*Improved Mode of Connecting Cars to Trucks.*—Patent dated June 2, 1863.—This invention consists of a device for hanging the car upon a yielding connexion between that frame and the truck frame. This is accomplished by attaching a chain to the truck frame and to a piston spring on a frame suspended from the sill of the car; upon this chain the car rests through the medium of a pedestal.

Claim.—Hanging the car body by a spring or yielding connexion extending from the pedestal to the truck frame, and acting in the manner and for the purposes specified.

No. 38,727.—JOHN S. BROOKS, of Rochester, N. Y.—*Improvement in Stove-pipe Thimbles.*—Patent dated June 2, 1863.—This is an iron cylinder with a length equal to the thickness of an ordinary wall, having a corrugated interior surface, but presenting a fair face to the outside; at the upper side is a pivoted slide, which is brought down against the upper side of the stove-pipe and holds it firmly to its place.

Claim.—A stove-pipe thimble having the adjustable slide C, or its equivalent, as and for the purposes shown and described.

Also, the corrugated collar, when so made as to hold the pipe by its inner points while the outer points or grooves carry the creosote into the flue.

No. 38,728.—FRANCIS A. CANNON, of New York, N. Y.—*Improvement in Sadirons.*—Patent dated June 2, 1863.—The improvement consists in fitting a slipper to the bottom of the iron with a roller near the heel of it, the whole being detached by a trigger at will.

Claim.—The use of a slipper and roller in combination, made substantially as described, to fit on the bottom of smoothing irons attached thereto, and removed therefrom by means of a spring catch.

No. 38,729.—HEZEKIAH CLEMENTS, of Warsaw, Ky.—*Improvement in Stills.*—Patent dated June 2, 1863.—This still consists of a central chamber and outer casing, with a helical partition or flange between them. The steam is admitted by a pipe through the cover, and passes by a helical worm down till it discharges into the space between the bottoms of the respective vessels; from thence it passes up the helical space and out at an escape pipe. A shaft in the central axis of the still is rotated by bevel gearing and a shaft passing horizontally through a stuffing box into the still for the purpose of stirring the wort and preventing the grains from settling.

Claim.—The vertical shaft H and the paddles k k, when used in connexion with the worm G and steam space a, substantially as and for the purpose described.

No. 38,730.—BENJAMIN CRAWFORD, of Pittsburg, Pa.—*Improved Feed-water Heater for Locomotives.*—Patent issued June 2, 1863; antedated November 16, 1862.—The exhaust steam is taken by pipes from the blast pipes under the chimney and conducted to the feed-water heater which is located above the boiler; rods passing to the engineer's cabin operate valves at the point of reception of the steam from the blast pipes so as to regulate the amount drawn therefrom, diminishing the amount withdrawn to increase the blast, and vice versa; a valve at the top of the heater, under control of the engineer, admits of the passage of the steam therefrom.

Claim.—First, the arrangement, substantially as herein described, for heating feed-water for locomotives by exhaust steam taken from the blast pipes at a point or points below the chimney or smoke-stack, as herein set forth.

Second, the valves E E, applied and operated between the blast pipes B B and the heater A, substantially as and for the purpose described.

Third, the valve D, applied and operated substantially in the manner and for the purpose described.

No. 38,731.—DANIEL DECKER, of New York, N. Y.—*Improvement in Piano-Fortes.*—Patent dated June 2, 1863.—This invention is an improved construction of what is known

as the full metallic plate. In this improvement the string bearings are not upon the plate, but pass under it and are upon the wrest plank, while the strings pass over the bridge near the wrest plank and avoid the strain on the pins incident to passing over the plate.

Claim.—Elevating the portion C of the plate in such manner that it passes entirely over a number of the longer or bass strings *e e* of the instrument and enables the said strings to pass between it and the wrest plank, and so enables a wooden bridge *f* to be used upon the wrest plank for the support of those strings and the said strings to be brought close to the wrest plank, substantially as and for the purpose herein specified.

No. 38,732.—DANIEL DICK, of Meadville, Crawford county, Pa.—*Improved Process of Burning Petroleum or other Liquid Fuel for Generation of Steam, and other Purposes.*—Patent issued June 2, 1863; antedated April 25, 1863.—The oil is ignited on the surface of a porous and unflammable mass, such as pumice-stone, contained in a chamber enclosed in a box, so as to have a casing of water between. Air is supplied by central tubes passing upwards through the mass, and the fire is extinguished, when necessary, by a close fitting-flat plate.

Claim.—The method of employing coal oil, petroleum, or other mineral oils, as fuel for the generation of steam or for other purposes, by saturating a bed or stratum of incombustible or refractory materials with the oil and burning it upon the surface thereof, substantially in the manner described.

No. 38,733.—MARTIN A. DILLEY, of Mendon, St. Joseph county, Mich.—*Improvement in Grain Drills.*—Patent dated June 2, 1863.—The improvement consists in the manner of raising the shares from the ground, which is by means of a lever pivoted to a semicircular plate, the vibrating lever being attached by chains, working over pulleys, to the bar, from which the shares are suspended.

Claim.—The manner of adjusting, that is to say, raising and lowering the teeth K, to wit, by means of the bar M having the teeth connected at its ends by chains N N, to a bar P, pivoted to a semicircular plate Q, provided with holes *u*; the bar P having a catch R attached to it, and all arranged as and for the purpose herein set forth.

No. 38,734.—RICHARD K. EWING, of Elizabethtown, Hamilton county, Ohio.—*Improved Mop.*—Patent issued June 2, 1863; antedated March 11, 1862.—The fold of the mop-cloth is retained within the groove on the lower edge of the block by means of the stirrup and pins.

Claim.—As a new and improved article of manufacture, the mop substantially as herein described.

No. 38,735.—JONATHAN FAW, of Lockland, Hamilton county, Ohio.—*Improvement in Rag Engine of Paper-making Machines.*—Patent dated June 2, 1863.—The invention consists in providing deflectors, which are placed inside of the cap of a rag engine, and which, in combination with the cap, deflect the stock in the engine, in the process of grinding, from the inside or short circumference to the outside or long circumference, and the object is to secure uniformity in the length of the staple which forms the pulp.

Claim.—The combination with the cap of a rag engine of the deflector E, constructed and arranged as and for the purposes set forth.

No. 38,736.—ANDREW FITZPATRICK, of New York, N. Y.—*Improvement in Pumps.*—Patent dated June 2, 1863.—The improvement consists in the arrangement of a rotary screw spindle, connected with and actuating the piston of the pump, in connexion with a tappet rod actuating a sliding clutch, and reversible bevel gear, so that the spindle is rotated alternately in either direction by the engagement of the clutch alternately with each of the continuously revolving bevel wheels, which are rotated in different directions by the master wheel.

Claim.—The rotary screw spindle D, and crosshead C, connecting by rods *a* with a piston moving in a pump cylinder B, in combination with the longitudinally sliding clutch G, wheels E E' F, and tappet rods H, all constructed and operating substantially as and for the purpose shown and described.

No. 38,737.—JAMES P. GAY, of Cincinnati, Ohio.—*Improved Composition for Black Varnish.*—Patent dated June 2, 1863.—Take one hundred pounds hard candle pitch and heat it to 375° Fahrenheit; while hot add ten pounds litharge, two pounds powdered quick-lime, and mix thoroughly; when partially cooled add twenty gallons benzine, and incorporate.

Claim.—The composition for black varnish, consisting of the material herein specified, combined in the proportions and substantially in the manner herein described.

No. 38,738.—GEORGE GEER, of Douglas, Knox county, Ill.—*Improvement in Corn Harvesters.*—Patent dated June 2, 1863.—This harvester is mounted on two wheels which span a corn row, which is guided to the spiral knife cylinder by guides. The armed cylinder strips the ears off the stalks, and the ears are carried by a transversely revolving apron and discharged from the machine. There are other arrangements for disposing of stalks accidentally broken off, and of such as are torn up by the roots, so as not to embarrass the machine, the object being to harvest the corn in the husk and leave the fodder standing.

Claim.—First, the rotating cylinder H, provided with a spiral rib *j*, in combination with the endless chain L, provided with arms *a'*, arranged to operate in connexion with the plates J I, substantially as and for the purpose herein set forth.

Second, the endless toothed chain M, in combination with the endless chain L, provided with arms *a'* and the spiral-ribbed cylinder H, as and for the purpose specified.

Third, the cutter U, placed at the back part of the space *m*, and arranged so as to be operated through the medium of a treadle *n'* and spring *n''*, as set forth, but the cutter thus arranged to operate I only claim when used in combination with the ribbed cylinder H and endless chains L M, for the purpose set forth.

Fourth, the serrated wheels *f f*, in combination with the endless chains L M, ribbed cylinder H, plate J, and bar *l* of the semicircular bars *k*, for the purpose specified.

Fifth, the V-shaped plates R R attached to the frame A by hinges or joints, and provided with rollers T T and bent rods S, to operate as and for the purpose described.

Sixth, constructing the frame A of two parts *a b*, one part *b* having an inclined position relatively with *a*, when said frame thus constructed is used in combination with the cylinder H, endless chains L M, plates J I, all arranged as herein set forth.

No. 38,739.—GEORGE W. HALL, of Lyndonville, Orleans county, N. Y.—*Improvement in Artificial Legs.*—Patent issued June 2, 1863; antedated December 27, 1862.—The improvements are clearly expressed in the claim, and consist in the ankle with the double attachment of its coupling to the leg, and the adjustment of the journal of vibration in the foot; the vibrating thigh irons, pivoted at the upper edge of the socket and to the leg iron, with the tightening adjustments of the knee joint, and the elastic straightening strap of the artificial leg, by which the automatic forward motion of the leg is obtained.

Claim.—First, the ankle coupling E, having a broad or double antero-posterior bearing *d* connected with the leg, and transverse journal *f* connected with the foot, arranged and operating substantially as and for the purposes set forth.

Second, the means of adjusting and tightening the journal *f*, consisting of the bearing pieces *j j* attached to the foot, as described, together with the clamp *k* and adjusting screw *l*, substantially as set forth.

Third, connecting the jointed side irons H to the socket D by the pivot *n*, to allow free motion or vibration thereof between the seams *o p*, or corresponding limits of action, substantially as shown and described.

Fourth, the combination of the slot and movable bearing *s*, screw-follower *t*, and transverse screw *u* with the pivot Q of the jointed side irons, substantially as and for the purposes set forth.

Fifth, connecting the lower portion of the leg B with the upper socket D by means of the elastic strap U and pad T, arranged and operating substantially as set forth.

No. 38,740.—THOMAS J. HALLIGAN, of New York, N. Y.—*Improvement in Sewing Machines.*—Patent dated June 2, 1863.—The improvement consists in the arrangement and construction of the shuttle-driving and feed mechanism. The feed-wheel is rotated by a gripping dog actuated by the short arm of a rock-shaft, the longer arm of the shaft being depressed by a cam on the central rock-shaft and returned by a spiral spring. The shuttle is operated by the central rock-shaft and derives its motion from an eccentric in the main shaft. Attached to the central rock-shaft is an arm and a wrist which slides in a slotted guide and actuates the shuttle.

Claim.—The combination of the rock-shaft H carrying an arm H2 and a cam L, the rock-shaft P carrying arms P' P' and a dog N, and the springs *f* and *g*, the whole arranged and applied in relation to each other and in connexion with the shuttle-carrier and feed-wheel, substantially as and for the purpose herein specified.

No. 38,741.—EDWARD HASSENPELUG, of Boston, Mass.—*Improvement in Pocket-books.*—Patent dated June 2, 1863.—The flap of the pocket-book is restrained from opening beyond a certain point by a strap, and is closed automatically by an elastic spring band.

Claim.—As a new article of manufacture a self-closing pocket-book, provided with a spring or springs *a* and stops *c*, as shown and described.

No. 38,742.—ALBERT N. HENDERSON, of Buffalo, N. Y.—*Improvement in Lamp Burner.*—Patent dated June 2, 1863.—The tube immediately enclosing the wick is enclosed by another tube which has communication by small orifices with the air chamber. The air is admitted into the cap and projects at right angles against the flame.

Claim.—First, the isolated space D, open at the top around the flame, without air holes around the bottom, but with small holes connecting with the oil reservoir, constructed in the manner and for the purpose described and represented.

Second, the said isolated air space in combination with the outer descending air space E, with the various modifications of the cap for the formation thereof, so constructed as to admit the air, as herein described, and in some of the forms at the top also, so as to throw it at right angles against the flame, and in further combination with these devices the plate F, now in use in other forms of lamps, all constructed in the manner and for the purpose herein substantially described and set forth.

No. 38,743.—HENRY HOLCROFT and CANBY S. SMITH, of Chester Valley, Chester county, Pa.—*Improvement in Railroad Car Platforms*.—Patent dated June 2, 1863.—The object of this improvement is to bridge the space between two adjoining cars, which is accomplished by a slide projected by a treadle and retained in its extended position by a catch.

Claim.—The slide B, applied to the platform A, and arranged with the spring E, bent lever D, lever D', and rod F, and recess f, in combination with the spring catch G and recess c, in the platform A', all arranged as and for the purpose specified.

No. 38,744.—GEORGE P. HOPKINS, of Albion, Orleans county, N. Y.—*Improvement in Cooking Stoves*.—Patent dated June 2, 1863.—The fire chamber is supplied from a magazine, which is surrounded by the chimney, and a direct passage up the chimney is permitted or denied by a rotating damper at the entrance of the flue. The movable back admits of the contraction of the fireplace.

Claim.—First, the tubular perforated shaft J fitted in the lower part of the flue G and provided with the wing c and serrated plate d, and placed in such position relatively with the fire chamber A and magazine D to operate as and for the purpose specified.

Second, the sliding or adjustable fire chamber A, arranged as shown, when arranged and combined with the flues G C, perforated shaft J, and the magazine D, as herein set forth.

No. 38,745.—ANSEL HOWARD, Jr., of Readsboro', Bennington county, Vt.—*Improvement in Machines for Shaping Wooden Trays*.—Patent dated June 2, 1863.—The block is adjusted and chucked to the rocking platform, whose inner end is hinged to a transverse bar, which moves in a circular path and exposes the sides of the block to the action of the rotating cutter, the object of the machine being to impart to the external surface of the tray such a shape that the flat bottom may be tangential to the curve of either or all the sides and ends.

Claim.—The combination of the separate carrier D and its adjustment g p h k i l m n, or their mechanical equivalent or equivalents, with the platform C and the rotary cutter or plane B, the whole being applied and arranged with respect to one another in the manner and so as to operate substantially as specified.

Also, the combination of one or more adjustable hold-backs q with the platform C and the rotary cutter B.

Also, the combination of the hold-fast u with the platform C when combined with a rotary cutter B, the whole being substantially as and for the purpose specified.

No. 38,746.—JOHN S. HOWELL, of Portsmouth, N. H.—*Improvement in Valves of Steam Engines*.—Patent dated June 2, 1863.—The steam chest, which is upon the cylinder, has exhaust ways on each side leading to the exhaust pipe which passes around the cylinder. In the sides of the steam chest are two ports opposite to each other near each end and separated from the exhaust, which are also opposite each other, by a partition. The valves are two in number and are fixed on one valve rod, and are made somewhat wider above than below to obtain a pressure to keep them steady to their seats. In each face of each valve there is an exhaust chamber to conduct the steam from the steam chest to the exhaust pipe.

Claim.—In combination with the steam cylinder H the exhaust ports C C, and passages J J, steam chest I, provided with valves A A, balanced or nearly balanced, as described, and so constructed, arranged, and operated as to supply steam to and exhaust it from each end of the cylinder H, as required.

No. 38,747.—FRANKLIN A. HEATON, of Washington, D. C.—*Improved Embalming Fluid*.—Patent dated June 2, 1863.—In six pounds muriatic acid dissolve four pounds of zinc; add one gallon alcohol, two drachms of arsenic, one drachm corrosive sublimate; warm and inject it.

Claim.—The ingredients mixed in the manner and in the quantities as herein described, as a fluid for the purpose of embalming the dead.

No. 38,748.—JOHN L. KIDWELL, of Georgetown, D. C.—*Improved Composition for Disinfecting and Purifying Hospitals, Camps, &c.*—Patent dated June 2, 1863.—The compound consists of sulphate of lime thirty parts and sulphate of magnesia twenty parts, with or without the addition of sulphate of copper two parts and charcoal or coal tar two parts.

Claim.—First, the combination of sulphate of lime with the sulphate of magnesia, as set forth, for the production of a disinfecting, deodorizing, and antiseptic compound or composition of matter.

Second, the combination of sulphate of lime and sulphate of magnesia with sulphate of copper, charcoal, and coal tar, or either one or more of them, substantially as set forth.

No. 38,749.—RICHARD KITSON, of Lowell, Mass.—*Improvement in Friction Brakes*.—Patent dated June 2, 1863.—The invention consists of a disk firmly attached to the shaft and enclosed in a box, which is clamped against the disk with any required force. The box has a circle of ratchet teeth around it, and a stopper bar is made to engage with the teeth on the revolving box, so as to arrest it and gradually, by the friction of the disk in the box, to stop the shaft.

Claim.—The brake composed of the disk B fast upon the shaft or axle, the toothed-box C clamped upon the said disk, and the stop E to act upon the teeth of the box, the whole combined to operate substantially as and for the purpose herein specified.

No. 38,750.—LAFAYETTE KNICKERBOCKER, of Philadelphia, Pa.—*Apparatus for Cutting Card-board*.—Patent dated June 2, 1863.—A reciprocating rectangular block armed with knives on its lower edge works in a box beneath, whose steel-plate edge corresponds to the size and shape of the descending block, admitting the latter, so as to cut an opening in the interposed card-board. The sides of the box are made adjustable by the slipping of the plates on each other under the pressure of the clamps.

Claim.—Cutting openings in card-board by means of plates E, arranged to enclose a space of the desired form and dimensions of the opening, in conjunction with the reciprocating block G, or its equivalent, and the blades H, arranged in a form corresponding to that of the space, when the cutting edges of the said blades are made of a concave or angular form, as described, for the purpose specified.

Second, the steel plates E secured to the adjustable plates B and arranged in respect to each other, as described, so that the space enclosed by the plates may be increased or diminished at pleasure, as set forth.

No. 38,751.—EDWARD LANE, of Philadelphia, Pa.—*Improvement in Hanging Carriage Bodies*.—Patent dated June 2, 1863.—The invention consists in supporting the carriage body upon levers, which at one end rest upon the fore or hind axle, and at their other end are suspended by a rod and an elastic strap to the body itself. Each combination of lever, rod, and strap acting independently of the others.

Claim.—Hanging the body of a vehicle to the front and rear axles of the same by means of the gum-elastic springs H H and H' H', the levers D D and D' D', the rods G G and G' G', or their equivalents, arranged as set forth, when the spring of one lever is independent of the springs of the other levers, as described, for the purpose specified.

No. 38,752.—MILES K. LEWIS, of Iowa City, Johnson county, Iowa.—*Improvement in Carriage Brakes*.—Patent dated June 2, 1863.—The invention consists of cam-shaped rubber blocks attached to a crank-shaped break bar, the rubbers being connected by chains to the hind axle, which holds the rubbers to the wheel when the brake bar is rotated by the brake lever.

Claim.—In combination with a cam-shaped brake block, arranged to turn on the brake bar, the links or chains which connect it to the axles or some part of the carriage, substantially as described, for the purpose set forth.

Also, in combination with a crank-shaped brake bar, a cam-shaped brake block, for the purpose set forth.

No. 38,753.—WILLIAM K. LEWIS, of Boston, Mass.—*Improvement in Apparatus for Dedicating Vegetables*.—Patent dated June 2, 1863.—This invention consists of an annular trough over a hot-water chamber, in which the meat or vegetables are alternately rolled and stirred by revolving appliances which are actuated by a central rotating shaft.

Claim.—First, the employment for the desiccation of vegetables, or other substances, at a temperature not above the boiling point of water, of a vessel A heated by the vapor rising from or through water heated in a vessel B which is open to the atmosphere, substantially as herein described.

Second, the combination, as herein described, of one or more rollers and one or more rakes, scrapers, or stirrers, with each other and with a desiccating vessel A heated in the manner herein set forth.

No. 38,754.—CHARLES P. LINDLEY, of Waterbury, Conn.—*Improvement in Lantern Globes*.—Patent dated June 2, 1863.—The lantern globe has a circular orifice and flange, which latter admits of a metallic band for the hanging of a door, with a reflector on its inner side.

Claim.—First, providing a lantern globe with an opening a, for the purpose specified.

Second, in combination with the same the lip, for the purpose described.

Third, in combination with the globe provided with the opening a the use or employment of the reflector C, or its equivalent, for the purpose herein set forth.

No. 38,755.—WILLIAM MURPHY, of New York, N. Y.—*Improved Letter Envelope*.—Patent dated June 2, 1863.—The side flaps extend over the width of the sheet, and when laid over, cover the back and front pieces, which being then folded together are secured by the lid flap.

Claim.—First, overlapping the flaps b b', with or without gum, when the same extend over the whole width of the sheet A, as and for the purpose shown and described.

Second, the arrangement of marks e g, opposite the points d f where the head flap a joins the side flaps b b', substantially as and for the purpose specified.

No. 38,756.—W. L. OLIVER and A. J. HANCOCK, of Wayne Township, Marion county, Ind.—*Improvement in Machinery for Turning Logs on Saw-mill Carriages*.—Patent dated June 2, 1863.—A block is spiked to the end of the log and a centre pin driven in; the log is then rolled until these temporary journals are over the head of the rack; the latter is then raised by gearing and the log placed on the head blocks. It may be raised again for turning after slabbing, dispensing with the usual lifting and turning with cross-bars.

Claim.—The movable elevators H, constructed and operated substantially as described, and in combination with the additional head blocks A, and the centre blocks L, for the purpose of facilitating the turning and raising of the log, in the manner described.

No. 38,757.—HARMON OSLER, of Philadelphia, Pa.—*Improvement in Garments having Body and Sleeves*.—Patent dated June 2, 1863.—The garment is made of a single piece of goods and joined by two sutures on each side, as represented.

Claim.—A garment having body and sleeves draughted in one piece and formed by the sutures N H, O G, F P and R Q on each side, substantially as shown and described.

No. 38,758.—J. M. PATTERSON, of Woodbury, Gloucester county, N. J.—*Improved Process of Utilizing the Tin from Tin Plate Clippings, &c.*—Patent dated June 2, 1863.—The tin clippings are placed in a bath of melted lead, which forms an alloy with the tin, and the clippings are then heated to drain off the alloy that adheres to them. The alloy in the bath and that obtained from the clippings have then added to them suitable proportions of tin to be used as solder.

Claim.—Utilizing or recovering the tin of the "waste clippings" of tin plates, substantially in the mode described.

No. 38,759.—A. H. PERRY, of Tipton, Cedar county, Iowa.—*Improvement in Furnaces of Sugar Evaporators*.—Patent dated June 2, 1863.—The two furnaces are placed in such a relation to each other that the heat from the first one heats and ignites the bagasse on the revolving grate in the second one; the bagasse being fed in from a hopper with a trap-door bottom above the grate.

Claim.—First, the arrangement of the hopper H, with a trap door I, and revolving grate E, in combination with the flues B D, leading from the furnace A to the chimney, the whole being constructed and operating in the manner and for the purpose substantially as described.

Second, so combining two furnaces A and C, and their flues B and D, that the fuel in the second furnace is dried and set on fire by the heat emanating from the fuel in the first furnace, substantially as set forth.

No. 38,760.—J. B. G. M. F. PIRET, of Paris, France.—*Improvement in Lubricating Journals and Axles*.—Patent dated June 2, 1863.—The invention consists of a peculiarly shaped cap piece or crown on the end of the axle, which latter is enclosed in and has an overlapping disk enclosing the inner edge of a box, so that by the rotation of the crown the oil shall be raised from the well or sunk place in the box, and poured over the axle, and drip back to the well again.

Claim.—First, the application within an axle or journal of what is herein described as a "helicoïd winged crown" rotating in contact with a stationary disk *k* or other equivalent flat surface, substantially as and for the purpose herein specified.

Second, the overlapping disk *n*, encircling a flange *o*, formed upon the inner end of the box, substantially as and for the purpose herein specified.

No. 38,761.—ARNER REEDER, of Buckingham, Bucks county, Pa.—*Improvement in Stopping Millstones*.—Patent dated June 2, 1863.—This is a device for stopping the revolution of the millstone, by the raising of the empty funnel within the hopper when the grain is fed out. The funnel is suspended from a lever, the upward vibration of which shifts the driving belt to a loose pulley or otherwise disconnects the driving power from the grinding apparatus.

Claim.—The funnel G or its equivalent, arranged in respect to the hopper of a mill substantially as described, in combination with the devices herein set forth, or their equivalent, through the medium of which the rising of the said funnel or its equivalent, when relieved from the weight or pressure of the grain, will cause the power from which the stones derive their motion to be arrested as described.

No. 38,762.—EDWARD S. RITCHIE, of Brookline, Norfolk county, Mass.—*Improvement in Cards for Liquid Compasses*.—Patent dated June 2, 1863.—The cardinal points are represented on a sheet of mica, which is varnished and covered with another thin plate of the same material. A metallic edge or binding is then attached.

Claim.—The new or improved liquid compass card, substantially as hereinbefore described.

No. 38,763.—BRADFORD ROWE, of Albany, N. Y.—*Improvement in Leather Splitting Machines*.—Patent dated June 2, 1863.—The leather is fed between the splitting roller and roller from a flexible steel gauge plate which is supported by rods and springs, so as automatically to adjust itself to the varying thickness of the skins.

Claim.—First, the elastic and flexible gauge-plate, in combination with the springs employed to keep its edge duly pressed upwards towards the roller.

Second, the roller having a centre and side divisions of different diameters, the centre division being the largest, and the others similar to each other, in combination with the knife and gauge-plate.

Third, the treadles, in combination with the rods and springs.

No. 38,764.—HUGH SANGSTER, of Buffalo, N. Y.—*Improvement in Head Lamps for Vessels*.—Patent dated June 2, 1863.—The invention consists in a movable lamp-pot, constructed so as to be adjusted by a screw from the outside to the focus of the reflector, and in the construction of the reflector, so that it may be inclined to direct the light in the required plane; also in the construction of the chimney, consisting of a flue covered by a cone, and in the method of isolating the tinned metal lamp from the looking-glass by the interposition of strips of wood.

Claim.—First, the reflector made movable for the purpose set forth by means of the two knobs H and G, and the piece K, or reflector holder, or their equivalents.

Second, the lamp-pot so arranged that it may be moved and its position changed inside of the lamp base by means of the knob I, or its equivalent, on the outside of the lamp, for the purpose of adjusting it to the focus of the reflector.

Third, the manner described of attaching looking-glass and frame to the wings of the lamp, also the panel or recess, which is stamped into the wing for its reception.

Fourth, the cone-covered hot-air tubes, as described, and the grooves for the glass, bent and formed of the same pieces of metal as the top and bottom, as shown in Fig. 3, and lettered W W' X X', also the manner of holding the fruit glass (in the door) to its place, as shown in Fig. 7 and by the piece Y'.

No. 38,765.—SAMUEL J. SEELY, of Brooklyn, N. Y.—*Improved Car for Carrying Petroleum, &c.*—Patent dated June 2, 1863.—The containing body of the car is made of a cylindrical shape and of corrugated sheet-metal; underneath it are pipes extending along each side and connecting with flexible hose by which the car is emptied; the hose and nozzles being stowed, when not in use, in boxes which protect them from injury.

Claim.—First, a railway car having its body composed of a corrugated or other sheet iron cylinder, substantially as and for the purpose herein specified.

Second, the combination with the car body of one or more pipes *k k* arranged below the car, as described, and furnished with a series of flexible branches *l l*, connected by cocks *k k*, substantially as and for the purpose herein set forth.

Third, the boxes *n n*, arranged as described, for the protection of the cocks *k k*, and for the stowage of the flexible branch pipes *l l*.

No. 38,766.—PHILANDER SHAW, of Boston, Mass.—*Improvement in Boots and Shoes*.—Patent issued June 2, 1863; antedated October 18, 1862.—The upper is made of flexible material and the sole of plates of compressed wood with an interleaved plate of metal.

Claim.—As a new article of manufacture, a boot or a shoe which is made of a flexible "upper" united with a sole composed wholly or in part of compressed wood; also the combined arrangement, operating substantially as shown and described, of the metallic plate *c* with the whole or a portion of the sole, when made of compressed wood.

No. 38,767.—MAX HENRY STEIN, of New York, N. Y.—*Improved Press for Forming Dies*.—Patent issued June 2, 1863; antedated April 9, 1863.—This is an improvement on J. J. C. Smith's patent of September 20, 1859, reissued April 10, 1860. The object is to subject the metallic alloy in the press box to a simultaneous pressure above and below. This is accomplished by making the cross-bar which sinks the downward plunger act by its ends through side pieces upon levers, which raise the upward plunger, while the metal is prevented from spreading by the sides of the adjustable press box.

Claim.—The arrangement of two hinged levers E E, plunger F, and bars *e*, in combination with the main follower D and an adjustable press box H, constructed and operating substantially in the manner and for the purpose shown and described herein.

No. 38,768.—BENJAMIN F. STURTEVANT, of Boston, Mass.—*Improvement in Manufacture of Tooth-Picks*.—Patent dated June 2, 1863.—The band of wood is cut spirally off a rotating block, and is chamfered at both edges, and the tooth-picks cut out butts and points alternately.

Claim.—As a new or improved manufacture, for the purpose aforesaid, the making of tooth-picks with bevels or chamfers at the opposite ends of each, the blank or band of wood as made with the chamfers or bevels at its opposite edges, and in other respects substantially as specified.

No. 38,769.—HENRY K. STONER, of Lancaster, Pa.—*Improvement in Horse Rakes*.—Patent dated June 2, 1863.—The rake tooth is attached to a vibrating head, which is pivoted on a rod and retained in its working position by a spring. The tooth is inserted into a recess in the flanged projection of the head-piece and secured by a bolt.

Claim.—The construction and application of the tooth-head A, with its perforated ear D D, raised and notched flange B f, for holding and securing the teeth, in the manner specified.

Also, the supporting and projecting base C, in combination with the projecting flange with its notch, for the additional purpose of attaching the springs, in the manner specified.

No. 38,770.—ARTHUR F. TAIT, of Morrisania, West Chester county, N. Y.—*Improvement in Self-Priming Hammer for Fire-arms.*—Patent dated June 2, 1863.—The chambered hammer contains a magazine of percussion pellets, which are forced to the striking surface of the hammer in the act of descent, by means of a spring lever and rod which project a pellet through a slot.

Claim.—The combination of the lever C, spring q, slide B, and stop t n, with the hammer A, magazine b, and the inclined plane r, in the manner and for the purpose herein shown and described.

No. 38,771.—LEWIS TEES, of Philadelphia, Pa.—*Improved Iron-clad Vessels.*—Patent dated June 2, 1863.—This improvement relates to the exterior angular and curved form of the vessel in connexion with the projecting ram, and is fully explained in the claim and illustration.

Claim.—The combination of the prominent steel-tipped edge b, the inclined portion of the vessel from the said edge to the spar-deck A, and the inclined or curved portion from the edge b, to a point below the water-line, the whole being arranged in respect to the gun-deck B as set forth, for the purpose specified.

No. 38,772.—HENRY UNDERWOOD, of Tolland, Conn.—*Improvement in Breech-loading Fire-arm.*—Patent dated June 2, 1863.—This fire-arm has a single-chambered revolving cylinder, the axis of which is in a horizontal position transverse to the axis of the barrel. The cylinder is rotated by means of a dog attached to the hammer, which engages with teeth on a ratchet on the axis of the cylinder. The upward movement of the hammer to half-cock brings the cylinder to the position for loading, and to the full-cock, to the position for firing.

Claim.—First, combining the cylinder with the hammer by means of the ratchet teeth c c d d in the cylinder, arranged in different planes, and the dog F attached to the hammer and having two teeth e f, set in planes to correspond with the ratchet teeth, substantially as and for the purpose herein set forth.

Second, the stop G applied in combination with the cylinder C and dog F, and operated by a tooth on the said dog, substantially as and for the purpose herein specified.

Third, the cam r' and lever s, applied in combination with the dog F, substantially as and for the purpose herein specified.

No. 38,773.—HORACE TRUMBULL, of Jersey City, N. J.—*Improved Machine for Separating and Dressing Ores.*—Patent dated June 2, 1863.—The water in the box is subjected to an intermittent vertical motion, by means of the closure in of the disks on its sides, under the influence of cams. This causes the water to permeate and loosen the bed of ground ore, and by its agitation causes the heavier particles to seek the lower position.

Claim.—First, giving to the water a sudden rising movement, followed by a slowly falling motion through the ore, substantially as herein shown and described.

Second, the disks B B arranged and operated by the cam wheels C, and springs G, in combination with the tank A, ore box I, and sieve or netting e, as and for the purpose set forth.

No. 38,774.—SYLVANUS F. VAN CHOATE, of New York, N. Y.—*Improvement in Telegraphic Magnets.*—Patent issued June 2, 1863; antedated April 26, 1862.—The object of this improvement in magnets is to reduce the amount of battery necessary to effect a given amount of magnetic force, and to operate the sounders, when placed directly on the main line, without the use of relays or local batteries. The peculiar construction of the magnets, and the arrangement of the coils and armature, do not admit of a brief intelligible description. The sounders are of different sizes, and are made adjustable, in reference to the hammer, according to the magnetic force actuating the latter.

Claim.—First, the mode above described of making magnets, consisting of the parts G F W W, and H W' W', as and for the purpose specified.

Second, the mode above described of constructing and arranging the armature L, and lever j, with reference to the coil and cores, in combination with the adjustable screw m, as set forth.

Third, the above-described mode of combining sounders, and the several parts thereof, with the adjustable screws and movable base to regulate the stroke of the hammer, and to adapt such sounders to the varying strength of the magnetic forces that may be working the armature, as above specified.

Fourth, the use in magnets of bells or sounders of different sizes—that is, one smaller than the other—as and for the purpose set forth.

Fifth, the sliding movable bar F, Fig. 4, with its slotted connexion, as and for the purpose set forth.

Sixth, in the construction of a magnet, the use of the parts described, viz., G F W W, and H W' W', in combination with the armature L, lever j, and bells or sounders A and B, as and for the purpose specified.

No. 38,775.—HENRY VAN DEWATER, of Worcester, Mass.—*Improvement in Water Wheels.*—Patent dated June 2, 1863.—The invention relates to that class of wheels commonly called "reaction," and is used in connexion with a draught case, by which the whole effective force of the fall of water may be utilized without placing the wheel at the lowest level. The foot of the vertical shaft is stepped in a post which rests on a transverse support in the draught case, and the post and step are enclosed in a conical chamber. The shape of the buckets can hardly be clearly defined, but their upper edge is attached to the face of the hub, which is the shape of an inverted frustum.

Claim.—First, the buckets H, constructed as shown, so as to conform to the shape of the hub G, and provided with the lips k and segment flanges I, as and for the purpose set forth.

Second, the pendent lips m attached to the under side of the rim l of the hub G, when arranged relatively with the buckets H, to operate as and for the purpose herein set forth.

Third, the combination of the hub G, buckets H, provided with the lips k and flanges I, the pendent lips m and case C, provided with the chutes D', all arranged to operate as and for the purpose herein set forth.

Fourth, the inverted conical chamber F, placed below or underneath the wheel D, and enclosing the step of the shaft E, as and for the purpose herein set forth.

No. 38,776.—P. VERBECK and O. T. WALKER, of Neenah, Winnebago county, Wis.—*Improvement in Dampers.*—Patent dated June 2, 1863.—The damper consists of two overlapping segmental disks, whose planes are a little apart, and connected at their sides by plates.

Claim.—A damper consisting of two segmental disks A, which are connected by end pieces B provided with gudgeons C, as and for the purpose shown and described.

No. 38,777.—RICHARD VOSE and CHARLES D. GIBSON, of New York, N. Y., assignors to CHARLES S. S. LENOX, of same place.—*Improvement in Car Springs.*—Patent dated June 2, 1863.—This invention consists of a conical volute spring coiled around an non-elastic central core. The spring rests upon a plate, between which and the timber of the truck is a disk of rubber. Beneath the flanged box, under the frame of the car is another rubber spring, which sits upon the core in the centre of the spring.

Claim.—First, combining a central non-elastic core B with a coiled metallic spring A, and one or more compensating springs E F, substantially in the manner and for the purpose herein set forth.

Second, combining a volute or helical spring with its supporting base, by means of a non-elastic core within said spring, united to said base, substantially in the manner and for the purpose herein set forth.

No. 38,778.—SETH WHEELER, of Albany, N. Y.—*Improvement in Links for Railway Horse-Powers.*—Patent dated June 2, 1863.—The toothed plate, which is slotted for the reception of the lag, is cast around the pins upon which the friction rollers revolve, and which receive the adjacent links, and the cap or outer member of the link. This combined link, consisting of a toothed plate, pins, friction rollers, and cap, is attached to similar links by a toothed plate or single member link, which is likewise slotted for the insertion of the end of the lag or section of the truck.

Claim.—First, the connecting link a b, constructed as described, in combination with friction rollers d, endless chain links e, and lag H, substantially as and for the purpose described.

Second, the use of a link which has a short, hard-metal pin or journal, and a cast metal body, united together in the act of casting, for the purpose set forth.

No. 38,779.—J. A. WOODWARD, of Plattville, Grant county, Wis.—*Improvement in Threshing Machines.*—Patent dated June 2, 1863.—The invention consists in using a suction spout in combination with the threshing cylinder and slotted concave, which, by means of the attached suction fan, remove the dust and light refuse from the grain, as it is passed from the discharged orifice and falls upon the screens.

Claim.—The combination and arrangement of the suction spout G, fan J, screw E, and screens N O, when applied to a threshing machine, or arranged in relation with a threshing cylinder B and concave C, to operate conjointly therewith, as and for the purpose specified.

No. 38,780.—LEONARD J. WORDEN, of Utica, N. Y.—*Improvement in Cast-iron Bottoms for Teakettles.*—Patent dated June 2, 1863.—The bottom is either cast around the lower edge of the teakettle sides, or is cast around a hoop, which is afterwards soldered to the teakettle.

Claim.—As a new article of manufacture, making the bottoms of teakettles of cast-iron, by uniting it to and with the body of the vessel in the manner and for the purpose as herein described and set forth.

No. 38,781.—WILLIAM A. BAKER and GEORGE J. HILL, assignors to Themselves, JAY PETTIBONE, and JOSEPH WARREN, all of Buffalo, Erie county, N. Y.—*Printing Press.*—Patent dated June 2, 1863.—The invention consists in arrangements whereby, by one passage through the press, a continuous sheet of paper or card-board may be printed in two or more

colors. This is accomplished by an intermittent feed-motion in combination with the reciprocating motion of two or more crossheads, each carrying a form of type with an inking apparatus attached thereto, which distributes the ink upon the face of the type during the intervals of the intermittent feed. The intermittent feed is obtained by feed-arms upon a rock-shaft, and the vertical reciprocating motion of the form-bearing crossheads is given by cams of peculiar construction. Provision is likewise made for feeding simultaneously distinct strips of paper, &c., with a varying length of feed to each, and a further provision for cutting into strips the printed matter while passing it through the machine.

Claim.—First, the combination of two or more reciprocating crossheads B, each carrying a form of type with an inking apparatus capable of inking each form of type with a different color, and an intermittent feed motion, whereby cards or railroad tickets may be printed in two or more different colors by one passage through the press, substantially as herein described.

Second, the giving of a vertical reciprocating motion to the crossheads B, by means of cams E, of such form as will cause them to remain stationary a certain length of time at each end of their movement, in combination with a cam J, for giving a reciprocating motion to the inking rollers I I, of such figure as will cause the inking rollers to pass under the crossheads while they are up and stationary, and return, evenly distributing the ink upon the face of the type, and to then remain stationary during the down-and-up movements of the crossheads, substantially as described.

Third, the feeding arm P, spring foot Q, curved arm P4, elliptic spring P5, spring catch S, the lifting toes r2, and adjustable tripping screws S', with a feed-table having rollers R, the whole combined and operating to form a variable intermittent feed-motion, substantially as described.

Fourth, the arrangement of a number of the feeding arms P, or their equivalents, upon a rock-shaft P', and their combination with a printing press, so that they may be made to feed simultaneously a number of distinct strips of paper or card-board, and to give any length of feed desired to each strip, so that a number of different tickets of different lengths may be printed at each impression, substantially as herein set forth.

Fifth, the combination with a printing press of circular revolving cutters, by which a sheet or roll of paper or card-board may be cut into any required number of strips while passing through the machine, substantially as described.

No. 38,782.—JAMES BIDWELL, of New York, N. Y., assignor to Himself and WILLIAM W. MARSTON, of same place.—*Machine for Facing Grindstones.*—Patent dated June 2, 1863.—This invention consists in an adjustable carriage setting on the grindstone frame and carrying a tool rest and a roller formed of a series of convoluted metallic disks, as wide as the face of the grindstone, to which the tool rest and roller are advanced by sliding the carriage.

Claim.—First, the tool rest g in combination with the adjustable frame c, as specified, whereby said tool rest is moved up to the stone as the stone wears, as set forth.

Second, the roller f composed of a series of metallic disks, and taking the entire face of the grindstone and pressed thereto, substantially as and for the purposes specified.

Third, the combination of the roller f, tool rest g, and adjustable frame c, for the purposes and as specified.

No. 38,783.—JOHN C. COOKSON, of Lancaster, Pa., assignor to Himself and DAVID REYNOLDS, of Indianapolis, Ind.—*Improvement in Flour Bolts.*—Patent dated June 2, 1863.—This screen is made of perforated metallic plate and is placed outside of the bolt, but on the same shaft, and so closed externally that no bug can get into or upon the bolt. The screened bran and meal enter the bolt, and the bran is discharged through the bran chamber C into a place provided for it apart from the bolted flour.

Claim.—The metallic bug-screen F' with its oblong slots, as shown, surrounded by a cylinder A which opens, by its entire circumference, directly into the bolt E, closed externally and connected with the screen B, said bug-screen being closed on its inner end and placed outside of the bolt but on the same shaft, as shown, for the purpose specified.

Also, surrounding the bolt E with an external screen B provided with a cap or slotted bran-chamber C in combination with the cylinder A, in the manner and for the purpose set forth.

Also, the use of balls or knockers, when employed within a bug-screen.

No. 38,784.—WILLIAM ELMER, of New York, N. Y., assignor to ANDREW MCKINNEY, of Boston, Mass.—*Improvement in Water Roofing Cloth, Leather, &c.*—Patent dated June 2, 1863.—Explained by the claim.

Claim.—Rendering cloth and other texture impermeable to water and other fluids, by the application of an elastic coating, the selenide or sulphide of caoutchouc or gutta-percha, and giving increased body and durability to vegetable, woody, and animal fibrous textures, as silks, woollens, leather, gelatinous tissue, prunella, cotton, linen, satins, mixed goods, &c., by first subjecting such goods or articles to the action of a solution of alumina (or its basic salts) or other true mordants and ichthyocolla, in such proportions and in such manner as to

chemically combine the alumina and ichthyocolla and form an insoluble composition which combines chemically with the fibre of the cloth, making the three a chemical compound, and subsequently subjecting the said goods to the series of actions, operations, or processes of the chemical and other agents employed, as fully described in the foregoing specification, so that by these various processes and substances employed a texture is added to a fibrous tissue and chemically united, forming a compact body, possessing great tenacity, flexibility, and at the same time being water-proof. And this, whether the precise chemicals before described are employed and in the proportions named, or equivalent ones, and the processes varied, according to the nature of the article under treatment, or other processes, &c., be employed, which are substantially the same, by which analogous results are produced.

No. 38,785.—WILLIAM ELMER, of New York, N. Y., assignor to ANDREW MCKINNEY, of Boston, Mass.—*Improved Artificial Leather.*—Patent dated June 2, 1863.—Explained by the claim.

Claim.—First, producing a durable artificial leather from any kind of suitable cloth, woolen, cotton, linen, silk, or mixed goods, by first filling the interstices or meshes of the same with a compound of ichthyocolla, albumen, extracture, and fatty matter, in the proper proportions, and then subjecting this compound to the action of tannic acid or other agents capable of rendering it elastic and imputrescible or permanent.

Second, alumina or other true mordants are employed to unite chemically the various substances used, together with subjecting them to the various processes, manipulations, and applications, as fully set forth in the foregoing specification under the head of "artificial leather," and this whether the proportions of the substances employed and the processes, &c., detailed in this specification, be strictly observed or changed to suit different kinds of materials as for other purposes, and equivalent substances used without altering the real character of the processes, &c., or the results produced.

Third, the finishing of "artificial leather" so as to represent any kind of true leather and producing a brilliant and durable polished surface on either artificial or true leather, by subjecting the same to the-varnished coatings, compounds, applications, manipulations, &c., as fully set forth in this specification, and for rendering all kinds of leather water-proof, as before described, by the selenide or sulphide of caoutchouc or gutta-percha.

No. 38,786.—THOMAS M. FELL, of Brooklyn, N. Y., assignor to JOHN MATHER JONES, of same place.—*Improved Knife Cleaner.*—Patent dated June 2, 1863.—The invention consists of two rotating disks surfaced with felt, between which the blade is inserted. The periphery of one of the disks is provided with a grinding surface.

Claim.—First, the rotating cleaning disks d and e faced with felt or other suitable material and kept together by a spring in combination with the rests k and l, taking the knife as specified.

Second, the grinding ring n, applied as specified, in combination with the cleaning disks d and e, for the purposes and as specified.

No. 38,787.—GUSTAVUS A. JASPER, of Charlestown, Mass., assignor to the UNION SUGAR REFINERY, of same place.—*Improved Machine for Compacting Sugar in Barrels, Boxes, &c.*—Patent dated June 2, 1863.—The barrel is supported upon a step, which is mounted on a vertical shaft coming up through the floor; upon the shaft is a projection, and a rotating cam alternately raises and drops the shaft so as to compact the material in the cask or box which sets upon the step; the shaft, when dropped, falls upon an elastic pad in the bed stone.

Claim.—A machine, substantially as specified, that is to say, as consisting of a combination of the barrel platform, the shaft, the cushioned step, or their mechanical equivalents, and mechanism for elevating the shaft and allowing it to fall by gravity, the whole being arranged in manner and so as to operate as hereinbefore explained.

No. 38,788.—MICHAEL J. MCCORMICK, of New York, N. Y., assignor to LEWIS R. CASE, of same place.—*Improvement in Mode of Ventilating and Illuminating.*—Patent dated June 2, 1863.—The invention consists of two correspondingly perforated plates, with the holes in each fitted with glass and left open alternately. These may be brought to register with each other, so as to expose half the holes open or all closed with glass; grooves on the adjacent sides of the plates connect with openings for permanent moderate ventilation.

Claim.—First, the arrangement of a permanent perforated plate, with a sliding plate similarly perforated, the alternate apertures, or rows of apertures, being filled with glass, in the manner and for the purpose set forth.

Second, the grooves G G upon the inside of one or both plates communicating with the openings c c c in the front plate, substantially as specified.

No. 38,789.—JOHANN F. E. SCHULTZE, of Potsdam, Prussia, assignor to Self and H. M. C. WERNICH, of Washington, D. C.—*Improved Gunpowder.*—Patent dated June 2, 1863.—The improvement consists in treating woody fibre, mechanically prepared, in a suitable granulated form, with salts containing oxygen and nitrogen, so as to produce an explosive compound.

Claim.—First, the production of grains or particles from plates, sheets, or veneers of wood, substantially in the manner set forth.

Second, the preparation of these grains or particles of woody substance, substantially in the manner set forth, for conversion into an explosive powder.

Third, combining the grains or particles of wood or woody substance, thus prepared, with salts containing oxygen and nitrogen in this composition, for the production of an explosive powder, substantially as set forth.

Fourth, the preparation of the dust or fine powder resulting from the preceding operations for the production of an explosive powder.

Fifth, the granulated explosive powder produced by the processes hereinbefore described.

No. 38,790.—PETER C. SCHUYLER and SYLVESTER W. WARREN, of New York, N. Y., assignor to PETER C. SCHUYLER.—*Improvement in Grain Dryers.*—Patent dated June 2, 1863.—The apparatus consists of a series of steam-heated tables, which are adjustable at any required inclination and subject to vertical agitation; these feed from one table to another in a zigzag course across the machine and discharge through a spout at the bottom.

Claim.—First, the construction of a hollow metallic steam table connected together by the studs 3 3 and heated by steam or hot water for drying grain or other substances, as specified.

Second, the arrangement of the shafts *w*, camis *v*, levers *t*, and chains or bands *s*, in combination with the hollow metallic steam drying tables, as specified.

Third, the slide bars *A*, adjustable as specified, in combination with the shafts *r*, wheels *q*, and shaking apparatus aforesaid, whereby said tables can be adjusted to the desired inclination and agitated, as set forth.

No. 38,791.—THOMAS SHAW, of Philadelphia, Pa., assignor to Self and JOHN L. LINTON.—*Improved Apparatus for Burning Fluids for the Generation of Steam, &c.*—Patent issued June 2, 1863; antedated May 19, 1863.—The oil is introduced into the fire chamber on the summit of a cone, which is provided with circular channels at various points on its sides; the oil trickles down from one to the other, and a blast of air descending around it mixes with the vapors, which are ignited in the furnace.

Claim.—First, the construction of cone *G*, substantially as and for the purpose set forth.

Second, the pipe *L*, or its equivalent, for conducting the air downwards over the cone *G*, substantially as and for the purpose specified.

No. 38,792.—CHARLES D. TISDALE, of East Boston, Mass., assignor to Self and BARN W. TISDALE, of Boston.—*Improvement in Car Coupling.*—Patent dated June 2, 1863.—The invention consists of a disk or elastic cushion attached to the connecting link of railroad cars, which answers a double purpose, holding up the link in a horizontal position and forming a fender for breaking the jar of the colliding bumper bars.

Claim.—The combination of the intermediate elastic cushion or link pad *E* with the link *B* and the bumper *A*, the said link pad being affixed to the link, and so as to operate as specified.

No. 38,793.—LUTHER FOGG, of Boston, Mass.—*Improved Buckle.*—Patent dated June 2, 1863.—The tongue is pivoted within the surrounding frame, and also by another joint to a metallic shank; the salient or gripping edge of the tongue is grooved, and the buckle is so arranged that the tongue can be made to liberate the end of the strap, independently of the bending or yielding of the connexion between the shank and the strap or other article to which it is attached.

Claim.—A buckle composed of a frame shank and grooved tongue that is jointed both to the frame and shank in combination with the notches *i i* and lugs *f f*, constructed and arranged as herein described.

No. 38,794.—JOHN E. VAN WINKLE, of Paterson, N. J.—*Improvement in Machine for Cleaning and Opening Cotton, &c.*—Patent dated June 2, 1863.—The cotton is fed in at an opening in the upper part of the case, wherein it is exposed to the action of revolving beaters set spirally on two rotating shafts. By the disposition of these beaters on their shaft, and the oblique deflecting ribs in the interior of the case, the cotton is carried along and discharged upon an endless apron and carried to the exit, passing a revolving screen, behind which is a suction fan drawing the dust from the machine.

Claim.—First, the combination of the apron *I* and fan *H* with the parallel toothed shafts *C C' a a*, grid or grating *D*, and feed aperture *g*, where the said parts are arranged as herein set forth to cause the cotton to traverse the beaters longitudinally of the shafts *C C'*, in passing from the feed aperture *g* to the apron *I*.

Second, the combination of the oblique deflecting ribs *w* with the feed aperture *g*, longitudinally operating beaters *C C' a a*, carrying apron *I*, and fan *H*, all arranged in the manner and for the purposes herein set forth.

Third, the opening or openings *e*, for the admission of air at the feeding end of the machine beneath the grid or grating *D*, in the described combination with the said grid or grating and with longitudinally operating beaters *C C' a a*, carrying apron *I*, and fan *H*, all arranged and operating as set forth.

Fourth, the eccentric *Q*, ratchet wheel *c*, and pawl *d*, or their equivalents, employed in the described combination with the beaters *C C' a a*, and grating *D*, to adjust the latter in its distance from the former.

Fifth, the suction fan *H*, communicating with the interior of the rotary screen *F*, in the manner and for the purposes specified, when used in combination with the toothed beaters *C C' a a*, and apron *I*, arranged and operating as set forth.

No. 38,795.—AUBRENT K. WAGNER, of Chicago, Ill., assignor to CHARLES KAESTNER and AUGUST KAESTNER, of same place.—*Improvement in Grinding Mills.*—Patent dated June 2, 1863.—The lower stone does not revolve, but is capable of a vertical adjustment and a rocking motion, so as to adapt itself to the face of the runner, which is fastened to a sleeve, rotating upon a hollow central shaft, through which the grain passes to the stones; on the top of this central shaft is a nut which holds down the sleeve and its attached running stone.

Claim.—First, the nut on the top of the hollow shaft, to hold down the running stone and prevent the stationary stone from lifting or raising it.

Second, in combination with the hollow stationary shaft, the metal bed-plate to which it is fastened.

No. 38,796.—GEORGE HALL, of Baltimore, Md.—*Improvement in Rakes for Harvesters.*—Patent dated June 2, 1863.—The jointed handle of the rake is pivoted at the rear end of the grain side of the platform, and the head moves in a circular path on the platform, throwing the grain over to the guard on the machine side, and then making it aft, so as to be discharged in a gavel at the rear of the platform.

Claim.—Mounting the rake head on an arm provided with a telescopic slide, substantially in the manner described, in combination with a guide slot in the platform, for the purpose of controlling the movements of the rake as set forth.

No. 38,797.—J. L. HENRY, of Kentucky, assignor to RICHARD P. HENRY, late of United States army.—*Improved Concussion Fuse for Explosive Projectiles.*—Patent dated June 2, 1863.—Near the point of this projectile is a chamber containing a conical plunger on a seat. The plunger is attached, by a friction tape, to the interior of the chamber, and the detaching of the plunger from the seat dislocates the friction tape and explodes the charge. The plunger is retained in position by centrifugal balls on a rod, until the rotation of the ball, due to the rifling of the gun, commences, and further temporarily retained by a rotating rod passing to the base of the projectile.

Claim.—First, the employment of a conical plunger *B*, as described, in combination with an enlarged chamber *Q*, and suitable concave seat for the purpose of allowing a very wide lateral range of motion of the said plunger in case of an oblique impact of the shell.

Second, the method of holding the plunger safely in its seat by means of the rotating rod *a* with its catch or stop *r* and rear valve attachment *v*, whereby it may be released only by the purpose of the discharge upon the said valve in the base of the shell, substantially as described.

Third, the additional holding device of a hook or elbow stop *s*, fixed in the cylindrical seat-piece *c* and a pin *i* in the plunger, or, as an equivalent thereof, the use of the centrifugal balls *q*, for the purpose of retaining the plunger securely, until released by the rotation of the projectile, due to the rifling of the gun, substantially as described.

Fourth, the employment of a friction tape *O* in connexion with the conical plunger, in the manner and for the purpose set forth.

Fifth, the combination with the conical plunger and friction tape, the twine or check-string *t*, to prevent the released plunger from straining and igniting the primer before the shell impinges, substantially as described.

Sixth, in concussion shells a chamber for the plunger of such dimensions as that the plunger may move freely, not only directly forward as usual, but also sidewise, and perform its functions, even before reaching the sides of its chamber, in case of side impact, substantially as described.

Seventh, the use of two sets of "stops," the one rigid and the other to yield on impact, as and for the purposes set forth.

No. 38,798.—WILLIAM H. PAGE, of New York, N. Y.—*Improved Feed Ration for Army Uses, &c.*—Patent dated June 2, 1863.—A suitable quantity of hay and grain—say in the proportion of fourteen pounds of the former to twelve of the latter—is compressed to one-eighth of its bulk, and sewed up in bags to save bulk in carriage.

Claim.—The ration composed and prepared substantially as described.

No. 38,799.—JOSEPH FRANCIS, of New York, N. Y.—*Improvement in Corrugating Metal Plates.*—Patent dated June 2, 1863.—The corrugations in the plates do not extend to the edge; the object is to facilitate the making of structures and the lapping and turning of corners.

Claim.—Forming a corrugation in a plate of metal which stops short of the edge of said plate, substantially of the same thickness as the flat straight edge, substantially as and for the purposes set forth.

No. 38,800.—THOMAS AGUDIO, of Turin, Italy.—*Improvement in Devices Attached to Railroad Cars for Facilitating the Passage of Trains up Steep Gradients or Inclined Planes.*—Patent dated June 9, 1863.—This invention consists in the use of grooved pulleys working in a frame, supported by a four-wheeled "bogie" at each end. An endless rope is wound around these pulleys (two on each side) in such a manner that all four impart the same motion to two drums working on axes between the pulleys. The pulleys on the descending side of the car work on separate axes. Around the drums runs a flat wire rope, attached at both ends of the inclined plane or gradient. By means of friction wheels the motion of the pulleys is imparted to the drums. By the use of the drums the train winds itself up by means of the flat wire rope running around them, and if any accident happens, and the endless rope breaks, the train will be held in its place by the friction wheels stopping the drums.

Claim.—The apparatus, constructed and operating substantially as herein described, to be used as an attachment to the front of a train for the purpose of facilitating its passage along a steeper gradient than the ordinary locomotive engine is competent for.

No. 38,801.—T. H. ARNOLD, of Arlington, Bureau county, Ill.—*Improvement in Car Coupling.*—Patent dated June 9, 1863.—This invention consists in such an arrangement of the parts of a self-acting car coupling that the shackle or link shall be held conveniently in position to enter the draw-head of the next car and become attached thereto.

Claim.—The pendant swinging plates C D, in connexion with the bolts E F and links or shackles G, all arranged in connexion with the draw-head A A, to operate as and for the purpose set forth.

Further, the projections *f f* in the draw-heads A A, in combination with the plates C D, bolts E F, and links or shackles G, for the purpose set forth.

No. 38,802.—B. F. AVERILL, of Dunkirk, Chautauque county, N. Y.—*Improvement in Weather Strips.*—Patent dated June 9, 1863.—This invention consists in appliances adapted to railroad coaches and other important structures in cold climates, whereby any snow, dirt, or other accumulation is removed from the step and the orifice under the door perfectly closed without straining the door.

Claim.—First, the two inclined faces M N, so arranged on the door frame as to operate the weather strip C through the aid of the piece K and connecting parts, substantially in the manner herein set forth.

Second, the arrangement of the separately adjustable pins G G in the holes *g g'*, &c., in the connected levers E and the slots C2 C2 in the sliding weather strip C, or its equivalent, so as to vary the range of motion of the weather strips C at either end or both ends, substantially in the manner and for the purpose herein shown.

Third, the employment of the inclined metallic surface P on the door sill in combination with a sliding weather strip C on the door and with supporting means adapted to act rapidly at the moment of the closing of the door and opening of the same, substantially as represented by M N K and E E, for the purpose herein explained.

Fourth, the scraper Q q, pivot R, and moving pin T, arranged as represented, relatively to each other and to the door-frame A, door B, and the working parts of the weather strip mechanism, substantially as and for the purpose represented.

No. 38,803.—JAMES R. BEGGS, of New Albany, Floyd county, Ind.—*Improvement in Ploughs.*—Patent issued June 9, 1863; antedated April 18, 1863.—The object of this invention is to construct light-turn ploughs, so that the draught will be in a vertical plane with the middle of the mould-board, so as to lessen the side draught on the mould-board.

Claim.—The combination of the beam A, mould-board B, standard C, brace D, and heel-piece E, all arranged as and for the purpose herein set forth.

No. 38,804.—URIAH BILLINGS, of Bedford, Bristol county, Mass.—*Improvement in Horse-shoe Machines.*—Patent dated June 9, 1863.—The invention consists in the construction and arrangement of the parts by which the piece of iron bar is carried along between the bars by the blank-former to the swaging rollers which bend it to the shape, the griper shutting down upon it and holding it in position, with other points of detail, forming a horseshoe by continuous motion of the wheel.

Claim.—The combination of the griper D and its operative mechanism, with the wheel W, the blank-former C, the actuator M, and the swaging rollers.

Also, the combination of the guide rails H H and the abutment I with the wheel M, the former C, and the swaging rollers or mechanism arranged so as to operate together substantially as specified.

No. 38,805.—C. T. BOARDMAN, of Bergen Point, N. J.—*Improvement in Rotary Engines.*—Patent dated June 9, 1863.—The cylinder or effective space consists of a semi-annular segmental groove of sufficient length to embrace two of the pistons. The rotary piston wheel is provided with three vibrating pistons, and is held in place by hinged clamps above and friction rollers below, which latter work in grooves in the disk faces of the wheels. The

valves are mounted on shafts which are worked by bell cranks whose vibrating motions are governed by guide plates on the exterior of the piston wheels; other guides on the opposite face operate the cut-off valve or cock in the supply pipe; abutments with inclined faces close the ends of the steam space.

Claim.—First, cylinder A constructed to receive only the lower portion of the piston wheel and having its abutments G G' combined with it and the piston wheel by means of hinged clamps H H, which also serve to confine the said wheel to its place in the cylinder, substantially as herein specified.

Second, the adjustable plates *h h* and anti-friction rollers *g g* applied in combination with the cylinder and with the groove *f* in the piston wheel, substantially as and for the purpose herein described.

Third, the combination with the swinging pistons C C of the bell-cranks K K, furnished with studs *q r*, the bar P, and the projections *s t* on the cylinder, the whole arranged substantially as herein described to operate the pistons.

Fourth, making the abutments G G' of taper form and so fitting them between the cylinder and the piston wheel that they may be kept tight by the pressure of steam, substantially as herein described.

Fifth, the combination of the variable cut-off cams T T with the cut-off valve by means of a system of levers S and U, combined to operate substantially as and for the purpose herein set forth.

No. 38,806.—C. F. BOSWORTH, of New Haven, Conn.—*Improvement in Sewing Machine Stitch.*—Patent dated June 9, 1863.—This invention consists in making one piece of the braid turn around a bar or roller or otherwise held in a bent position; the needle is then to be entered across the bend, passing twice through it, coming out again on the same side, and then through the piece to which the first has to be attached, where it is secured, in any ordinary way, as may be desired.

Claim.—A seam or succession of stitches having the distinguishing characteristic above set forth, formed in and uniting two pieces of braid or other material, said seam being chiefly useful in uniting braids for hats and like fabrics.

No. 38,807.—C. F. BOSWORTH, of New Haven, Conn.—*Improvement in Sewing Machines.*—Patent dated June 9, 1863.—The object of this improvement is to provide a machine for sewing braid which shall perform its work with but one needle and one thread, and this is done by bending the braid around a roller and adjusting a needle thereto, so that it shall enter and leave on the same side of the fabric—that is to say, that it shall traverse the end of the loop made by the wrapping of the braid around the roller.

Claim.—The combination of a sewing-machine needle with a roller, or its equivalent, and with a feed apparatus or mechanism, when the needle and roller are so arranged relatively to each other that braid can be sewed by a needle piercing and leaving the braid or other material on the same side thereof, the combination being substantially such as described.

Also, in combination, a sewing-machine needle, a roller, or its equivalent, around which braid can be bent, and a needle guide, the three being arranged and acting in combination substantially as specified.

Also, a vibrating sewing-machine needle, or a sewing-machine needle caused to vibrate by proper mechanism, substantially as specified, in combination with a roller around which braid can be bent or turned and any appropriate feed apparatus, the mode of operation of the combination being substantially as set forth.

No. 38,808.—J. MOSHER BROWER, of Syracuse, N. Y.—*Improved Journal Boxes.*—Patent issued June 9, 1863; antedated February 28, 1862.—This journal box consists of an iron case with a brass framework or longitudinal band and rib inside of the casing and fitted to the journal, soft metal being poured in to fill up the interstices between the ribs and the holes prepared for it and binding all firmly together.

Claim.—The combination of the iron shell or case A, the brass rib formed of a longitudinal central portion B, and lateral arms B', and the soft metal filling C, filling cavities in the said rib and locking the whole firmly together, all as hereinbefore explained and for the objects stated.

No. 38,809.—LEVI BURNELL, of Milwaukee, Wis.—*Improvement in Radiators.*—Patent dated June 9, 1863.—This invention consists of an enlargement of the stove pipe, with a central cylinder having an annular space for the passage of products of combustion; a register *c* at the top of the central deflecting cylinder regulates the communication between the interior of the deflector and the chimney.

Claim.—The arrangement of the deflector C and register E with each other and with the pipe A and space D, in the manner herein shown and described.

No. 38,810.—JOHN K. CHASE, of New York, N. Y.—*Improvement in Caps for Jars, Cans, &c.*—Patent dated June 9, 1863.—These can covers are made of sheet metal, in which the thread is given by dies and the piece afterwards rolled up and soldered; at the point of junc-

tion the metallic edges are turned up so as to make a little boss or projection by which to manipulate the lid; a disk is then soldered on for a crown to the cap, and when desired, a spout can be set in so as to make a nozzle or spout for molasses, &c.

Claim.—First, the mode, substantially as described, of constructing caps for the purposes mentioned.

Second, the combination with a cap for the purposes enumerated, whether constructed substantially as described or not, of a knob or projection for facilitating the tightening or loosening of the cap, as set forth.

Third, the combination of a cap and nozzle, whether constructed substantially as described or not, with the spouts of oil cans or molasses cups, or the lips of bottles and other similar articles, substantially as set forth.

No. 38,811.—NATHANIEL COLVER, of Chicago, Ill.—*Improvement in Apparatus for Raising Water.*—Patent dated June 9, 1863.—The claim explains the invention.

Claim.—The arrangement of the screw *A* within a conduit *c* *d* 2, whose inlet is placed in a plane lower than that of its exit passage, when applied for the purpose of displacing and drawing off stagnant and sluggish waters and causing an artificial inflow of pure water, substantially in the manner and for the purposes herein set forth and described.

No. 38,812.—WELLSLY W. CRANE, of Auburn, Cayuga county, N. Y.—*Improved Steam Boiler.*—Patent dated June 9, 1863.—The improvement consists in placing within the ordinary cylindrical boiler a second or inner cylinder, with a flue intervening so as to extend the fire surface.

Claim.—The cylinder *D*, or its equivalent, in combination with the cylinder *C* and fire-box *B*, for the purposes herein set forth.

No. 38,813.—ABBOT R. DAVIS, of Cambridge, Mass.—*Improvement in the Manufacture of Balls, Springs, &c.*—Patent dated June 9, 1863.—Sponge is pressed into a mould of any desired shape, dried therein, and, after removal, covered with water-proof material.

Claim.—Compressing the sponge into any desired form and drying or baking it, in the manner substantially as set forth.

Also, covering the sponge, when so treated, with India-rubber or other water proof material, in the manner and for the purpose substantially as described.

No. 38,814.—F. A. DE MEY, Brooklyn, N. Y.—*Improvement in Submarine Revolving Battery for War Vessels.*—Patent dated June 9, 1863.—The invention consists in making a downwardly projecting submerged turret, to fire under water, and in arrangements for lowering and raising the same.

Claim.—First, extending the turret of a vessel, or floating battery, through the deck and bottom of said vessel, in the manner and for the purpose substantially as herein shown and described.

Second, combining with the said turret so extending through the bottom of the vessel a mechanism for raising and lowering in addition to and independent of the ordinary mechanism for revolving said turret, substantially as and for the purpose specified.

No. 38,815.—F. A. DE MEY, New York, N. Y.—*Improvement in Printing Apparatus.*—Patent dated June 9, 1863.—This machine is designed to print directly from and without setting up the type; and the invention consists in the method of operating a wheel in which the type are placed, and also of operating the type and feed-table on which the paper is placed. The required type is brought to the point and the pressure applied to the paper, which is adjusted beneath by two motions, one answering to the lines, and the other to position in the lines.

Claim.—First, the revolving type-wheel *R*, when operated or turned through the medium of the toothed rim *V*, wheel *t*, and hand-wheel *X*, and used in combination with the notched annular plate *T* and the stop *U*, and with or without the stop *Y* and notches *u* in the periphery of the wheel *X*.

Second, the lever *M*, connected with the bar *J*, as shown in combination with the toothed arm *I* attached to the feed-table *H*, and the lever *N*, arranged in relation with the lever *M*, to operate as and for the purpose herein set forth.

Third, the treadle *O*, connected with the lever *P*, as shown in connexion with the plate *B'* and lever *C'*, when said parts are used in combination with the type-wheel *R*, for the purpose specified.

Fourth, the combination of the levers *M N P*, treadle *O*, bar *J*, toothed arm *I*, plate *B'*, lever *C'*, and type-wheel *R*, all arranged for joint operation as and for the purpose herein set forth.

No. 38,816.—WM. H. DOLE and R. D. FRAZER, Chicago, Ill.—*Improvement in Reels for Drying Flour.*—Patent dated June 9, 1863.—The reels, through which the flour is passed, are made of wood and cloth, (avoiding the use of metallic surfaces,) set in an inclined posi-

tion, one above another, in a chamber with a rising blast of hot air, and so that the flour falls from one to another; the exit orifice in each reel being reduced to an annular opening by the interposition of a cone at that point.

Claim.—First, drying flour and other similar ground substances by means of reels of the character substantially as described; and hot air circulated through such anti-metallic reels, for the purpose set forth.

Second, the employment of cones, or their equivalents, in connexion with flour-drying reels in the manner substantially as and for the purpose described.

No. 38,817.—TIMOTHY EARLE, of Valley Falls, Providence Co., R. I.—*Improvement in Pincushions.*—Patent dated June 9, 1863.—This pincushion is made of two disks of metal, with a perforated band, and a filling of wool.

Claim.—As an improved article of manufacture, a pincushion, composed of two disks *A A* of metal, or other suitable hard substance, connected together by a perforated band *B* of the same material, to form a case which is filled with wool or other suitable substance *c*, to keep the pins which pass through the perforations in the band *B* in proper position as herein set forth.

No. 38,818.—MORRISON FOSTER, of Cleveland, Ohio.—*Improved Machine for making Railroad, Boat, and other Spikes.*—Patent dated June 9, 1863.—The invention consists in so combining a heading and pointing mechanism, with a series of continuously rotating gripping jaws, that the head and point of the spike, &c., may be formed while the blank is in motion and without stopping the motion of the grippers for that purpose. The devices are explained in the claim.

Claim.—The heading and pointing of the spike or other article, one or both, during the revolution of the jaws, substantially as described.

Also, the use of the bar or roller, or its equivalent, for bending the protruding portion of the blank, to form the head upon one side of the spike, substantially as described.

Also, so arranging the header that it shall travel in the same radial plane with and upon the jaws, in order to perform its functions without disturbance of any of the other parts of the machine, substantially as described.

Also, the curved guides *P*, in combination with the header, as and for the purpose substantially as described.

Also, in combination with the curved guides *P* and the header, the guide *u* for the header to play through and to prevent lateral motion thereof, substantially as described.

Also, combining the pointing rolls with the revolving jaws and header, in such manner that the points of the spikes shall be formed during the rotation or movement of the jaws and header, substantially in the manner and for the purpose described.

Also, the inner revolving shaft *F*, with its outer stationary shaft, each carrying its respective parts as described and represented, so that the outer shaft may take the strain of the heading and pointing operation without springing or straining the inner shaft, substantially as described.

No. 38,819.—HENRY C. GLASGOW, of Chicago, Ill.—*Improvement in Car Coupling.*—Patent issued June 9, 1863; antedated December 25, 1862.—The improvement consists in devices for coupling cars, whose hunter bars are at different heights, leaving as little play as possible by means of a spring connexion which draws upon the link, and which makes a yielding resistance when the cars are started.

Claim.—First, the combination and arrangement of the abutment *A*, the arm *B*, the pin *C*, the bar *D*, and the ribs *e*, constructed and operating substantially as and for the purpose set forth.

Second, the combination and arrangement of the abutment *A*, the rods *c*, the plate *I*, the rods *a G*, the plate *J*, the cups *H*, and the block *M*, all constructed and operating substantially as and for the purposes delineated and set forth.

No. 38,820.—RALPH GRAY and ROBT. HEMINGRAY, of Covington, Ky.—*Improvement in Caps for Fruit Jars.*—Patent dated June 9, 1863.—The top is made of sheet metal with the edge turned around a helical wire, so as to form a thread to follow a corresponding depression in the glass neck of the jar. Two studs fastened to the side of the cap give points of support to a cross-bar in screwing the lid on or off.

Claim.—In the construction of sheet metal screw-tops for jars, the combination of the helical wire *d*, the annular space *e*, and the lugs *f*, substantially as herein shown and described.

No. 38,821.—JAMES F. J. GUNNING, of New York, N. Y.—*Improvement in Frames for Forming Hoop Skirts.*—Patent dated June 9, 1863.—The wire reel, or reels, are placed on a central shaft within the frame, over which the hoop skirt is formed, so as to be conveniently placed and save space. The reel is removable by unshipping the adjustable cross-bar at bottom.

Claim.—First, the arrangement of one or more reels D in the interior of the frame A, constructed and operating in the manner and for the purpose substantially as shown and described.

Second, the arrangement of the adjustable or movable cross-bar E, or its equivalent, in the bottom of the form A, as and for the purpose specified.

No. 38,822.—ALEXANDER HAMILL, Baltimore, Md.—*Improved Composition for Lubricating*.—Patent dated June 9, 1863.—Explained by the claim.

Claim.—The mixture in suitable proportions of pulverized soapstone with crude petroleum, coal oil, or any of its products, to form a lubricator for machinery.

No. 38,823.—HIRAM W. HAYDEN, of Waterbury, Conn.—*Mode of Ornamenting Lamp-Stands, &c.*—Patent dated June 9, 1863.—In this tool there are two lathe heads, one carrying the stand to be engraved, and the other carrying the pattern; the rest is duplicated, one end carrying a tracer in connexion with the pattern, and the other a graver to operate on the lamp-stand as the tracer sinks into the depressions of the pattern; the rest is fed along gradually so as to make a spiral intermittent line upon the stand, and thus produce a figured ornamentation corresponding to the depressed portions of the pattern.

Claim.—The method herein specified of ornamenting a lamp-stand, or similar article, by interrupted parallel lines engraved upon the surface of such article by a tool in contact with such surface while the said article is being rotated as specified.

No. 38,824.—CHARLES W. S. HEATON, of Belleville, St. Clair county, Ill.—*Improvement in the Batteries of War Ships and other Floating Structures*.—Patent dated June 9, 1863.—The sides of the battery consist of a series of advancing and receding angles, so as to give a greater sweeping range to the guns, and to enable a greater number to be concentrated on a given point.

Claim.—Constructing batteries of war vessels and other like structures in zigzag bastions, in the manner and for the purpose substantially as set forth.

No. 38,825.—WM. G. HERMAN, of West Sandlake, Rensselaer county, N. Y.—*Improved Compound Oil for Burning and Lubricating*.—Patent dated June 9, 1863.—The invention consists in mixing, in proportions varying with the purpose to which the oil is to be applied, of vegetable or animal oil with mineral oil, such as refined petroleum.

Claim.—The compound produced by the admixture of fish or other animal or vegetable oil with mineral oil, substantially in the proportions herein described.

No. 38,826.—FREDERICK HEWITT, of Newark, Essex county, N. J.—*Improvement in Lamp Tops*.—Patent dated June 9, 1863.—The sides of the burner are provided with projecting lugs which, when it is inserted in the cap or collar top of the reservoir, are made by rotation to interlock with recesses or clamps on the collar, and connect the burner and lamp top.

Claim.—First, the fastening together of the two specific parts of a lamp, viz: the top or fluid receptacle by means of corresponding wedge-shaped pieces, substantially as described.

Second, as new the combination of the parts A C C' B and D D', substantially in the manner and for the purposes described, all being parts of a lamp as herein set forth.

No. 38,827.—JOHN HOUSIAUX, of Washington, D. C.—*Improved Folding Bedstead*.—Patent dated June 9, 1863.—Each section is composed of an end and side rail hinged in the middle so as to pack up in a parallelogram. The two sections fasten together at diagonal corners.

Claim.—A bedstead composed of two sections, each section being made up of three pieces hinged together as described, and the two sections united at diagonal corners, substantially in the manner set forth, so that the two sections may, when taken apart, be folded up as shown and described.

No. 38,828.—G. G. HUNT, of Quincy, Adams county, Ill.—*Improvement in Stoves*.—Patent dated June 9, 1863.—After the fire in the fire-pot is fairly under way, the stove is nearly filled with coal and the air admitted at the register in the cap of the stove; passing thence down flues in the side of the furnace it issues into the fire-pot and assists in the combustion of the evolved gases as they issue from the throat of the fire-box.

Claim.—First, the chamber I, provided with the internal air-tubes J', in combination with the fire-pot E, flues or vertical tubes F, communicating with the annular chamber G and smoke-pipe H, all arranged to operate as and for the purpose herein set forth.

Second, the annular pendant flange a, in the central opening of the annular chamber G, when placed relatively with the upper ends of the tubes J', to operate as and for the purpose herein set forth.

No. 38,829.—A. W. JOHNSON, of Auburn, N. Y.—*Improved Skate*.—Patent dated June 9, 1863.—The supporting pieces or knees between the tread and the runner are made with a flaring or enlarged upper end, so as to admit of a large bearing for the tread-plate and a narrower basis for the attachment of the runner.

Claim.—The employment of the double-screwed knee D, made small at its lower part and enlarged at its upper part, in combination with the runner screw C and the foot-stand screw E, as herein shown and described, so that the said knee, while it presents at its upper end a large and firm bearing surface or support for the foot-stand, will also present a large interior nut or screw surface for the reception of the foot-stand screw, while in its lower end the said knee will receive the runner screw, and all the parts will be firmly bound together, as set forth.

No. 38,830.—WILLIAM KENYON and ALEXANDER MENZIES, of New York, N. Y.—*Bushes for Bungs*.—Patent dated June 9, 1863.—This consists of a metallic socket secured to the stave and enclosing the bung.

Claim.—The metallic flanged bush b secured to the stave, as set forth, and receiving the bung, as specified.

No. 38,831.—JAMES B. LYONS, of Litchfield, Conn.—*Improvement in Gun Carriage*.—Patent dated June 9, 1863.—These improvements are intended to limit and regulate the recoil of the gun, and consist of levers and cams operating on the axle of the carriage to let the face of the latter down upon the track to add to the friction in the recoil, and in an arrangement of transversely projecting wedges, which in recoil are received under adjustable clamps to determine the distance of the recoil by opposing resistance to the further rearward motion of the carriage.

Claim.—First, the arrangement of the hand-levers o o, and their cams l l, with the axle levers i i, operating substantially as described.

Second, the arrangement of the combined friction clamp m m and wedges P P to check and hold the recoil and prevent the rebound of the gun, substantially as set forth.

Third, the combination of the friction clamp with the gun carriage by means of the adjustable chains t t, whereby the distance provided for the recoil may be accurately and uniformly provided for, as set forth.

No. 38,832.—JONATHAN MANN, of Waltham, Mass., and ALEXANDER McDONALD, of Cambridge, Mass.—*Improvement in Hoop Skirts*.—Patent dated June 9, 1863.—The hoops of which the skirt is composed are provided with one or more nippers, which when the ends of the hoop are drawn past each other to collapse the skirt will embrace the adjacent portions of the overlap, and maintain the skirt at the required extension.

Claim.—The improved collapsible hoop skirt, made substantially as described, viz., with each of its hoops lapped at its ends, and having one or more spring nippers or mechanical equivalents applied to one or more of them, so as to operate as specified, each half of the number of the ends of the hoops being connected by a band, as specified.

Also, the combination and arrangement of rings with the hoop skirts when made with the ends of its hoops to overlap one another, and such hoops are provided with one or more spring nippers applied to one or more of them, in the manner and for the purpose as specified.

No. 38,833.—ISAAC MARSH, of Lewisburg, Union county, Pa., and GRIGGS MARSH, of Milton, Northumberland county, Pa.—*Improved Composition for Forming Cement, Tiles, Pipes, Pavements, Building Blocks, &c.*—Patent dated June 9, 1863.—The cement is made of powdered clay sixty-six parts to coal tar thirty-three parts, cooked together to a consistency adapted to the required purpose. It may be cast into shape with the addition of gravel to form building blocks, &c.

Claim.—First, an improved cement, as specified in the manner and for the purposes herein fully set forth.

Second, an improved paving or building block, in combination with our improved cement, made in the manner and for the purposes herein fully set forth.

Third, the manner of preparing the said composition or cement in the proportions of the materials used, as particularly set forth in the specifications.

No. 38,834.—WARREN P. MILLER, of New York, N. Y.—*Improved Spring Bed*.—Patent dated June 9, 1863.—The bottom of the bed consists of a number of independent pistons, the shanks of which work in guides, and are actuated by spiral springs.

Claim.—The combination of the upper guide bars d', and connecting standards e, with the lower guides d, independent rods g, caps f, and springs h, the latter being confined between the upper and lower guides, and all arranged and operating in the manner and for the purposes specified.

No. 38,835.—JOSEPH PROSPER OLIER, of Paris, France.—*Improvement in Safety Paper*.—Patent dated June 9, 1863.—The invention consists in making a paper of triplicate layers of which the middle one may possess a water mark or a fugitive color, so as to prevent tampering with the printed or written surface without the obliteration of the color; the object being to have a paper possessing two fair sides for printing or writing upon, while the character of the enclosed layer shall be a protection against tampering with the inscription.

Claim.—As an improved article of manufacture, a paper composed of three layers of differing thicknesses, of which the central layer is or may be colored with a delible or easily removable color, and the external layers are or may be charged with silicate of magnesia or other mineral or vegetable matter, all made in the manner herein shown and described.

No. 38,836.—F. E. OLIVER, of New York, N. Y.—*Improvement in Inkstands.*—Patent dated June 9, 1863.—The improvement consists of a flexible diaphragm, which is capable of deflection upwards or downwards, and of retaining the position in which it is placed, so as to inject the ink into the dipping cup or to withdraw it as required.

Claim.—First, the combination with an ink reservoir of otherwise ordinary construction, and provided with the usual dipping cup, of a flexible diaphragm valve capable of assuming and retaining a convex or concave form for withdrawing the ink from or forcing it into the dipping cup, substantially as herein set forth.

Second, forming the diaphragm valve, for operation hereinbefore referred to, of a concavo-convex vulcanized India-rubber disk, in combination with a centre knob, substantially in the manner and for the purposes herein set forth.

No. 38,837.—AARON PALMER, of Brockport, Monroe county, N. Y.—*Improvement in Sewing Machines.*—Patent dated June 9, 1863.—This is a "running stitch" machine, in which the cloth is corrugated and run upon a common needle by means of a pair of crimping wheels, and the improvement consists of a horizontal screw with a countersink in the end to hold the eye end of the needle against the pressure of running the cloth upon it, and affording a means of adjustment for different lengths of needles. In order to adjust the feed and crimping wheels, the lower wheels are journaled in a movable frame which is adjusted by a set screw.

Claim.—First, a horizontal screw having a countersink for the eye end of the needle, in combination with the feeding and crimping wheels, when constructed and arranged substantially as described, so that the horizontal screw is, in itself, both an adjusting screw and holder for the eye end of the needle.

Second, in combination with a feed wheel and crimping wheel, the movable frame in which the mandrels of the lower feed wheels and corrugating wheel are sustained, and the set screw, substantially as described, and for the purpose of simultaneously adjusting both the corrugating wheels and feed wheel, substantially as described.

No. 38,838.—MOSES POND, of Boston, Mass.—*Improvement in Cooking Stoves.*—Patent dated June 9, 1863.—The improvements in this stove consist of a shouldered flange to hold the ash box in position to catch the ashes as they fall from the grate, and a deflecting plate over the opening, from the oven to the back flue.

Claim.—The combination and arrangement of the shouldered ledges or rests R R with the ash chamber C, the same being for the purpose specified.

Also, the combination of the deflector L with the smoke flue G and the hot-air receiving and discharging passages I K, arranged with respect to the oven, as hereinbefore specified.

No. 38,839.—N. Y. POTTER, of Union town, Knox county, Ill.—*Improvement in Evaporating Pans for Sorghum Juice, &c.*—Patent dated June 9, 1863.—The circuitous course of the sirup is from one division of the pan to another, guided by the transverse partitions and alternate inclinations of the bottom of each division; thus making the sirup pursue a zigzag course in its descent.

Claim.—Giving to the bottoms of the several divisions of a sugar pan a lateral inclination alternately in opposite directions, substantially as and for the purpose shown and described.

No. 38,840.—EDWARD F. RATE, of Woodbridge, Cedar county, Iowa.—*Improvement in Seed Drills.*—Patent issued June 9, 1863; antedated January 11, 1862.—The object of the toothed wheels is to hold the stalks over which the machine passes while the drills break through, and the arrangement of the lever and its connexions is such as to lift the drills from the ground by straps attached thereto, and also by the rotation of a cam to push in the slide and "cut off" the seed.

Claim.—First, constructing a seed drill with the toothed wheels *a*, operating in the manner described and for the purpose specified.

Second, combining the toothed wheels *a*, drills *f*, cam *t*, and guides *s*, substantially in the manner described, by which the wheels and the drills may be raised from the ground, and the seed cut off by a single shifting of the handle.

No. 38,841.—JOSHUA REGISTER, of Baltimore, Md.—*Improvement in Hydrants.*—Patent dated June 9, 1863.—The two cocks, for the supply outside of the house and that for house use, are combined in one stem or single way cock in such a manner that while the lateral capacity of the outer casing which encloses the apparatus is reduced, an uninterrupted supply may be obtained at either or both places.

Claim.—First, combining in one and the same tube or tail stock C C' C'' the two cocks B E', arranged and operating substantially as herein described.

Second, making the axes of the two cocks, when combined in one tail, stock or tube, in the same plane, and conducting the water through C, and around the "street-supply" cock, substantially as herein described.

Third, combining with and supporting the street and house-supply cocks within a metallic casing, constructed substantially as herein described.

Fourth, the combination of the key rod G, tubular key rod F, bearings *a a'*, and supply cocks E E, substantially as and for the purposes set forth.

No. 38,842.—EGBERT S. RICHARDS, of Attleboro, Mass.—*Improvement in Ornamental Chains, &c.*—Patent dated June 9, 1863.—The invention consists in including an ornamental stone or glass with the open work or tracery of the metallic link.

Claim.—The improved method of making links for guard chains, ear-drops, breast-pins or other similar articles of ornament described, consisting of the use of a skeleton frame of metal, within which the glass or other material composing the body of the ornament is contained, and by which it is held in place, substantially as specified.

No. 38,843.—WILLIAM W. ROBINSON, of Ripon, Fond du Lac county, Wis.—*Improvement in Gate Hinges.*—Patent dated June 9, 1863.—This gate has an ordinary pintle hinged at the top, and the lower hinge is so constructed as to throw the gate out of the perpendicular in opening, and to seek its equilibrium by closing when freed from obstruction.

Claim.—The lever hinge *h*, constructed and operated in the manner herein set forth.

No. 38,844.—JOACHIM and DETLEF SCHILDHAUER, of New Holstein, Calumet county, Wis.—*Improvement in Grain Separators.*—Patent dated June 9, 1863.—Beneath the hopper are a series of screens made of perforated metal to retain oats and larger refuse, while the wheat passes down to a cheat screen and afterwards to the larger screen, where it is exposed to the fan-blast. A box is under the cheat screen to catch the cockle, cheat, and grass seeds which may be present in the uncleaned wheat.

Claim.—The screens F and screens G, placed in the box D, and the sliding box H, arranged in relation with the screen box D, substantially as shown in combination with the inclined screen Q, placed in the box P, the latter communicating with the fan case K, and all arranged for joint operation as and for the purpose herein specified.

No. 38,845.—MILTON SAVIERS, of Shawneetown Johnson county, Kansas.—*Improvement in Portable Shield for Infantry or Artillery.*—Patent issued June 9, 1863; antedated January 25, 1863.—This consists of a metallic plate attached to the hind axles of a truck or carriage to be mounted with its lower edge on the parapet of an earthwork to form a shelter for the defenders of the same, or to be used as a cover for artillery or infantry, having loop-holes for sharpshooters.

Claim.—The adjustable head guard M, constructed as described, and applied to the portable shield K, in manner and for the purposes shown and explained.

No. 38,846.—JOHN H. SEAMAN, of Brooklyn, N. Y.—*Improvement in Fountain Lamps.*—Patent dated June 9, 1863.—The improvements in this fountain lamp consist of a central rod by which the connexion of the wick chamber with the fountain is cut off when the reservoir is being charged, and vice versa, and the addition of a pipe to admit air to replace the expended oil in the reservoir, and also acting to admit of the exit of the air from the upper part of the reservoir when that is being refilled.

Claim.—The combination of the air tubes M N, and chamber L, with the chamber E and fountain A, substantially in the manner herein shown and described.

Also, the combination with the above-named parts of the tube F, valve H, and socket G, as shown and described.

No. 38,847.—WM. F. SPIELER, of Philadelphia, Pa.—*Improved Composition for Coloring and Waterproofing Photographs, &c.*—Patent dated June 9, 1863.—The photograph printed on albumenized paper is painted with colors mixed with the following compound: one ounce clarified honey boiled in sixteen ounces of water, cooled, filtered, and treated with two ounces acetic acid. No. 8. The surface is waterproofed by the use of the following: To twelve ounces of concentrated sulphuric acid add twenty-two ounces of absolute alcohol, one quarter of an ounce of gum camphor, and three-quarters of an ounce of gun cotton, with which compound float the picture.

Claim.—The use and application for the purposes of painting and permanently securing and protecting photographs printed on albumenized paper or its equivalent, by the use of the aforesaid described two compound fluid materials.

No. 38,848.—SAMUEL N. THOMAS, of Auburn, Cayuga county, N. Y.—*Improved Fruit Collecting and Drying Apparatus.*—Patent issued June 9, 1863; antedated April 11, 1863.—This apparatus consists of a frame with legs which are capable of being folded up compactly, and the former provided with a canvas cloth to receive the falling fruit and a central canvas spout or conductor to lead away the fruit on to the ground without bruising. It may also form a table on which to expose fruit to be dried.

Claim.—The employment or use of the folding frame A, with adjustable legs B, in combination with the canvass C and conductor D, constructed and operating as and for the purpose shown and described.

No. 38,849.—JAS. E. TREAT, of Boston, Mass.—*Photograph Holder*.—Patent dated June 9, 1863.—The card containing the photograph is retained in place by means of two flanges, one being stationary, under which an edge of the card is slipped, and the other folded down upon it.

Claim.—Confining the ferrotype, photograph, or other picture, in a holder, or album leaf, by means of a stationary flange *f*, and a movable flange or flap *d*, or their equivalents, substantially as set forth and for the purpose described.

No. 38,850.—WM. B. WADSWORTH, of Cleveland, Ohio.—*Improvement in Water Elevators*.—Patent dated June 9, 1863.—As the bucket is raised the upper end strikes against a cross-bar which deflects the bottom of the bucket so that it hangs over the discharge spout. A rod projecting upwards from the valve at the bottom of the bucket is now arrested by a block, the valve opened and the water discharged.

Claim.—The combination of the chair and wheel, substantially as described, with the bucket F, rod I, valve *g*, and spout A, substantially as described.

No. 38,851.—WM. B. WADSWORTH, of Cleveland, Ohio.—*Improvement in Wind Wheels*.—Patent dated June 9, 1863.—This is a compensating or governor arrangement for wind-mill sails, whereby they are presented at a proper angle to the wind proportionately to the power of the wind for the time being. The devices are recited at length in the claim.

Claim.—First, the governor composed of the hub H', arms N N, and rods M' M', weights M M, springs X X, chuck X', and set screws Z Z, and arms F, and hooks S, connecting with standards on the sails or their equivalents, substantially as described.

Second, the lever D, and counterbalance D', in combination with the rod R Z, when applied to relieve the mill-head T, substantially as and for the purpose described.

Third, the hooks S and arms F, connecting the sails with the governing arrangement, when made substantially as and for the purpose described.

Fourth, the hub H, arms I, hooks L, and pivots *p*, in combination with the wind sails and movable brackets *m*, substantially as and for the purpose described.

Fifth, the posts B, wings *b*, tube A, guide screws *d*, in combination with shank *o*, mill-head T, and wheel shaft *a*, substantially as and for the purpose described.

No. 38,852.—WM. B. WADSWORTH, of Cleveland, Ohio.—*Improvement in Cupboard Latches*.—Patent dated June 9, 1863.—This consists of a gravitating catch with an inclined face on the end of the knob shank and a catch with a similar face fastened on the inner side of the cupboard. The vertical motion of the knob unbooks the catch.

Claim.—The latch described, as a new article of manufacture.

No. 38,853.—GILBERT D. WHITMORE, of Boston, Mass.—*Improved Sash Fastener*.—Patent dated June 9, 1863.—This consists of a spring bolt retracted by a projecting knob.

Claim.—The improved sash-fastener, having its parts arranged and constructed substantially in the manner and so as to operate as described.

No. 38,854.—WILLIAM H. WHITMORE, of Boston, Mass.—*Improved apparatus for the Manufacture of Cube Sugar, &c.*—Patent dated June 9, 1863.—The device consists of a drum with moulds rotating against a pressure plate, and with a piston operated radially to condense the sugar in the moulds while passing against the pressure plate.

Claim.—A combination consisting not only of the rotary moulding drum or series of moulds, and a movable presser-plate, but mechanism for imparting motions to such presser-plate, substantially as and for the purpose hereinbefore described; the said rotary moulding drum, when in use, being provided with a plunger or piston to each mould, and with suitable means of operating such piston or plunger.

No. 38,855.—CHARLES WHITTIER, of Roxbury, Mass.—*Improved Mode of Connecting Sections of Steam Boilers*.—Patent dated June 9, 1863.—The sections are connected by a hollow screw thimble which passes through holes in the contiguous sides of the sections, the thimbles having an angular interior so as to be turned by an inserted key.

Claim.—First, the application of the herein-mentioned metallic thimbles to the connecting of the sections of steam boilers, generators, or radiators, for dispensing with packing, substantially as set forth.

Second, constructing the interiors of the herein-described metallic thimbles, of square or other suitable form, for the reception of a key of corresponding form by which to turn them, substantially as represented.

No. 38,856.—ELIAS L. YORKS, of Honeoye Falls, Monroe county, N. Y.—*Improvement in Water Elevators*.—Patent dated June 9, 1863.—In this machine a brake power is applied to the windlass by the reversal of the crank to prevent the bucket running down too fast. The invention consists in the construction and arrangement of the parts connected with the crank and the end of the windlass. The devices are recited at length in the claim.

Claim.—First, the ratchet box D, consisting of the disk *b*, having a laterally bearing frictional surface, the cylindrical flange *d*, and the ribs *e e*, or equivalent; said ratchet box turning loosely on the shaft, and held by the pawl K, substantially as herein described.

Second, in combination with the ratchet box thus arranged, the gear plate G, having notches *g g*, or equivalent, sliding over the ribs *e e*, in such a manner as to hold on the shoulders *f f*, when turned forward, but to be disengaged therefrom when turned back, substantially as specified.

Third, in combination with the gear plate, provided with the concentric inclined teeth *h h*, the crank gear H, having similarly engaging teeth *h h*, substantially as and for the purpose herein set forth.

Fourth, in combination with the gear plate G, and crank gear H, the coupling gear I, arranged and operating substantially as herein specified.

Fifth, the combination and arrangement of the ratchet box D, coiled spring E, or equivalent gear plate G, crank gear H, coupling gear I, pawl K, and frictional bearing shoulders *sp*, whereby the whole automatic action is produced, substantially as herein set forth.

No. 38,857.—E. H. BORTON, of St. Louis, Mo., assignor to Himself and E. A. SKEELE, of same place.—*Improvement in Burial Cases*.—Patent dated June 9, 1863.—The invention consists in the use, as a lining for burial cases, of a combination of paper and asphaltum varnish or equivalent material or composition.

Claim.—The employment of paper, in combination with asphaltum varnish, or its equivalent in effect, for lining the interior surfaces of burial cases, substantially as herein described for the purposes set forth.

No. 38,858.—JOHN CONNELL, of Rochester, N. Y., assignor to MARTIN BRIGGS, of same place.—*Improvement in Permutation Locks*.—Patent dated June 9, 1863.—The tumbler, to which is attached the dog, which gates in the permutation wheels, is supported upon a bearing which traverses the face of the cam, the latter being attached to the operating shaft, so that the dog is preserved from contact with the permutation wheels. The wheel cylinder and the back plate of the lock are locked together by means of a catch P, and tooth X, when the bolt of the lock is thrown back, so that the cap cannot be removed from the permutation wheels, when the door is unlocked, to study the combination or construction.

Claim.—The arrangement and combination of the cam O, on the operating shaft, the bearing *m*, and dog N, of the tumbler C, and the permutation wheels M M, whereby the dog is prevented from producing noise or pressure on the edges of the wheels, substantially as herein set forth.

Also, locking the back K, and cylinder L, in place when the bolt is reversed or thrown back, by means of the catch P, passing through the hole *u*, arranged and operating substantially as herein set forth.

No. 38,859.—F. B. DE KRAVENAN, of France, now residing in New York, N. Y., assignor to JOSEPH H. BAILEY and GEORGE A. JONES.—*Improved Mechanical Movement for Lamps*.—Patent dated June 9, 1863.—The invention consists of a spring and clock-work actuating a blower to supply air to insure more perfect combustion in lamps.

Claim.—The general arrangement and combination of the mechanism herein described for the purpose of supplying air to the lamps, &c.

No. 38,860.—SAMUEL H. FRENCH, of Boston, Mass., assignor to Himself and SIDNEY ALLEN, of Newton, Mass.—*Improvement in Safety Pockets*.—Patent dated June 9, 1863.—The mouth of the pocket is made of sections hinged together, and the lock is opened by pulling on a bolt actuator made of links which operate the cams, and the latter the lever catches.

Claim.—The improved flexible arm or bolt-actuator carrier, as made of tubular sections connected by ball-and-socket joints.

Also, the improved flexible pocket-mouth frame, as made in separate plates or sections hinged together and with some to overlap others, and having contractile bands applied to them, substantially as described, the whole being so as to enable the mouth frame to be readily flexible and capable of being expanded more or less, as specified.

Also, the combination of the rotary pulley *k*, its cams *m m*, retractile spring *o*, with the catches *l l*, and their spring *x*, arranged in the manner and so as to operate as described.

No. 38,861.—RICHARD HEALY, of Swanton Falls, Franklin county, Vt., assignor to Himself and SAMUEL GOLDEY, of same place.—*Machine for Rossing Bark*.—Patent dated June 9, 1863.—This machine strips the outer unprofitable surface from tanner's bark; and the improvement consists in running the bark upon concave beds between which are cutters bearing a concave edge, the bark being drawn along by toothed convex feeding rollers which impinge upon the inner side of the bark which is uppermost in the machine.

Claim.—First, the fixed concave bed B, and adjustable concave bed C, in concave rollers L L', arranged to operate substantially as and for the purpose herein set forth.

Second, the cutters K, provided with concave cutting edges and arranged on the shaft J, as shown, when said cutters thus formed and arranged are used in connexion with the concave beds B C, and convex feed-rollers L L', for the purpose specified.

Third, the particular arrangement of the feed-rollers L L', with the arms M M', and driving mechanism, as herein set forth, whereby said rollers may be raised and lowered, and adjusted as circumstances may require, without interfering with the driving mechanism.

Fourth, the combination of the toothed feed-rollers L L', concave beds B C, revolving cutters K, and roller I, all arranged for joint operation, as and for the purpose herein specified.

No. 38,862.—MINARD HARDER, GEORGE W. DOUGLASS, and HIRAM BECKER, of Cobleskill, Schoharie county, N. Y., and DAVID ANTHONY, of Worcester, Otsego county, N. Y., assignors to REUBEN and MINARD HARDER, of Cobleskill.—*Improvement in Threshing Machines*.—Patent dated June 9, 1863.—The concave is above the threshing cylinder, and a spout is carried above it under the cap of the case, by which the dust above the throat is drawn into the machine. The separator is suspended by rods, and has a longitudinal vibratory motion, and the board underneath it unships by the removal of screws and the slipping of an eyelet joint.

Claim.—First, the "concave" suspended upon the arms *b*, and having attached to it the air deflector or guide *d* and the rods *e* and jamb nuts, as and for the purposes herein set forth.

Second, the dust-flue *k*, constructed and arranged as described.

Thirdly, the rods or bars *p*, placed outside of the casing and connected by the sides of the separator by the eyes *r* and hooks *s* passing through the slots *t*, in combination with the strips *Z'* and side boards *X'*, whereby the separator is moved and guided as herein described.

Fourth, connecting the bottom to the separator by the hooks *v*, eyes and screws *z*, so that the bottom may be easily and readily detached, as herein set forth.

No. 38,863.—LUCIEN E. HICKS, of New York, N. Y., assignor to Self and RUFUS E. CRANE, of same place.—*Improvement in Inkstands*.—Patent dated June 9, 1863.—The invention consists of an elastic diaphragm, in combination with a pipe and bowl, acted upon by a key in such a manner that the raising of the bowl by the key draws air into the inkstand, while the release of the key causes the diaphragm to compress the air within the inkstand, and elevate a column of ink into the bowl. By raising a valve the ink is allowed to recede into the reservoir, when so desired.

Claim.—First, the elastic diaphragm *b*, resting upon the top of the reservoir and secured by the cover or cap *c*, in combination with the elastic tube *d*, formed with or attached to said diaphragm, and receiving the tube *e* of the bowl *f*, whereby said tube and bowl are sustained, but can be raised for drawing air to the reservoir, as set forth.

Second, the flexible tube *g*, in combination with the tube *e* and bowl *f*, for the purposes set forth.

Third, the air valve *h*, applied as shown, in combination with the diaphragm *b*, tube *e*, and bowl *f*, as specified.

Fourth, the forked lever *k* and key *k*, in combination with the thimble *i*, tubes *d* and *e*, and bowl *f*, as and for the purposes set forth.

Fifth, the holes 9 at the sides of the tube leading to the bowl, to prevent the ink jetting or spirting up in the bowl, the end of said pipe being closed, as set forth.

No. 38,864.—HORACE HOLT, of Brooklyn, N. Y., assignor to WILLIAM W. SECOMBE, of New York, N. Y.—*Hand Stamp*.—Patent dated June 9, 1863.—The types are on the end of the stamp, and in the cylindrical casing are two rollers, to and from which the transfer ribbon traverses, passing over the face of the type from one to the other. The ribbon being saturated with ink, the type pressing upon it on the paper delivers the impression.

Claim.—The hand stamp herein described and represented, consisting essentially of rollers or reels *s s'*, transfer ribbon *O*, type box *z*, type *t*, and cylindrical metallic case or tube *a*, the whole combined and arranged in the manner and for the purposes specified.

No. 38,865.—E. H. PHILO, of Half Moon, Saratoga county, N. Y., assignor to Self and SAMUEL PETERS.—*Improvement in Churns*.—Patent issued June 9, 1863; antedated June 2, 1863.—The cream box is swung upon journals, and has a partial rotation or pendulous motion, in addition to the intermittent and reversible rotation of the dasher, by the meshing of the teeth of the pinion wheel on the dasher shaft with a segment wheel on the frame.

Claim.—The arrangement for imparting two distinct, efficient motions to the cream, by means of the reversing cream box *B*, when the same is pivoted as described, in combination with the revolving paddle *H*, when these are operated substantially in the manner and for the purposes set forth.

No. 38,866.—SYLVESTER H. ROPER, of Boston, Mass., assignor to ELMER TOWNSEND, of same place.—*Improvement in Hot-air Engines*.—Patent dated June 9, 1863.—The improvements are in the construction of the fire-box, which is protected with a lining of soapstone or calcined plaster, and the air is admitted to the fire by means of two valves, one of which admits it over the fire, and the other under the grate.

Claim.—Lining the fire-box with fire-brick, or their equivalent, upon all sides except the bottom, as set forth.

Also, the parts or pieces of the fire-box *G* and *H'*, in combination with the exterior casting *A*, the space between them being filled with plaster, or its equivalent, for the purpose specified.

Also, the induction pipes *d' f'*, arranged and operating as described, in combination with the pipe or passage which brings the air from the air pump to the furnace, for the purpose of regulating the intensity of the fire, as set forth.

No. 38,867.—GEORGE L. WITSILL, of Philadelphia, Pa., assignor to CLEMENT CRESSON, of same place.—*Improved Washing Machine*.—Patent dated June 9, 1863.—The concave, in which the fluted rollers are placed, forms the bed of the frame, which sets in a washing tub. From this bed rise standards, to which pendulous arms are attached carrying a fluted roller, between which and the rollers of the concave the clothes are pressed and rubbed.

Claim.—A washing machine, consisting of the frame with the revolving fluted rollers *G*, posts *C C*, and the vibrating frame carrying the fluted roller *H*, when the whole are arranged as described, and adapted by means of the projection *k* and the shoulder formed by the box *B* to a wash-tub, substantially as set forth.

No. 38,868.—WILLIAM L. WOODS, of Washington, D. C., assignor to HENRIETTA WOODS, of same place.—*Improvement in Paper Files*.—Patent dated June 9, 1863.—The invention consists of a file or case for papers, having a hinged end, and slipping within an outer box, which has a hinged lid.

Claim.—The combination of the falling lid *l*, the outer box *A B C D E*, the inner box *F G H*, and the perforations *J*, as shown and described, for the purpose set forth.

No. 38,869.—DAVID REEVES, of Phoenixville, Chester county, Pa., assignor to PHOENIX IRON COMPANY, of Philadelphia, Pa.—*Improvement in the Construction of Rolls for Rolling Metal*.—Patent dated June 9, 1863.—The roller is made with a wrought-iron centre, so as to resist breaking by any transverse strain. It is made of bars welded and turned off, and grooved and channelled, and afterwards placed in a flask, where a coating of iron is cast around it.

Claim.—A compound roller made of wrought and cast iron, in the manner and for the purpose substantially as herein described.

No. 38,870.—W. W. MARTIN, of Allegheny, Pa.—*Improvement in Feed-water Heaters for Steam Boilers*.—Patent dated June 9, 1863.—The feed-water is conducted through a vertical pipe located within an exterior vertical pipe, which is in direct contact with the furnace heat, and thence to the boiler or stand pipe, as may be desired.

Claim.—Locating a feed-water pipe within an external vertical pipe arranged in the furnace space, for the purpose of heating the water that is to supply the steam boilers, substantially in the manner herein described and represented.

No. 38,871.—E. W. DENNISON, of Boston, Mass.—*Improvement in Labels or Tags*.—Patent dated June 9, 1863.—The eye is strengthened by additional material secured to that part.

Claim.—As a new article of manufacture, a label or tag composed of paper with an additional thickness of fabric in the form of a washer applied and secured by glue, or other adhesive material, on each side of the label or tag around the eye, as and for the purpose specified.

No. 38,872.—ELIAS W. SEYMOUR, of Centre Lisle, Broome county, N. Y., and GEORGE W. GREGORY, of Binghamton, Broome county, N. Y., assignors to GEORGE W. GREGORY aforesaid.—*Improvement in Hay Elevating Forks*.—Patent dated June 9, 1863.—This improvement consists of a rotating head, whose teeth, when in elevating position, are at an angle with the handle, and retained by a latch upon a plate which lies against the handle, the load being discharged by tripping the catch through means of a check-line.

Claim.—The peculiar construction and combination of the head *A*, handle *C*, latch *E*, lever spring catch *G*, and staple *H*, as and for the purpose herein described.

No. 38,873.—BARNEY MEE, of Troy, Rensselaer county, N. Y.—*Improvement in Machines for making Horseshoes*.—Patent dated June 9, 1863.—The blank is drawn in between the rollers by a bender, and is pressed by a die in a former, where it receives its shape between side plates which, as well as the die, are exchangeable for different sizes, &c., of shoes. After it is shaped, it is discharged on to an inclined plate, where it is arrested by a stopper and straightened by a plate which is pressed by a cam.

Claim.—First, the adjustable bender *g*, in combination with the slotted bar *n* and the die *f*, substantially as and for the purposes herein described and set forth.

Second, the exchangeable side formers *E E*, in combination with the exchangeable die *f*, substantially as and for the purposes herein described and set forth.

Third, the employment of an inclined bed or plate *N*, which shall receive the shoe from the die rollers by means of the scraper *M*, and which shall hold the same by means of the stopper

8" during the operation of flattening or straightening said shoe, substantially as herein described and set forth.

Fourth, the adjustable die plate or flattener P, in combination with the cams R' and the inclined bed or plate N, substantially as and for the purposes herein described and set forth.

Fifth, the employment of the movable stopper S'', in combination with the inclined bed or plate N, substantially as and for the purpose herein described and set forth.

No. 38,874.—JOHN NORTH, of Middletown, Conn., assignor to DANIEL S., GEORGE S., SAMUEL F., JOHN A., and WM. H. APPLETON, all of New York, N. Y.—*Machine for Folding Paper*.—Patent dated June 9, 1863; antedated August 10, 1858.—This machine is adapted to fold the printed sheets for pamphlets or books, and consists of a vibrating frame operated so as to run the tapes in the contrary direction by the change of its reciprocating motion from an upward to a downward motion, and *vice versa*, it being also suitably provided with carrying-tapes, folding-knives, and adjustable stops. The sheet is clasped by tapes upon the frame, presented to the first folding-knife by the downward motion of the frame, and as the folder pushes the fold of the paper between the tape-carrying rollers, the latter leads it away. The rollers then change their motions as the frame is raised, which carries the folded sheet under an upper knife to a stop, and the raising of the frame against the knife folds the sheet a second time, after which it is carried off by the tape rollers between which it is pressed and again presented to the knife which gives it a third fold, being cut in two in the act of folding, the inset being inserted by hand.

Claim.—First, placing the sheet direct in register upon the knife to receive its first fold, in the manner and for the purpose hereinabove described.

Second, folding paper by means of a straight edge or knife and reciprocating rollers.

Third, hanging the frame *m m* with reciprocating rollers and folding-knife E, attached to move and reciprocate in the arc of a circle.

Fourth, causing the rollers to rotate and change their motion alternately, for the purpose specified.

Fifth, cutting off the inset for the "twelve-mo." folding at the same time it is being folded.

No. 38,875.—JOHN R. AGNEW, of Mercersburgh, Pa.—*Improvement in School Globes*.—Patent dated June 16, 1863.—A transparent case is applied to a celestial globe having the same lines and constellations depicted on the surface of both. An equator, also having the same lines and constellations, bisects at two points the elliptic of the celestial globe.

Claim.—The arrangement of the case B, in combination with a celestial or with a terrestrial globe, constructed and arranged substantially as and for the purpose herein shown and described.

Also, the arrangement of the folds or ribs *d* in the flexible case B, in combination with the horizon C and globe A, constructed and operating substantially as and for the purpose specified.

No. 38,876.—WM. L. BARNES, of Kingston, Ulster county, N. Y.—*Improved Hinges for Blinds*.—Patent dated June 16, 1863.—The invention consists in the application of an additional member or locking piece to the hinge which acts as a detent against that member of the hinge which is screwed to the shutter or blind.

Claim.—The swinging blocking pieces *g* hinged to the leaf *a* of the hinge, in combination with the projection *f* on the leaf *d*, for the purposes and as specified.

No. 38,877.—IRA L. BECKWITH, of Providence, R. I.—*Improvement in Machines for Round Tenons*.—Patent dated June 16, 1863.—This improvement consists in an arrangement of the appliances in a tenon machine, consisting of a guide tube with a recess on the end for the reception of the cutter and its carrier, and the cutter rest and set screws for adjustment.

Claim.—The improved spoke-tenoning tool or machine, as provided, not only with the separate guide tube B and its socket *g*, but as having one or more adjustable cutter carriers *k k*, made and applied to its stock A, substantially as hereinbefore specified.

Also, the guide tube B as made with a recess *i* for the reception of the cutter and its carrier, such recess being arranged in the said guide tube, as and for the purpose specified.

Also, the arrangement of the cutter rest *f*, the adjustable cutter carrier *k*, and the clamping and adjustable screws or devices *n n* of the latter.

No. 38,878.—SAMUEL A. BELL, of Epping Villas, Stratford, England, and THOMAS HIGGINS, of Carrico Terrace, Middlesex, England.—*Improved Apparatus for Dipping Lucifer Matches*.—Patent dated June 16, 1863; patented in England August 16, 1862.—The object of this invention is to present the matches or splints, while contained in a traversing clamp or frame, endwise to a continuous supply of phosphorus or other like ignitable compound, evenly laid upon or covering the surface of a cylinder, to enable the splints as they are passed through the machine to take up upon their ends a suitable supply of the compound.

Claim.—Submitting splints or matches to the dipping operation by presenting their ends to a continuous supply of the phosphorus or other like ignitable compound, in the manner above described.

No. 38,879.—WILLIAM B. BILLINGS, of New York, N. Y.—*Improvement in Coal Oil Lamps*.—Patent issued June 16, 1863; antedated December 16, 1862.—The invention consists in impelling a current of air into the burner, where it is mixed with the generated vapor near the point of combustion.

Claim.—First, the impelled current of air when carried into the self-generating burner for the purpose and in the manner substantially as set forth.

Second, the mixing or mingling of the self-generated vapor with the impelled current of air in the burner, near the point of combustion.

No. 38,880.—R. BOCHLEN, of Brooklyn, N. Y., and L. PLANER, of New York, N. Y.—*Improvement in Bellows*.—Patent issued June 16, 1863; antedated September 1, 1862.—This improvement is designed to prevent the drawing or sucking in of dust and fire at the nozzle of the bellows while expanding for inflation, and consists of ball valves working against seats in the chambered throat of the bellows.

Claim.—The employment or use of the ball valves *ff*, placed in a box C, provided with a central partition *g*, and applied to the double acting bellows, as and for the purpose herein set forth.

No. 38,881.—HENRY BOOTH, jr., of New York, N. Y.—*Improvement in Lamp Chimneys*.—Patent dated June 16, 1863.—The improvement consists in constructing a chimney, the lower portion of glass and the upper of metal, from the metallic portion of which depend rods, which slide telescopically into tubes affixed at their lower end to a band on the burner.

Claim.—The combination of the lower glass portion D of the chimney with the metal tube portion E, when the latter has pendant rods *c c* attached to it, which are fitted in tubes C C, connected to a ring or band A, placed on the burner B, and all arranged substantially as and for the purpose herein set forth.

No. 38,882.—JOHN BUTTER, of Buffalo, N. Y.—*Improvement in Harvesters*.—Patent issued June 16, 1863; antedated May 5, 1863.—The invention consists in the construction and combination of the parts, so that the machine can be adjusted to operate with a front or rear cut. To change it the finger beam and braces are detached, and the tubular shaft rotated one quarter, which brings a supplementary shoe in contact with the ground, and presents another lug for the attachment of the brace. The same connecting rod and finger bar are attached. The tubular shaft is supported at one end by the shoe on the ground, and at the other by stays or plates, suspended from the frame, and is stayed from lateral displacement, and the suspended plates from side strain by a V-shaped brace or hounds from the main axle to the top of the tubular shaft. When the cut of the machine is reversed the tongue is changed, so as to draw the machine in the opposite direction.

Claim.—First, changing the gearing in a combined reaping and mowing machine, in the manner and for the purposes set forth.

Second, the combination of the shoe which supports the heel of the finger beam when the machine is used for a mower with the yielding supports of the finger beam with the main frame, in such a manner as that, by simply turning said shoe one quarter over, the finger beam can be attached to the same shoe piece for reaping, and the same connecting rod used, while the finger beam is left free to rise and fall, substantially as described.

Third, the tubular part H, in combination with the finger beam supports J and K, arranged in relation to each other for the purposes stated.

Fourth, the combination of the finger beam I and brace L with the tubular part H, and its lugs *o* and *p*, substantially as and for the purposes set forth.

Fifth, the frame G as a support for shafts *f* and *e*, substantially as set forth.

Sixth, the frame G, in combination with the supporting plate F F, substantially as set forth.

Seventh, the combination of the yielding slotted brace N with the frame G, substantially as set forth.

No. 38,883.—CHARLES CHINNOCK, of Brooklyn, N. Y.—*Improvement in Tobacco Pipes*.—Patent dated June 16, 1863.—It consists of a mouth-piece and central tube attached thereto. Near the end of this pointed tube is an orifice, which is inserted into the pipe; for a cigar-holder the punctured tube is thrust into the cigar, and withdrawn as it is smoked. A saliva chamber intervenes between the bowl and the mouth-piece.

Claim.—The pointed and punctured tube *d*, the movable cap, cigar and pipe-holder *b*, for the purposes set forth.

No. 38,884.—PHILIP COONROD, of Keithsburg, Mercer county, Ill.—*Improvement in Cultivators*.—Patent issued June 16, 1863; antedated June 2, 1863.—This cultivator consists of a frame on wheels; to this rigid frame a swinging frame is attached at its forward end, carrying inclined plough standards braced by rods; two additional ploughs are attached by standards to the back part of the swinging frame, and may be raised by means of a crank shaft, which has its bearings in uprights attached to the draught pole, and operated through stirrups by the feet of the driver. The frame is raised or depressed by the motion of a lever

or treadle. The two middle ploughs are intended to operate on each side of a row of corn, guided by the lever J, and the other two to clear out the space between the rows. Circular guards protect the plants from clods, &c.

Claim.—The combination of the stationary frame D, and the rising and falling frame E, when the latter is provided with the laterally-adjustable ploughs F and guards M, arranged with the bars or levers j j, operated through the medium of the foot lever J or hand lever I, as herein set forth.

Also, the lever u, connected with the frame E through the medium of the shaft L, crank s', and link s, but this only when used in connexion with the laterally-adjustable ploughs F, and the means employed for operating as herein described.

No. 38,885.—**NAPOLÉON FELIX BORECKO DE CHODZKO**, of Paris, France.—*Improvement in Furnaces*.—Patent dated June 16, 1863; patented in England March 13, 1862.—The furnace is divided into an upper and a lower compartment; in the upper the coal is coked, and the coke raked down into the lower one; the resulting gases from the upper compartment are deflected downward on to the incandescent coke, securing the consumption of all the volatile results capable of ignition.

Claim.—First, the improvement in dividing the furnace into upper and lower fire-grates or compartments.

Second, the lugs, projections or hooks at one end of the fire-bars to keep them in their proper position.

Third, the deflector over the lower fire grate to deflect the gases or smoke on to the surface of the heated coke. The combination of a furnace, divided into upper and lower fire-grates, with the deflector over the lower fire-grate, substantially as set forth.

No. 38,886.—**SILAS DODSON**, of Bloomsburg, Columbia county, Pa.—*Improvement in Hulling and Dressing Rice*.—Patent dated June 16, 1863.—By this machine the hull and pellicle surrounding the grain are removed, and the improvement consists in a horizontal cylindrical rotary screen internally provided with annular stones or rubbers, and used in connexion with rotary stones placed within the screen on a shaft, the pintle of one stone being centred on the shaft of the other, so as to enable it to be rotated at a different speed or direction without changing the velocity or direction of the other.

Claim.—The combination of the bevel-faced stones C' C'', and the straight-faced stone C, with the central shaft D, screen B, stone E, straight-faced on one side and bevelled upon the other, and the double-bevelled stone E' as herein shown and described.

Also, having the stone E made adjustable upon the shaft D, independently of the stone E', in the manner and for the purpose herein shown and described.

Also, the arrangement of the screw H with the shaft D, in the manner herein shown and described, whereby the speed and direction of motion of said screw may be changed and governed without altering the velocity of the shaft D, or that of the stones, all as set forth.

No. 38,887.—**DANIEL DONCASTER**, of Punxsutawney, Jefferson county, Pa.—*Improvement in Water-Wheels*.—Patent dated June 16, 1863.—This wheel revolves on a vertical shaft in a penstock, and the water is directed to it by a stationary guide wheel, which is supported by an encircling suspension frame, the latter being adjustable by means of the suspension rods and nuts from the upper framing of the penstock. A horizontal annular disk or gate below the wheel limits the size of the discharge opening, and is regulated by means of the suspension rods.

Claim.—First, the combination of a turbine A with a guide wheel C, and an adjustable suspension frame E, when arranged and operating substantially in the manner described, for the purposes set forth.

Second, the combination of the turbine A and adjustable gate G, when constructed, arranged, and operated, substantially in the manner and for the purposes set forth.

Third, the combination of an adjustable guide frame, a guide wheel, and a turbine, with a gate arranged below the same; the whole operating substantially in the manner described and for the purposes specified.

No. 38,888.—**CHAS. F. DÖRTENBACH**, of Cleveland, Ohio.—*Improvement in Machine for Cleaning Animals' Intestines*.—Patent dated June 16, 1863.—The intestines are drawn along on an inclined spring table, and are exposed thereon to a revolving wheel armed with radial scrapers; an attached rod furnishing the means for their introversion.

Claim.—In combination with the rotary scrapers K, the inclined adjustable table C, for cleaning the intestines of animals, substantially in the manner herein described.

Also, in combination with the adjustable table C, the springs E, for the purpose of causing the table to yield to the pressure of the scrapers to protect the intestines from being injured by the scrapers, substantially in the manner herein described.

Also, in combination with the rotary scraping cylinder and adjustable table, the rod P, and the convex scrapers p, for the purpose of turning the intestines inside out, substantially in the manner herein set forth.

No. 38,889.—**CURRY DURRANT**, of Lyndonville, Orleans county, N. Y.—*Improved Horse Collar*.—Patent dated June 16, 1863.—The collar is made of rushes in a manner fully described in the claim and illustration.

Claim.—A new article of manufacture, the improved horse collar herein described, the skeleton or foundation being composed of braids of flags or rushes, and the stuffing composed of rushes or other stalks, retained in place by the transverse fringe or covering g, to give additional strength and covered by the cloth lining k, the whole constructed and arranged substantially as herein set forth.

No. 38,890.—**HENRY D. DUNBAR**, of Hartland, Windsor county, Vt.—*Improvement in Pistons for Steam Engines*.—Patent dated June 16, 1863.—At the opening in the packing ring, where its unjoined ends come together, is a break-joint plate pivoted to one end of the packing ring and extending into a recess in the adjacent ring.

Claim.—First, covering the cuts of packing rings by flat plates fastened at one side of the cut, and fitting said plates into recesses in the uncut ring for the purpose of preventing the passage of steam through the joints, substantially as described.

Second, in combination with plates for covering the cuts or packing rings, the pivoting of said plates to one side of the cut, and so that when in their recesses they will allow the rings to move upon them as they expand or contract, substantially as described.

No. 38,891.—**S. F. EMERSON**, of Seville, Medina county, Ohio.—*Improvement in Churns*.—Patent dated June 16, 1863.—Near the bottom of the churn, and attached to the vertical shaft, are a number of scroll-shaped dashers which plough through the cream. Attached to the vertical shaft are tubes with their orifices so exposed as to conduct air down and discharge it into the cream.

Claim.—The combination of the tubes E E with the dasher D, in the manner and for the purpose herein shown and described.

No. 38,892.—**EBERHARD FABER**, of New York, N. Y.—*Pencil Eraser and Stamp*.—Patent dated June 16, 1863.—This pencil has a square, seal-faced rubber plug on the end for the purposes specified in the claim.

Claim.—As an improved article of manufacture, a lead pencil provided with an angulated rubber-seal head, as herein shown and described, which serves as a seal, a preventer against rolling, and as an eraser, all as set forth.

No. 38,893.—**CYRUS S. FARRAR**, of Romeo, McComb county, Mich.—*Improvement in Apparatus for the Manufacture of Salt*.—Patent issued June 16, 1863; antedated February 27, 1863.—The apparatus consists of a supply pan, a settling pan, and a crystallizing pan, through which the brine is passed serially, the two latter having a zigzag motion around the partitions which are closed at alternate ends. The salt is raked from the last pan upon inclined draining-boards, heated by a steam-pipe, until fit to be discharged into the side bins.

Claim.—First, the improved arrangement of the vats A B and C, constructed and operated substantially in the manner and for the purpose set forth and described.

Second, the grates D D, in connexion with the steam-pipes m m, as set forth and described.

No. 38,894.—**D. H. FITCH, jr.**, of Litchfield, Montgomery county, Ill.—*Improvement in Liquids for Galvanic Batteries*.—Patent dated June 16, 1863.—The invention consists in producing a compound easily decomposed, both elements of which have a strong affinity for hydrogen, and which will unite with the hydrogen discharged during the action of the galvanic battery. The ingredients of the compound are, chlorate of potassa, sulphuric acid, and water.

Claim.—The use of chlorate of potassa in combination with sulphuric acid and water, for the purpose specified.

Also, the use of the salts of chloric acid in combination with sulphuric acid and water, for the purpose specified, their action being substantially the same as chlorate of potassa.

No. 38,895.—**FRANCIS J. FLANAGAN**, of Newark, N. J.—*Improvement in Hats*.—Patent dated June 16, 1863.—The body of the hat, made of straw, palm leaf, or other material, has a coating of India-rubber solution covered by hatter's varnish, and this by a surface of felt or fabric; a binding strip being fastened over the edge of the brim.

Claim.—First, the employment, in combination with a coating of hatter's varnish to secure a covering of felt, cloth, plush or other woven fabric, to a hat body made of palm leaf or other material of similar character, of a coating of India-rubber solution applied to the body preparatory to the application of the hatter's varnish, substantially as and for the purpose herein specified.

Second, the binding strip a pasted over the edge of the brim preparatory to the application of and in combination with the covering b, substantially as and for the purpose herein specified.

No. 38,896.—JAMES BYRON FREEMAN, of Lebanon, Grafton county, N. H.—*Improvement in Sheep Racks*.—Patent dated June 16, 1863.—This is a long frame with a central rack and side troughs, the sheep putting their heads in at the openings on the side to eat their grain from the trough, or to pull hay from between the slats of the hay rack; two inclined doors above cover the trough and direct the hay to the central portion or hay rack.

Claim.—The combination of the hay rack C and troughs B B placed within a frame A provided with lids D D, and all arranged as and for the purpose herein set forth.

No. 38,897.—CHARLES GOODYEAR, jr., of New York, N. Y.—*Improved India-Rubber Whip Socket*.—Patent dated June 16, 1863.—The socket is made of fabric coated on both sides with vulcanizable soft India-rubber, which is rolled around a former and afterwards trimmed and ornamented with bands, and stiffened by the insertion of a collar at the opening. It is afterwards vulcanized.

Claim.—The manufacture of soft vulcanized India-rubber whip sockets, substantially as hereinbefore described.

No. 38,898.—GEO. W. GOULD, of Norwich, Conn.—*Improved Power Mortising Machine*.—Patent dated June 16, 1863.—The improvements consist in the construction of the four-sided vertical frame with its guides at each corner to secure strength and solidity; in the method of supporting the table by the screw rods entering the foot rests; and in the rack and lever for lifting or lowering the table; and, finally, in the auxiliary boring attachment operated by hand wheels, pinions, and shafts, for raising, lowering, and traversing the tool for making consecutive holes.

Claim.—First, the iron frame C, cast whole—top, bottom, and sides—and the arrangement of the four guides, one on each corner of the same, D D D D, Fig. 3.

Second, the arrangement of the iron rods and screws E E connecting with the sleeves F F, for the support of the rest B.

Third, the rack G and lever H, by which the rest is raised or lowered with ease and accuracy.

Fourth, the auxiliary boring attachment by which it is moved and held in position without stopping the machine, and its connexion with the expanding attachment of the bit shaft, and the pulley, frame, card and weight.

No. 38,899.—GEORGE E. HAYES, of Buffalo, N. Y.—*Improvement in Safety Valves*.—Patent dated June 16, 1863.—This consists of an infusible plug, fastened into a hole or seat in the boiler by means of a fusible alloy, so that the plug will be driven out when the boiler attains the fusing heat of the solder.

Claim.—The conical valve or plug b, of infusible metal or alloy, soldered into the hole or seat a, provided for its reception in the boiler or other vessel, by means of a fusible alloy, substantially as and for the purpose herein specified.

No. 38,900.—JOHN M. HORNER, of San José Mission, Cal.—*Improved Washing Machine*.—Patent dated June 16, 1863.—The tub is mounted on legs, and two pendulous dashers suspended from a rod supported by standards are worked by the vibrations of a lever through connecting rods actuating the pivoted lever to which they are attached. The floor, which is an arc of a circle, with the point of suspension of the dashers as a centre, has a plain surface in the middle and a corrugated surface at the sides.

Claim.—First, the bottom of the reservoir or washing chamber having the plain central and the curved and corrugated portions as recited, in combination with and in relation to the mauls, as set forth.

Second, the arrangement of the vertical, weighted lever u, the horizontal rod t, the horizontal lever p, and the rods r, for operating the uprights and mauls, as herein described.

No. 38,901.—MORRIS L. KEEN, of Royer's Ford, Montgomery county, Pa.—*Improved Boiler for making Paper Pulp*.—Patent dated June 16, 1863.—The invention consists in connecting the man or feed-hole in the shell of the boiler with the man or feed-hole through the diaphragm by a perforated well or cylinder, so that the material can be charged through said well into the boiler without falling upon or clogging the perforated diaphragm; also, in the valve and discharge hole through which the pulp is discharged under pressure.

Claim.—First, a boiler provided with a perforated diaphragm and well, or their substantial equivalents, arranged in the manner and for the purpose described.

Also, in combination with the boiler, the arrangement of the discharge pipe and valve, for the purpose of blowing out or discharging the contents of the boiler under pressure, substantially as and for the purpose set forth.

No. 38,902.—JAMES A. LAWSON, of Troy, N. Y.—*Improvement in Ash Pans*.—Patent issued June 16, 1863; antedated April 17, 1863.—The pan has a withdrawing handle, and a bail by which to carry it. The preponderating weight being in front, the bail is kept vertical in carrying by stops, against which the bail impinges.

Claim.—The bail C, in combination with the ash pan drawer A, and with the stops e e and handle B, substantially as and for the purposes as herein described and set forth.

No. 38,903.—ORRIN D. LULL, of Watkins, Schuyler county, N. Y.—*Improvement in Breech-loading Fire-arm*.—Patent dated June 16, 1863.—The barrel is open from end to end, and the load placed in a tubular charge chamber attached to the breech piece, to which latter the nipple is secured. The hammer slides longitudinally in a slot in the small of the stock, and is held in its retracted position by a dog, which is freed by the trigger, the hammer being projected by a spring operating on a lever and rod at the rear of the hammer. The breech piece is held against the recoil of the charge by a partial rotation, which engages it in a notch in the edge of the slot in which the hammer traverses.

Claim.—First, the cartridge L M, constructed substantially as set forth in the described combination, with the longitudinally sliding hammer c, open barrel B, longitudinal slot a, and lateral cavity a', arranged to operate as explained.

Second, the combination of the sliding hammer C, spring D, rods E E, and lever G, constructed, arranged, and operating as described, in connexion with the cylindrical metallic cartridge L M and longitudinal nipple N.

Third, the specific arrangement of the dog H, spring I, trigger J, and set screw K, in combination with the sliding hammer C.

No. 38,904.—JOSIAH LYMAN, of Lenox, Berkshire county, Mass.—*Improvement in Draughting Scales*.—Patent dated June 16, 1863.—This consists of a hollow metallic scale of a prismatic shape, and graduated on each face. On one end is a set screw, with a thread on its interior end, whose pitch is equal to the finest subdivisions of the coarsest scale. On the shank of this screw is a micrometer circle, adapted to the scale in use, the circles being changeable, and each one adapted to its appropriate scale. The end of the scale beyond the zero mark is moved out by the motion of the set screw, and the motion read by the micrometer measure to great exactness. Other devices are explained in the claim.

Claim.—First, the combination and arrangement, in the manner described and for the purpose set forth, of a triangular and quadrangular scale with a screw micrometer, by which distances on paper or otherwise may be measured, read, or laid down with mathematical precision.

Second, the arrangement, as set forth, for exchanging one micrometer circle for another suited to any one of the several scales.

Third, the peculiar arrangement of the screw tube, by which a smooth, uniform friction is given to its action, and all perceptible error from play or other causes is excluded from the readings of the micrometer circle.

Fourth, the arrangement, as set forth, of the spring attachment, by which this draughting scale may be brought into connexion with and become a part of the protracting trigonometrical.

No. 38,905.—ROBERT J. MARCHER, of New York, N. Y.—*Improvement in Moulding Pottery Ware*.—Patent dated June 16, 1863.—This invention is intended to mould elliptical dishes, and consists of an upright eccentric lathe and a yielding former on a descending lever, which is pivoted to the frame of the machine. The former is moved in and out longitudinally by a wheel operating a guide on the lever, so as to flute the edge of the dish.

Claim.—First, the combination of an eccentric chuck or lathe and a mould, arranged substantially as herein shown and described.

Second, the bar H, with a pendant plate or former k attached, in combination with the mould and eccentric chuck or lathe, for the purpose specified.

Third, the cam O and spring N, or its equivalent, arranged to operate in connexion with the plate or former k, mould L, and eccentric chuck or lathe, for the purpose set forth.

No. 38,906.—LOOMIS G. MARSHALL, of Philadelphia, Pa., assignor to Self and ANDREW COCHRANE.—*Improvement in Furnaces for Reducing and Smelting Ores*.—Patent dated June 16, 1863.—This consists of a central furnace with four radial wings, in which the molten metal is refined. At the top of the stack is a reservoir of heated water, which is conducted down by pipes and mixed with petroleum, &c., and passes from the lower reservoir to be conducted to the refining chambers, which have inclined grate bars for the wing furnaces and a movable top with slide doors through which to inspect the progress of the operation.

Claim.—The arrangement of the reservoir of water at top of stack, in combination with a reservoir at side of stack, (containing the refining flux,) with their connecting pipes, that conduct the heated water and flux to the side wings below.

Also, the four side wings, with their connecting pipes, movable top, and perforated incline bed, as arranged in combination with the smelting furnace, for the purpose of smelting and refining the ores and drawing off the fluid continually while the fluxing is going on in the bosh.

No. 38,907.—J. J. MCCORMICK, of Brooklyn, E. D., N. Y.—*Improvement in Skates*.—Patent dated June 16, 1863.—The foot-stand is made of sheet metal, with the heel socket struck up, and the heel retained therein by a set screw in the rear. Spring clamps on the sides embrace the sole opposite the ball of the foot, and stirrups are provided for the attachment of the straps.

Claim.—A foot-stand A for a skate, struck up, with the socket a for the heel out of one piece of sheet metal, in the manner shown and described.

Also, as a new article of manufacture, a skate having a foot-stand with the socket for the heel struck up out of one piece of sheet metal, and provided with a set screw *b* and spring clamps *c*, as and for the purpose specified.

No. 38,908.—JOHN MEYER, of Brooklyn, N. Y.—*Improved Boring Machine*.—Patent dated June 16, 1863.—The object is to connect the driving gear with the line shaft, and admit of the shifting of the position of the boring apparatus. The invention consists in the application to the line shaft of a disk, adjustable round the centre of said shaft, in combination with an extension shaft with universal joints, by which arrangement motion is transmitted to the bore spindle in such a manner that the drill can be carried and operated in any direction round the centre of the driving shaft.

Claim.—The arrangement of the adjustable disk *D* on the shaft *B*, in combination with the bevel gear *E F*, extension shaft *G*, bevel gear *I J*, curved rotary arm *A*, and bore spindle *H*, all constructed and operating substantially as and for the purpose herein shown and described.

No. 38,909.—JULIUS A. PEASE, of New York, N. Y.—*Improvement in Shirt Collars*.—Patent dated June 16, 1863.—The metal frame is covered with water-proof enameled cloth, so as to preserve its shape and be readily cleansed.

Claim.—A shirt collar made by covering a metal frame with water-proof enamelled cloth or other material, substantially as before described.

No. 38,910.—SIMEON S. POST, of Jersey City, N. J.—*Improvement in Iron Bridges*.—Patent dated June 16, 1863.—The object of this invention is to obviate the injurious effects of expansion and contraction in bridges of this class by so connecting the parts to each other by bolts that they have a certain degree of motion by revolving upon the bolts which form a pivotal connexion.

Claim.—First, the joint box-connecting segments of the top chord or plate, and also receiving the heads of the posts or struts and braces, with the loose pin *k* passing through the whole.

Second, a cylindrical joint in the construction of a bridge, as shown at *B*, irrespective of its location, when used for the purpose of obviating the dangers of expansion and contraction.

Third, the slotted chord, when used in connexion with the cylindrical joint, and for the same purpose.

Fourth, the construction of the chord when used in combination with the cylindrical joint, substantially as described and shown.

No. 38,911.—VAN RENSSELAER POWELL, of Troy, N. Y.—*Machine for Splitting Match Blocks*.—Patent dated June 16, 1863.—The match blocks are fed with a continuous motion under a guillotine knife by means of feed-rollers, and the knife is carried forward by the block and returns to its proper place at the next stroke. The presser between the feed-rollers and the knife holds the block steady, and the shape of the bed allows the block to expand on its upper surface by the division of its parts. The claims are full and explicit.

Claim.—First, the combination of a suitable bed or support *A* for the match blocks, a splitting knife *B*, having an edgewise reciprocating movement toward and from, but not to or past the said bed, a set of feed-rolls *C C'*, and a presser *D*, whereby each succeeding match block is moved along on the bed and pressed against, and thereby made to support and feed to and past the knife the rear portion of the next preceding block, substantially as herein described.

Second, the combination of a match block support *A*, presser *D*, feed-rolls *C C'*, and a splitting knife *B*, having an edgewise reciprocating movement toward and from, but not to or past the said match-block support, and also a movement sideways so that the knife will follow the inclination of the grain of the wood in splitting into the block, and return to the proper place for starting a new split on withdrawing from the block, substantially as herein described.

Third, a match-block splitter having devices for holding match-blocks and successively feeding them with an uninterrupted or continuous movement to a splitting knife mounted so as to strike into but not through the match-block, and be moved sideways with and by the moving block while in the latter and be returned to the proper place to make a new cut upon being drawn out of the moving block, substantially as herein set forth.

Fourth, the spurs or projections *E*, when arranged in combination with a bed *A*, splitting knife *B*, presser *D*, and feed-rolls *C C'*, or their equivalent, for pushing the match-block along on the bed and past the splitting knife by means of a succeeding match-block, substantially as herein described.

Fifth, the yielding holder *G*, when arranged in combination with a splitting knife *B*, presser *D*, feed-rolls *C C'*, and bed *A*, with or without the spurs *E*, as herein described.

Sixth, the supplemental presser *I*, when arranged in combination with the shedding presser *D*, bed *A*, knife *B*, and feed-rolls *C C'*, substantially as herein described.

No. 38,912.—SAMUEL RAY, of Alliance, Stark county, Ohio.—*Improvement in Moulds for Casting Shoes*.—Patent dated June 16, 1863.—The invention consists of a plate or "lifter" with one or more holes, which, in addition to its use for lifting the main body of the mould, serves to support the latter and prevent it from being crushed by the upper part of the flask being closed on it after the patterns are withdrawn.

Claim.—The employment or use of the plate or "lifter" *B*, in combination with the follow board *A* and flasks *C D*, all constructed and operating in the manner and for the purpose substantially as shown and described.

No. 38,913.—WM. F. REDDING, of Utica, N. Y.—*Improvement in Fastening for Blind Slats*.—Patent dated June 16, 1863.—A rod is secured to the slat bar, and a loop on its end clasps an elastic which is provided with depressions to retain the loop at the point for which it is adjusted.

Claim.—The rod *D*, secured to the lower slat rod *b'*, and provided with an eye *d* at its lower end, in combination with the spring or elastic plate *E*, provided with recesses *f*, and secured to the lower cross-piece *e* of the blind, either with or without the plate *D'*, as and for the purpose herein set forth.

No. 38,914.—J. J. RICHARDSON, of Woodstock, Windsor county, Vt.—*Improvement in Wrenches*.—Patent dated June 16, 1863.—This ratchet wrench is arranged with a double shank centred in sockets in the ratchet wheel, and two spring pawls engaging with the teeth of the ratchet to rotate it.

Claim.—The ratchet *C*, provided with two bosses *d d*, which are fitted loosely in eyes at the ends of the parts *a a'* of the shank *B*, in combination with the pawls *E E'*, spring *F*, and removable socket *D*, all arranged to operate as and for the purpose set forth.

No. 38,915.—CHARLES E. ROWAN, of Brooklyn, N. Y.—*Improvement in Rice-Cleaners*.—Patent dated June 16, 1863.—This invention consists of headed pins introduced through metallic plates, which are then secured to the respective surfaces of the rotating cylinder and the stationary concave, the plates being removable for the replacing of the pins, which are required to have sharp angles to perform the work effectually.

Claim.—The movable perforated metallic plates, receiving the headed pins as aforesaid, and applied to the surfaces of rice-cleaning machines, for the purposes and as specified.

No. 38,916.—GELSTON SANFORD and JAMES E. MALLORY, of New York, N. Y.—*Improvement in Machines for Breaking and Cleaning Flax, Hemp, &c.*—Patent dated June 16, 1863.—The flax or hemp is fed from a table between a large fluted roller having a continuous rotary motion, and two smaller ones whose axes are concentric with the larger one, and which are journaled on two forks of vibrating levers, so as by the vibration to receive a reciprocating rotary motion by the engagement of their ribs or teeth with those of the larger one.

Claim.—The combination of the large fluted roller, having a continuous and regular rotary motion as described, in combination with one or more small fluted rollers having a reciprocating rotary motion imparted substantially as herein described, the flutes of the small roller or rollers meshing into the flutes of the large roller, and rolling alternately in opposite directions on the periphery thereof, substantially as and for the purpose specified.

No. 38,917.—THOMAS SHARP, of Chicago, Ill.—*Improvement in Frogs for Railroad Switches*.—Patent dated June 16, 1863.—This frog has an additional groove to admit of the passage of a car wheel with two flanges. The rail or track is made of wrought or malleable iron imbedded in cast-iron and fastened thereto by bolts.

Claim.—First, providing the frog of a railroad switch with an additional groove, substantially as and for the purposes herein specified and shown.

Second, the combination of the wrought-iron or malleable iron track with the cast-iron bed or base, substantially in the manner and for the purpose herein delineated and set forth.

No. 38,918.—JACOB SHAVOR and ALBERT C. CORSE, of Troy, N. Y.—*Improvement in Cooking Stoves*.—Patent dated June 16, 1863.—The stove is constructed with a damper in the front door, and one in a plate extending from the grate to an inner front plate, so as to bring the draught entering at the front downwards through the damper opening and under the fire. An air tube is interposed between the ash-pit and fire-chamber and the oven, the air circulating through which passes in part to the fire-chamber and partly to the oven.

Claim.—The combination of the damper *d* with the front plate *t* and with the fire-box or chamber *a*, substantially as herein described and set forth.

Also, the combination of the air tube *o* with the curved or inclined plate *w*, and with the air-chamber *i*, substantially as herein described and set forth.

No. 38,919.—SAMUEL SMYTH and WILLIAM H. FLUDDER, of Newport, R. I.—*Improved Means of Setting up Ship's Rigging*.—Patent dated June 16, 1863.—This is an improved metallic lanyard attached to the shroud or stay, and operated by means of screw blocks and screws, by which it is shortened to "set up" the shroud or stay.

Claim.—First, the lanyard composed of a metal tube A and rod B, combined with each other, and with the shroud, stay, or other portion of the standing rigging, substantially as herein specified.

Second, the employment in combination with such lanyard of a strap I, or its equivalent, screw blocks F F' and a screw or screws G, substantially as and for the purpose herein described.

No. 38,920.—DAVID M. SMITH, of Springfield, Windsor county, Vt.—*Improvement in Spring-hook Fastening for Garments.*—Patent dated June 16, 1863.—One end of the hook shank is permanently attached to the button, and the other can be taken out of the slot in which it is secured, and after being passed around or through the article to be clasped, is introduced into the slot in the plate at the back of the button and retained by the elasticity of the spring against the end of the slot.

Claim.—Extending the free or disengaged end a' of the spring or elastic hook B through an oblong slot b in the back plate c of the button or knob A, substantially as and for the purpose herein set forth.

No. 38,921.—HORACE SMITH and D. B. WESSON, of Springfield, Mass.—*Improvement in Revolving Fire-arms.*—Patent dated June 16, 1863.—In this fire-arm the chambers extend through the cylinder, the cartridge being entered from the rear, and the invention consists in fitting the recoil shield with a movable breech-pin, which is advanced by the hammer in the act of striking, to support the exploding cartridge, and moving back again with the retraction of the hammer to enable the cylinder to revolve freely.

Claim.—The movable breech-pin C, applied in combination with the revolving cylinder having its chambers extended through its rear, to operate substantially as and for the purpose herein specified.

No. 38,922.—JOSEPH A. TALPEY, Somerville, Middlesex county, Mass.—*Centring Device for Lathes.*—Patent dated June 16, 1863.—This instrument is intended for centring the ends of shafts, &c., for turning, and consists of a tube with attached pivoted arms and a conical slide, and having fitted within it a punch with a helical spring, so that by placing the tube against the end of the shaft with the arms grasping its periphery, the tube is centred upon the shaft, and the punch is ready for driving.

Claim.—The tube A, punch B, arms E, and conical slide F, all combined and arranged to operate substantially as and for the purpose herein set forth.

No. 38,923.—NATHANIEL WATERMAN, of Boston, Mass.—*Improved Friction Match Stand.*—Patent dated June 16, 1863.—The metallic match stand is in the form of a frustum of a pyramid with a base. It has a hollow on the top for the matches, fluted sides, and a trough hollowed out of the base to catch the droppings from the igniting match.

Claim.—The above-described improved match stand and rubber made with the receiving or intercepting channel applied to or about its base, as specified.

Also, the match stand as made with the intercepting channel, and with the flutings or grooves arranged with respect to the said channel as specified.

No. 38,924.—GEORGE WICKE, of New York, N. Y.—*Machine for Nailing Boxes.*—Patent dated June 16, 1863.—The parts of the box are placed together on the rest and against the upright in suitable relation to the spring jaws which hold the nails, over each of which is a plunger operated by a foot lever and cam. The conical collars open the jaws and allow the head of the nails to pass, and the shape of the cam determines the depression of the plunger.

Claim.—First, the employment of the grooved spring jaws H, substantially as described, for the purpose of receiving the nails, and to guide them to their proper places.

Second, the combination with the spring jaws H, of the rising and falling plunger E, constructed and operating substantially as and for the purpose described.

Third, arranging the plunger E with a disk-shaped collar i, or its equivalent, to operate in combination with the spring jaws H, substantially as and for the purpose specified.

Fourth, the arrangement of the circular portion e f on the cam C to operate in combination with the gate B and treadle d, substantially as and for the purpose set forth.

Fifth, the arrangement and combination of one or more adjustable carriages F, table J, and slide L, constructed and operating in the manner and for the purpose substantially as specified.

No. 38,925.—A. T. WRIGHT, of Oskaloosa, Mahaska county, Iowa.—*Improvement in Beehives.*—Patent dated June 16, 1863.—The hive is formed of a series of frames laid along-side of each other on a trestle or support and clamped together by bars, staples, and wedges. The roof is fastened on by hooks and an alighting board provided on the trestle.

Claim.—First, the employment or use of a series of frames f, placed upon a suitable trestle or support A, and secured in proper contact with each other by means of a clamping device formed of the longitudinal bars C C, cross-bars E, springs I, bars H, and with or without the wedges J, all arranged and combined substantially as and for the purpose herein set forth.

Second, the roof or cover k applied to the frames f and secured thereto and to the trestle A by means of the hook l, formed at the ends of rods L, provided with springs M, substantially as set forth.

Third, the trestle A, constructed substantially as shown and provided with an alighting board d, when used in connexion with the hive formed of the frames f clamped together substantially as herein described.

No. 38,926.—P. J. CLARK, of West Meriden, Conn., assignor to S. S. CLARK, of same place.—*Improvement in Lamp Burners.*—Patent dated June 16, 1863.—From the lid of the oil chamber arise two wick tubes with arc-shaped horizontal sections. The inner sides of these tubes are lower than the outer, and the tubes enclose an inner space. The wicks are operated independently by thumb-screw and pinion, and the other portions of the lamp are of the usual construction.

Claim.—The two inclined wick tubes d d, when closed by plates f at their edges or narrow sides to form a draught-space g, and provided with elevated outer sides 2 and inner sides 1 on a level with the upper edges of the plate f, and fitted at their lower ends in a box a, into which air is admitted into the space g, formed by the wick tubes and plates f, the wick tubes being curved in their horizontal section, and all arranged as and for the purpose herein set forth.

No. 38,927.—WILLIAM G. COOK, of New York, N. Y., assignor to ELLEN L. DEMOREST, of same place.—*Improvement in Sewing Machines.*—Patent dated June 16, 1863.—In this sewing machine the cloth is fed in between rollers and is corrugated so that the needle may pass straight through, making a running stitch. The rollers are in a vibrating frame which alternately brings the head of the needle against the thimble, and then detaching it therefrom feeds the cloth by means of a tooth past the head of the needle.

Claim.—First, the arrangement of the feeding and needle-holding rollers a a' b b' in a vibrating frame C D, substantially as and for the purpose herein specified.

Second, the reciprocating thimble G applied in combination with the feeding and needle-holding rollers a a' b b', to operate substantially as and for the purpose herein described.

Third, the tooth T applied to operate in combination with the reciprocating thimble G and feeding and needle-holding rollers a a' b b', to operate substantially as and for the purpose herein specified.

No. 38,928.—PLATT C. INGERSOLL, of Greenpoint, Kings county, N. Y., assignor to Himself and H. F. DOUGHERTY, of same place.—*Improved Mode of Fastening Doors of Hay and Cotton Presses.*—Patent dated June 16, 1863.—The improvement consists in a series of levers hinged upon the door of the press and engaging clevises in the frame by which the doors are closed and retained by catches.

Claim.—First, the levers C attached to the doors of a press with their fastenings E and F, as and for the purpose described.

Second, the levers I, and their mode of hanging, fastening, and operating, as and for the purpose specified.

Third, the projections G, for the purpose described.

No. 38,929.—H. W. HENSEL and L. D. VALLETON, of Philadelphia, Pa., assignors to H. W. HENSEL, of same place.—*Improvement in Jacquard Looms.*—Patent issued June 16, 1863; Antedated May 23, 1862.—This invention is designed for looms weaving coach lace, braid, and other narrow fabrics, and the improvement consists of a sliding bar having a horizontal projection arranged on the lathe of the loom, operating so as to keep the warp threads open while the reed is beating the weft thread up into the fabric.

Claim.—The sliding bar H and the horizontal projection i arranged on the lathe of a jacquard loom in respect to the warp threads, substantially as set forth, for operating on the said warp threads in the manner and for the purpose specified.

No. 38,930.—EDWARD DITHRIDGE, of Pittsburg, Pa., assignor to EDWARD D. DITHRIDGE, of same place.—Patent dated June 16, 1863.—Explained by the claims.

Claim.—The annealing of glassware by enclosing it immediately after it is made, and while yet hot, in close compartments or boxes of such size as that the air confined therein will be readily heated by the glass article or articles placed therein, and keeping the glassware thus confined and excluded from the external air until it becomes cold or nearly so; thereby securing the gradual cooling of glassware without the use of leers or the application of artificial heat other than that which is contained in the articles themselves when placed in the annealing boxes.

Also, the use of annealing apparatus for glassware, consisting of a series of compartments capable of being readily closed as the glass articles are placed therein, and constructed of wood, fire-brick, or other suitable substance, substantially in the manner and for the purposes hereinbefore set forth.

No. 38,931.—JAMES S. MCCURDY, of Brooklyn, N. Y., assignor to ELIAS HOWE, jr., of same place.—*Improvement in Sewing Machines.*—Patent dated June 16, 1863.—This machine makes a single-thread stitch, and the improvement consists in a detached independent looper which revolves in a circular groove formed in the solid end of the cylinder. The looper is an arc of more than half a circle, and is semicircular in section, forked on the rear

end, and with a small curved spring. It is rotated by a driving disk on the main shaft, and an intervening ring or plate keeps them from contact.

Claim.—First, the spring *m* applied to the detached or independent revolving looper, substantially as and for the purpose herein specified.

Second, the plate *k* applied in combination with the revolving looper and the looper-driving disk *G*, substantially as and for the purpose herein specified.

No. 38,932.—GEO. H. PARSONS, of East Eddington, Penobscot county, Me., administrator of HARVEY M. PARSONS, deceased, and THOMAS N. EGGERY, of Bangor, Me.—*Improved Machine for Sawing Shingles and Staves.*—Patent dated June 16, 1863.—The invention consists of a swinging or vibrating bolt-frame provided with dogs and a feed mechanism of ratchets and levers by which the bolt is fed automatically to the saw which cuts the shingles from the bolt. The bolt is grasped between cylinders under the influence of a weight, and the frame thrown forward towards the saw by a rack and pinion, and after the cut is made the frame is returned and the toothed cylinders revolving feed the bolt forward in the frame.

Claim.—First, the swinging bolt-frame *N*, arranged to operate in connexion with the circular saw *B*, through the medium of the segment rack *O*, pulley *P* on shaft *H*, arm *I*, lever *J*, and the serrated arm *D'*, or their equivalents, substantially as and for the purpose herein set forth.

Second, the manner of feeding the bolt *H'* forward in the bolt-frame, as herein described, to wit, by means of the ratchets *R W*, pawls *e f*, bent levers *S X*, connected by the bar *g* and the bar *m*, all arranged substantially as set forth.

Third, the toothed cylinder placed in the bolt-frame *N*, and arranged to operate as and for the purpose herein set forth.

No. 38,933.—JOHN POMEROY, of Derby, New Haven county, Conn., assignor to HENRY A. SHIPMAN and ROBERT HOADLEY, of same place.—*Improvement in Lamp-wick Regulator.*—Patent dated June 16, 1863.—The centre pin is upset so as to form a collar on each side of the spur-wheel and fill up the octagonal-shaped hole in the wheel so as to secure the wick-raising wheel firmly to the shaft.

Claim.—The combination of one or more spur-wheels with the centre pin or axis fastened together by upsetting the centre pin so as to fill a polygonal hole in each spur-wheel and form a collar on each side of it, substantially in the manner and for the purposes set forth.

No. 38,934.—LUCIUS W. POND, of Worcester, Mass., assignor to Himself and JOHN H. VICKERS, of same place.—*Improvement in Revolving Fire-arms.*—Patent dated June 16, 1863.—The chambers have lining thimbles or tubes which are connected at their front ends by a ring fitting against the front of the cylinder so that they can all be withdrawn for loading and all be replaced at once.

Claim.—The connexion of the several lining thimbles or tubes *C C* at their front ends by means of a ring or flange *D*, substantially as and for the purpose herein specified.

No. 38,935.—ALBERT BALL, of Worcester, Mass.—*Improvement in Self-Loading Fire-arm.*—Patent dated June 23, 1863.—This invention consists in a peculiar and simple arrangement of parts in a self-charging breech-loading fire-arm, whereby the cartridge as it is passed to the rear out of the longitudinal magazine is carried by the charging carriage upwards and forwards, thrust into its place, and securely locked there by the motion of the trigger.

Claim.—First, the combination of *D* and the charging carriage, as above set forth and described.

Second, the combination of the locking piece *P*, charging carriage *O*, and tumbler *I*, when constructed and operating in the manner and for the purposes above set forth and described.

No. 38,936.—NATHAN BADGLEY, of New York, N. Y.—*Improvement in Lever Jacks.*—Patent dated June 23, 1863.—This improvement consists in the form and application of a reciprocating lever on the inside of the jack frame and a curved slot with bearings in each of the sides of the frame.

Claim.—The shape and construction of the reciprocating lever *L*, operating as herein described.

Also, the curved slot with its bearings on each side of the frame *D*.

Also, the arrangement and combination of the devices of the plate *H*, lever *L* with *B*, arranged and combined as herein described.

No. 38,937.—MYRON J. BARCALO, of Mount Morris, Livingston county, N. Y.—*Improvement in Grain Separator.*—Patent dated June 23, 1863.—This invention consists in the application of a plate of metal immediately below the discharging point of the grain from the hopper and overlapping the point of junction of the upper riddle and the floor of the shoe, and also of the separating plate on the outer edge of the second riddle, the two being designed to secure efficient action.

Claim.—The application of the plate *f* to the upper end of the screen *B*, covering not only

the joint of the screen and the chute, but the rough edge of the wire gauge and several rows of the meshes nearest to the upper end of the frame of the screen, substantially as herein set forth.

Also, the separator plate *D* in combination with the plate *f*, and operating substantially as herein described and set forth.

No. 38,938.—GARDNER T. BARKER, of Pittsfield, Berkshire county, Mass.—*Improved Skating Boots.*—Patent dated June 23, 1863.—This improvement consists in a more effectual mode of securing the runner to the boot by making tenons on the runner which enter mortises on the sole and heel of the boot, giving a stronger attachment than can be secured by the usual screws.

Claim.—The improved construction of the runner *e* and its application to a boot or shoe, substantially as described.

No. 38,939.—HOMER J. BLAKESLEE, of Concord, Erie county, Pa.—*Improvement in Railroad Car Couplings.*—Patent dated June 23, 1863.—The object of the improvement is to enable the cars to become self-locked as they come in contact, and it is accomplished by causing the link which protrudes from one of the stocks to push against an inclined bar and trip the collar to which the locking bolt is attached, causing it to fall and connect the cars.

Claim.—The sliding bolt *E E*, the collar *H*, the falling bolt *F*, the link *N*, when the same are constructed as described, and in the aforesaid combination, for the purposes set forth.

No. 38,940.—PIERRE A. F. BOBOEUF, of Paris, France.—*Improvement in Preparations to serve as Hemostatic and Antiseptic Agents.*—Patent dated June 23, 1863.—The invention consists in preparing hemostatic and antiseptic agents by separating phenates and other alkaline salts from coal tar or other like substances containing phenic acid, creosote, &c.

Claim.—The manufacture and application, as hemostatic and antiseptic agents, of alkaline "phenates" and salts obtained by means of mineral and vegetable essential oils soluble in caustic soda or potash, in manner and for the purposes hereinbefore described.

No. 38,941.—E. S. BOYNTON, of Alexandria, Va.—*Improvement in Vault Covers.*—Patent issued June 23, 1863; antedated January 3, 1862.—The invention consists in placing sash in sliding grooves beneath the usual grated or perforated covers for vaults.

Claim.—Lighting and ventilating subterranean or lower apartments, by means of a metallic frame in combination with sash, with glass fitted and sliding therein, the glass being protected by an open iron grating, or perforated cover, constructed substantially as described.

No. 38,942.—N. A. BOYNTON, of New York, N. Y.—*Improvement in Stoves.*—Patent dated June 23, 1863.—As the claim indicates, the invention consists in making in one piece all the parts of the stove, which are enumerated and shown.

Claim.—Making the magazine cylinder, fire-chamber, fire-flues, gas-chamber, and window projections all in one piece, as herein shown and described.

No. 38,943.—CHRISTOPHER C. BRAND, of Norwich, Conn.—*Improvement in Breech-loading Fire-arm.*—Patent dated June 23, 1863.—This invention consists mainly in an arrangement for withdrawal of the flanged metallic case of the cartridge after discharge, and consists of a pendant hook which receives the lower edge of the flange of the cartridge casing, the hammer holding it firmly in the recess of the hook, being there held in suitable position to enter the orifice at the breech. The trigger is attached only to the stock, having no connexion with the lock when the breech-pin is withdrawn and being brought into contact by the closing of the breech-pin.

Claim.—First, the combination of a sliding breech-block with a hammer and pendant hook to seize and hold the cartridge by its flanged but, the arrangement being such that the hook is actuated by the hammer to operate in connexion therewith, substantially as herein set forth.

Second, the combination of a breech-pin sliding to and from the barrel, but out of the line of its axis, with a hook and hammer to seize and hold the cartridge by its flanged but, the arrangement being such as to allow the cartridge to move on the hook as fulcrum, as the breech-pin recedes from or approaches to the but of the barrel, substantially as herein set forth.

Third, in combination with a sliding breech-pin provided with hooks, or their equivalent, to receive and hold the cartridge, and moving together with the lock in a recess in the stock, a trigger directly connected with the stock and operating the lock only when the breech is closed, substantially as herein set forth.

No. 38,944.—SYLVESTER BRISACK, of Walton, Delaware county, N. Y.—*Improvement in Railroad Chairs.*—Patent issued June 23, 1863; antedated October 21, 1862.—This chair consists of an iron block grooved in its upper surface to admit of two ends of rails being slipped in and meeting midway, the groove being of such a shape that it may be placed under the rail without entering the rail at the end, and being fastened in its position by a wedge, which holds the foot flange of the rail and supports the track flange.

Claim.—The construction of a railroad chair in such a manner that it may be used for coupling the rails or fastening them on the ties, and may be placed on the rails without displacing them; and also the entire inner construction as shown in the drawings and description, and also the entire form of the wedge as so shown, which together are so constructed as to securely fasten the rails in the chair and also act as a bracket to support the head of the rail and prevent its springing or turning, and so constructed also that the pressure of the wedge acts as a cramp or spring on the rail so as to hold the rail and wedge firmly when contracted by cold, and allow the parts to give when expanded by heat, so as to avoid breaking, and also so as to receive all pressure on the rail to act directly on the centre of the web and foot of the rail and on the centre of the chair.

No. 38,945.—JAMES BUCKNELL, of Decorah, Winneshek county, Iowa.—*Improvement in Apparatus for Evaporating Saccharine Liquids.*—Patent dated June 23, 1863.—This evaporator consists in a series of movable pans on wheels, which run on an elliptical track, exposed during a part of their revolution to the heat of the furnace; also a stationary pan, back of the movable pans, and exposed to the escape heat from the main furnace.

Claim.—First, the arrangement of two endless tracks B C, in combination with wheeled-pans A, and fire-place E, constructed and operating in the manner and for the purpose substantially as shown and described.

Second, the arrangement of the double flues c d and stationary pan G, in combination with the fireplace E, flues D, and movable pans A, constructed and operating substantially as and for the purpose specified.

No. 38,946.—FREDERICK D. CHASE, of Boston, Mass.—*Improvement in Ventilators.*—Patent dated June 23, 1863.—The smoke-pipe projecting through the deck is surrounded by a frustum, which keeps it in place and out of contact therewith; above this is a cap ventilator, larger in diameter than the smoke-pipe, and passing between the latter and the upper edge of the frustum. In the annular orifice between the cap and the pipe the proceeds of ventilation pass, having escaped from the cabin through holes in the base of the frustum, the latter forming the deck plate.

Claim.—The above-described deck-guard and ventilator, the combination of the annular rain cap F and air opening b, with the smoke-pipe E, the ventilating passage a and its air-receiver G, provided with inlets and a register as specified.

Also, the combination of the cap plate A with the air-receiver G, its smoke-pipe E and fastening plate B, by means of the adjustable pipe C applied to, and so as to be capable of sliding into the frustum D, and made to circumscribe the smoke-pipe, substantially as and for the purposes hereinbefore specified.

No. 38,947.—G. F. J. COLBURN, of Newark, N. J.—*Improvement in Glass Chimneys for Lamps.*—Patent issued June 23, 1863; antedated October 3, 1862.—The invention consists in moulding or casting glass handles upon the sides of the chimney.

Claim.—A glass lamp chimney A, with one or more glass handles or projections B, substantially as described.

No. 38,948.—EMANUEL COLE, of Dryden, Tompkins county, N. Y.—*Improvement in Cleaning, Hulling, and Grinding Grain.*—Patent dated June 23, 1862.—In this mill the lower stone is rotated by the revolution of its supporting spindle, and the upper stone is suspended by pivots in a frame B, which sets on the main frame of the husk. When the upper stone needs dressing the frame B is run out on the ways, and the lid being removed, the screws F are turned so as to withdraw them, and the stone is turned over upon its pivots E so as to expose its working surface.

The cleaned or hulled grain or the meal is received as it falls from between the stones in an inverted conical chamber, where it is collected, and from whence it is discharged by the opening at the bottom.

Claim.—First, the means substantially as herein described by which the stone D is secured in the removable frame B, for the purpose set forth.

Second, the means substantially as herein described by which the top stone D and its connexions are supported in a fixed plane and removed, and replaced for the purposes and with the advantages specified.

Third, the construction and arrangement of the curb M, substantially as and for the purpose herein described.

No. 38,949.—JACOB B. CROWELL, of Greencastle, Franklin county, Pa.—*Improvement in Manure Distributors.*—Patent dated June 23, 1863.—This consists of a box or trough with openings in the bottom, and a roller provided with stirrers and wipers rotating therein: the said roller being thrown into or out of gear with the driving crank by means of a lever and clutch, which connects by crank and pitman with the wheel on the driving shaft.

Claim.—The rocking shaft, provided with the stirrers H and G and the wipers D, in the manner and for the purposes set forth.

Also, in combination with the rocking shaft, as described, the clutch P, crank O, and pitman N, all constructed and operating in the manner and for the purposes specified.

No. 38,950.—GEORGE N. DOOLITTLE, of Louisville, Ky.—*Improvement in Hay and Cotton Presses.*—Patent dated June 23, 1863.—This is a horizontal press, and the follower is worked by a sweep whose shaft passes through the box behind the follower, and carries a crank which connects by a pitman with the end of the follower rod.

After one revolution the pitman is detached and the shaft caused to wind a rope which passes over the end of the follower rod, and thereby plunge it into the press.

Claim.—The shaft D passing through the press-box A, and provided at its upper end with a sweep E, and at its lower end with a crank F, in combination with a pitman G, plunger B, and plunger-rod C, and rope J, all arranged in relation with the press-box A to operate as and for the purpose specified.

No. 38,951.—HARRISON DOOLITTLE, Alton, Ill.—*Improvement in Churns.*—Patent issued June 23, 1863; antedated November 3, 1862.—The improvement consists in a metallic lining for a churn which has slats on its inside, provided with holes to prevent the collection of cream upon them, and with holes in the bottom which allow the buttermilk to drain off when the lining containing the butter is raised from the churn.

Claim.—The lining figure 2, made of tin or zinc, when made with the slats E, and the holes F and the holes T, in the manner described, and for the purpose specified.

No. 38,952.—W. DOWELL, of Hicksville, Defiance county, Ohio.—*Improvement in Double Trees.*—Patent dated June 23, 1863.—The double tree has a rod behind it working in clip guides, and the double tree and rod are pivoted to a box on each end, which is provided with a spiral spring affording an elastic bearing to the ring-bolts, to which the single trees are attached.

Claim.—The tubes B B attached to the ends of the double-tree A, as shown, provided with the springs D and rods E, and connected by the rod C, all arranged substantially as and for the purpose specified.

No. 38,953.—JAMES O. DUGAN and JEREMIAH WALKER, of Yarmouth, Cumberland county, Maine.—*Improved Box Sieve.*—Patent dated June 23, 1863.—The round sieve is enclosed in a case, and is there subjected to a reciprocating rotary and vertical motion, sifting its contents into a chamber below.

Claim.—In combination with the sieve its case, and the machinery for imparting to the sieve vertical and reciprocating rotary movements as described, the supporting bar D and the guide cross E, the whole being applied together and to the case substantially in manner and so as to operate as hereinbefore specified.

No. 38,954.—DANIEL P. FALES, of Poultney, Vt.—*Improvement in Sleighs.*—Patent issued June 23, 1863; antedated January 11, 1862.—The improvement consists of a continuous metallic brace which extends from the runner to the post under the bench, thence to the runner again, and so on, according to the number of benches.

Claim.—The combination of the continuous brace c with the runner A, with the knee or post B and beam D, as herein described and set forth.

No. 38,955.—CHARLES W. FELT, of Salem, Mass.—*Improvement in Type-Setting Machines.*—Patent dated June 23, 1863.—This machine is to be used in conjunction with a type-setting machine to "space" and "justify" the type in the line; that is to say, to secure an equal distance between the words, and to make the lines the same length. When the type is being set up, "spaces" of peculiar construction are inserted in the place of those ordinarily employed to indicate by the mechanism where "spaces" of the common kind should be inserted, and the line of type is then placed in a channel having its top open for insertion and for the extraction of the temporary "spaces." The series of devices by which the box containing "spaces," and located above the line of type, is moved along and checked at the required point; the temporary "spaces" extracted; and the line exactly "justified," cannot, however, be minutely detailed within the limits of an abstract.

Claim.—Justifying lines of type by means of mechanism which operates wholly or partially in the manner substantially as described.

No. 38,956.—HENRY FRANCE and CHARLES L. KNOWLES, of Sacramento, Cal.—*Improvement in Setting Steam Boilers.*—Patent dated June 23, 1863.—The space under the boilers is divided by bridge walls with arched openings to keep the direct current of air from the steam boilers, and underneath the flues is a plate deflecting the draught to a side flue, from whence it passes by a backward and forward motion through the series of flues in the boilers, being received at each end by connecting flues.

Claim.—First, the arrangement of two or more pits H H', formed below a boiler A by means of one or more bridge walls F, with an arched opening G at a certain distance below the surface, as and for the purpose described.

Second, the horizontal plate d, under the flue or flues B of a steam boiler A, in combination with the side flue I, constructed and operating substantially as and for the purpose specified.

Third, the arrangement and combination of the pits H H', side flue I, flue or flues B', in the boiler A', rear connecting flue L, and flue or flues B, in the boiler A, all constructed and operating substantially as and for the purpose set forth.

No. 38,957.—HENRY FRANCE and CHARLES L. KNOWLES, of Sacramento, Cal.—*Improvement in Setting Tubular Steam Boilers*.—Patent dated June 23, 1863.—The heat, after passing through the flues to the rear end of the boiler, is deflected by a horizontal plate above the level of the flues into pits under the boiler and to the extreme front, passing up the front and along side flues to the stack.

Claim.—First, the pits C C' and arched bridge wall B, in combination with a tubular or flue boiler and with the side flues F, constructed and applied substantially as and for the purpose shown and described.

Second, the deflecting plate *a* over the ends of the tubes T, in combination with the pits C C', bridge wall B, vertical flues E, and side flues F, all constructed and operating substantially as and for the purpose shown and described.

Third, the application of the side flues F, in combination with a steam boiler A, constructed and operating substantially as and for the purpose specified.

No. 38,958.—JOEL C. GARRETSON, of Pilot Grove, Lee county, Iowa.—*Improvement in the Manufacture of Sugar from Sorghum*.—Patent dated June 23, 1863.—The pan has a number of transverse partitions communicating with each other by holes, to each of which a gravitating door is attached. A skimmer extends the length of the pan, having slots corresponding to the salient partitions over which it extends.

Claim.—The arrangement and combination of the grading pans B with shutters D, at the end of each partition A, with skimmer F, extending over all the apartments B, arranged and combined for the purpose of grading and granulating sugar in the mode and manner described.

No. 38,959.—C. G. GRABO, of Greenfield, Wayne county, Mich.—*Improvement in Straw Cutters*.—Patent dated June 23, 1863.—The straw is fed in a horizontal trough to the rotary disk knives, which are adjustable obliquely in their sockets, and cut against the acute angular edge of a bar, between which and the frame is interposed a stratum of elastic material. The cutter wheel is likewise adjustable toward the stationary edge by means of a screw and jam nuts attached to the journal box.

Claim.—Interposing an elastic material *x* between the stationary cutter bar *a* and the frame of the straw cutter, substantially in the manner herein described.

Also, the combination of the rotary cutter wheel G with the stationary tapering cutter bar *a* and interposed elastic material *x*, substantially in the manner and for the purpose herein described.

Also, in combination with the rotary cutting wheel the adjustable journal box K, for the purpose of adjusting the cutter wheel towards the stationary cutting edge *a*, substantially in the manner herein described.

Also, in combination with the yielding and tapering stationary bar *a*, the adjustable cutting blades *d*, substantially in the manner and for the purpose set forth.

No. 38,960.—JAMES B. GRAY, of Hudson, St. Croix county, Wis.—*Improvement in Lamp Burners*.—Patent dated June 23, 1863.—The lamp cap is horizontally divided and hinged so as to be swung round to trim the wick without removal of the chimney; and the wick tube is adjustable vertically by means of a pinion and rack so as to enable it to be depressed out of range of the swinging cap.

Claim.—First, the combination of the divided lamp cap with a vertically adjustable wick tube, substantially as and for the purposes herein described.

Second, the hooked friction spring *d*, or its equivalent, in combination with the adjustable wick tube and the divided lamp cap, substantially as described.

No. 38,961.—SOLOMON G. GRAY, of Boston, Mass.—*Improvement in Shirt Collars*.—Patent dated June 23, 1863.—The object of this improvement is to turn over the collar in such a way as to allow the outer portion a larger curve to avoid the puckering of the material.

Claim.—A shirt collar in which the part B is turned over on to the part A, in the curved or angular line *x*, instead of a straight line, in order to prevent the part A from wrinkling, substantially as described.

No. 38,962.—E. C. HAMLIN, of Pavilion, Genesee county, N. Y.—*Improved Lubricator for Locomotive Engines*.—Patent issued June 23, 1863; antedated December 27, 1862.—The invention consists in the application to locomotives of pipes leading from an oil-chamber to the important working parts of the machinery, the oil pipe being enclosed by a branch pipe from the boiler to keep the oil in a flowing condition. Also in the arrangement of rods and cocks to enable the engineer to lubricate the parts without leaving his usual position on the engine.

Claim.—The arrangement of the oil pipe C (on locomotives) with the branches E and F, the cocks *f g* and *h*, and their connecting rods *a b*, &c., in the manner and for the purposes specified.

Also, combining the branch oil pipes E and F and the branch steam-pipe G, the cocks *f g* and *h*, and their connecting rods *a b*, and *c*, with the main oil pipe C and the steam-pipe B, in the manner and for the purpose specified.

No. 38,963.—JOHN K. HARRIS, of Allenville, Switzerland county, Ind.—*Improvement in Presses for Baling*.—Patent dated June 23, 1863.—The improvement consists in the manner of raising and releasing the weighted plunger, whose successive blows pack the material preparatory to the final pressing. A bevel wheel under the bed of the press operates a wheel which has a projection on its upper end that engages a rope lifting the plunger; at a certain part of the revolution the rope is cast off, and the plunger falls, the wheel being continuously revolved.

Claim.—The wheel F, provided with the ledge H, the rope or chain E, and follower or plunger C, all arranged and combined to operate as and for the purpose herein set forth.

No. 38,964.—JONATHAN F. HORN, of Boston, Mass.—*Improved Washing Machine*.—Patent dated June 23, 1863.—The vibratory dasher operates against a concave bottom, rack, and side racks, which have an adjustability toward and from the dasher; the dasher shaft being weighted to increase the force of the stroke of the dasher.

Claim.—The improved machine, made substantially as described, that is to say, with a vibratory dasher, a bottom rack, and two movable side racks, constructed, arranged, and applied together in manner and so as to operate substantially as described.

And, in combination therewith, the loaded momentum lever, or lever and weight arranged and applied to the dasher so as to operate the same as described.

No. 38,965.—DAVID G. HUSSEY, of Nantucket, Mass.—*Improvement in Horse Rakes*.—Patent dated June 23, 1863.—The improvement is in the attachment of the rake teeth to the head which is by making the loop at the end of the tooth to project into a tube in which it is secured by the passage through it of a rod.

Claim.—The attaching of the teeth L to the shaft or rake-head J, by means of the rods *r*, fitted loosely in tubes *q*, which are secured to the shaft or rake-head substantially as and for the purpose set forth.

No. 38,966.—JAMES INGERSOLL, of Grafton, Loraine county, Ohio.—*Improvement in Turn Bridges*.—Patent dated June 23, 1863.—The bridge is attached to a turn-table which surrounds the base of a tower, the latter having a turning cap from which suspension rods support the outer end of the bridge.

Claim.—The bridge D, in connexion with the tower C and turn-tables B and F, all arranged to operate substantially as set forth.

No. 38,967.—JAMES A. LAWSON, Troy, N. Y.—*Improvement in Cooking Stoves*.—Patent dated June 23, 1863.—Beneath the grating are plates forming a hopper to direct the ashes to the pan below, which is withdrawn by a handle, having first removed the end plate which forms the door of the ash-chamber.

Claim.—The employment of the ash-pan drawer D, in combination with the hopper C C', in the manner substantially as herein described and set forth.

Also, the adjustable end E, arranged and combined with the ash-pan drawer D, substantially as and for the purposes herein described and set forth.

No. 38,968.—S. P. LOOMIS and T. HAWK, Mauch Chunk, Carbon county, Pa.—*Improvement in Sash Stop or Fastening*.—Patent dated June 23, 1863.—The invention consists of a roller fitted in an inclined recess on one side of the window frame. The weight of the sash binds the roller in the narrowing recess, and thus retains itself at the desired height, the roller being lifted at will by a lever, and the sash close-fastened by a slide bolt.

Claim.—The roller D, placed in the case C, which is provided with an inclined back *a*, and fitted in one side of the window frame, in combination with the lever F and the slide bolt G, all arranged substantially as and for the purpose herein set forth.

No. 38,969.—FREDERICK H. MANNY, Rockford, Winnebago county, Ill.—*Improvement in Harvesters*.—Patent dated June 23, 1863.—The invention consists in severing the rear frame timbers of the machine which sustain the rear end of the platform at or near their points of intersection with the side pieces of the frame, and in suspending them and the platform in adjustable brackets. The object is to prevent the tilting of the frame in short or lodged grain.

Claim.—In that class of harvesting machines having the finger beams forward of the driving wheel, the combination of the hinged platform with the divided frame when made adjustable, substantially in the manner and for the purpose described.

No. 38,970.—FREDERICK H. MANN, Rockford, Winnebago county, Ill.—*Improvement in Harvesters*.—Patent dated June 23, 1863.—The improvement consists in hinging or pivoting the shield-board to the panel of the divider and giving it a vertical adjustability that permits it to be raised for reaping, and lowered when used as a mower, to bring the track-clearer into action.

Also, in combining with the hinged shield-board a supplementary divider to enable it to be used as a harvester.

Claim.—The shield-board, constituting both a separator and track-clearer, substantially as herein described, for the purposes set forth.

Also, the combination of an adjustable shield-board, which acts both as a separator and track-clearer, with a supplementary divider, substantially in the manner and for the purpose described.

No. 38,971.—J. F. MCKRAY, Harmonsburg, Crawford county, Pa.—*Improvement in Mill-stone Bush*.—Patent dated June 23, 1863.—The object of this improvement is to protect the spindle which passes through the bush of the bed-stone from foreign substances, and to keep it lubricated. The devices are defined in the claim.

Claim.—First, the application of the cap D with oblique notches *e*, in combination with the tapering collar *d* of the spindle, and with the main cap E of the bush, constructed and operating in the manner and for the purpose substantially as specified.

Second, the partition plate *g*, in combination with the annular lip *h*, projecting from the inner surface of the cap E, as and for the purpose shown and described.

Third, the tapering oil-cups *m* in the interior of the bush A, in combination with the packing and with the follower B, constructed and operating substantially as and for the purpose set forth.

No. 38,972.—BARNEY M. MENKE, of Cincinnati, Ohio.—*Improvement in Teakettles*.—Patent dated June 23, 1863.—A thimble or flange on the lid sets over the bail-ear, and is there secured by the insertion of the bail, while permitting the free revolution of the lid.

Claim.—As an improved manufacture of bailed and covered hollow-ware, the provision of the thimble F *ff'*, adapted to fit over the bail-ear, and to confine the lid while permitting its free horizontal vibration, the whole being secured by the insertion of the bail, in the manner set forth.

No. 38,973.—SILAS MERRICK, New Brighton, Beaver county, Penn.—*Improvement in Railroad Trucks*.—Patent dated June 23, 1863.—The invention consists in mounting the friction rollers forming the side bearings of the cars in guides curved in an arc of which the king-bolt is the centre, and allowing them end play to accommodate themselves to the lateral movement of the car.

Claim.—The combination of the guides J L, curved in the arc of a circle, of which the king-bolt forms the centre, with the conical friction wheels K, rolling upon a flat surface, and having end play in their bearings, when constructed, arranged, and operating substantially in the manner described for the purposes set forth.

No. 38,974.—HERRMAN MILLER, of New York, N. Y.—*Improvement in Sheet Metal Cans*.—Patent dated June 23, 1863.—This joint, while it forms an effectual lap and clamp joint, does not project laterally beyond the sides, nor vertically beyond the top or bottom of the vessel. Its form, however, will be better understood by reference to the illustration.

Claim.—Forming the junction or union between the sides and the top or bottom of a can or other vessel made of sheet-metal by means of the double recessed clamping lap joint herein described.

No. 38,975.—W. K. MOODY, of Hartford, Washington county, Wis.—*Improvement in Stump Extractors*.—Patent dated June 23, 1863.—The machine runs on wheels except when it is arranged for working, when it is lowered by a lever and cam so that the frame rests upon the ground. The extractor consists of a pivoted lever operated by a windlass with a pendent pawl which rotates a ratchet wheel, around whose shaft is a chain hooked under a spur root of the stump.

Claim.—First, the combination of the lever O, provided with pawl *h*, ratchet L, with chain M attached, and the windlass P, all arranged and placed on a suitable framing to operate as and for the purpose herein shown and described.

Second, the vertically sliding and adjustable bars D D, having wheels H at their lower ends, in combination with the cams I, said parts being applied to the framing of the machine in the manner as and for the purpose set forth.

No. 38,976.—ROBERT MORRISON, of Newcastle-upon-Tyne, Great Britain.—*Improvement in Valves for Steam Hammers*.—Patent dated June 23, 1863.—Patented in England, December 16, 1859.—The steam is admitted below or above the piston at will, so that the hammer may be worked single-acting or instantly changed to double-acting, when it is desired to increase the weight or rapidity of the blows.

Claim.—The use of a valve in steam hammers, when so arranged with reference to the parts that both ends of the steam cylinder can be placed in communication with each other at the same time, communication with the boiler being then cut off, the same valve being also so arranged that whenever steam shall be admitted to one end of the cylinder, communication between that end and the other shall be cut off, substantially as described and for the purpose specified.

No. 38,977.—SAMUEL NOWLAN, of New York, N. Y.—*Improvement in Coffee-Roasting Apparatus*.—Patent issued June 23, 1863; antedated November 12, 1862.—The roasting cylinder is connected through the trunnions by a pipe with a worm in a tank so as to condense the volatile oil resulting from the dry distillation of the coffee.

Claim.—First, the method herein described of collecting the volatile products of coffee and condensing the same, substantially in the manner and for the purpose herein set forth.

Second, combining with a revolving coffee-roaster of otherwise ordinary construction and operation a serpentine or other suitable condenser, in the manner herein described, so that the vapors or volatilized essential oils shall pass into said condenser, to be collected, as set forth.

No. 38,978.—F. C. PAYNE, of New York, N. Y.—*Improved Sofa Bedstead*.—Patent dated June 23, 1863.—The sofa seat is permanent, and the mattress is attached to a hinged frame, and this again to the sofa frame; being folded away in the space under the seat when out of use.

Claim.—A sofa bedstead having a fixed or permanent seat *a*, and a bed or mattress C, formed of two parts *ff'*, attached to frames B D, connected to each other by hinges *d*, and to the sofa by hinges *e*, and arranged to fold within a case or box *d* within the sofa underneath the seat *a*, substantially as herein shown and described.

No. 38,979.—EZRA PECK, Middleport, Iroquois county, Illinois.—*Improvement in Corn Planters*.—Patent dated June 23, 1863.—This planter has a seed box preceding the wheels; the bottom of the box is arc-shaped, and a segmental seed slide traverses therein, being operated by a lever and rod from an arm which is tripped by a tappet on the revolving wheel, dropping seed behind the share which has furrowed the ground.

Claim.—The arrangement of the working beam E', levers *f*, and tappets *g*, in combination with rods *e*, bell-crank levers *d*, and the segmental seed slides E, all constructed and operating substantially as and for the purpose specified.

No. 38,980.—WILLIAM PETTIT, of Philadelphia, Pa.—*Improvement in Connexion of Car Trucks*.—Patent dated June 23, 1863.—The centre pin which connects a car or locomotive to its truck is placed back of the centre of the truck, to enable the latter to accommodate itself more readily to abrupt curves by the length of the leverage being increased between the point where the front wheels are in contact with the rails and the centre pin, so as to guide the truck into the curve with less abrasion between the wheels and the rails.

Claim.—Arranging the centre pin which connects a car or locomotive to the truck, and on which the truck turns, in a position to the rear of the centre of the truck and between the two axles of the same, as set forth for the purpose specified.

No. 38,981.—CHARLES P. PHILIPPI, of Crown Point, Lake county, Ind.—*Improvement in Drilling Machines*.—Patent dated June 23, 1863.—This invention consists of a horizontal drill stock working a sleeve and provided with a drill, in combination with a vertically and laterally adjustable rest, upon which the metallic plate is presented to the drill.

Claim.—The arrangement and combination of the adjustable square screw Q with cylinder N and drill M, arranged and operating on the table A with the adjustable bed-plate B, as herein described, for drilling holes in plates of metal.

No. 38,982.—SAMUEL PIERCE, of Troy, N. Y.—*Improvement in Ranges*.—Patent issued June 23, 1863; antedated April 29, 1863.—At the back of the range is a reservoir for coal which feeds itself down into the grate as the lower portion burns away. Its motion is favored by the inclined floor at the back of the grating, constituting the spout of the coal-bunker.

Claim.—The supplying of the fire-chamber *d* at the rear end thereof by means of the reservoir and feeder *a*, in combination with the triangle concave fire-brick back *b* and the fire-chamber *d*, in the manner substantially as herein described and set forth.

No. 38,983.—CHARLES V. HANCOCK, of Bangor, Maine.—*Improvement in Skates and Fastenings*.—Patent dated June 23, 1863.—The improvement consists in a heel and a toe socket, which are mutually approached by a screw rod working in pendants from the respective pieces so as to clamp the boot of the wearer to the wooden sole, which is secured to the runner.

Claim.—The combination of the devices A B D E F and G, as arranged with the wooden sole of the skate, as herein described and for the purposes set forth.

No. 38,984.—LEWIS RAYMOND, of New York, N. Y.—*Improvement in the Construction of Metallic Boats*.—Patent dated June 23, 1863.—The improvement relates to facilities for building metallic boats, and consists in a removable skeleton boat frame constructed so that it can be secured to a keel and stem and stern posts, to which the sides of the metallic boat are made fast in the process of building, and removable when completed therefrom, leaving the keel, stem, and stern posts in the metallic shell.

Claim.—A removable skeleton frame for the purpose of building metallic boats, consisting of a combination of ribs E, clamps H, stringers F, and aprons I, or their equivalents, and constructed substantially as described, in such manner that it can be secured to the keel, the stem, and stern post of the boat by screw bolts or other fastenings, and can be removed therefrom after the removal of these fastenings, substantially as herein set forth.

No. 38,985.—RANSOM S. REYNOLDS, of New Haven, Conn.—*Improvement in Grain Dryers*.—Patent dated June 23, 1863.—The grain to be operated upon is admitted from a hopper to a shaking riddle, thence by a guiding board and a hole, &c., to the endless apron, which carries it forward while the rotary stirrers agitate it. It then falls on to another board, and through similar passages to the former, and reaches another endless apron, which carries it to the discharge orifice. Warm air is conducted into the machine, and a suction fan removes the light impurities and moisture.

Claim.—The arrangement of the endless moving aprons in their respective chambers, with their inlet and exit passages for the transmission of grain through them when said chambers are furnished with heated and cool air, substantially in the manner and for the purposes herein described.

Also, in combination with the travelling endless belt W, the series of stirrers hung upon hinged arms for the purpose of allowing them to yield to the depth of grain on said belt, and to continue their rotation at whatever position they may assume, substantially as described.

No. 38,986.—A. P. RICHARDSON, of Worcester, Mass.—*Improvement in Boot Trees*.—Patent dated June 23, 1863.—This is an arrangement for expanding the boot tree by the rear propulsion of the hind member of the tree under the rotation of a cam operated by the plunging middle piece. A vibrating catch-piece pivoted to the plunger retracts the foot-piece by the withdrawal of the plunger.

Claim.—First, the combination of the hooked cam m with rod B and the movable part D, substantially as set forth.

Second, the combination of catch-lever a with the foot-piece and rod B and movable part D, substantially as set forth.

No. 38,987.—THOMAS SANDS, of Gilford, Belknap county, N. H.—*Improvement in Making Knitting Needles*.—Patent issued June 23, 1863; antedated June 10, 1863.—This machine takes the steel wire from the coil, straightens it, punches the eye, slabs down the wire, and cuts it off ready for the finisher, in whose hands it is polished, and the hook bent to the required form. The series of motions cannot be clearly described in the present limits.

Claim.—First, the combination in their relative order of the straightener, the eye punch, the traversing platform, the cutting-off apparatus, and the rotary burr for slabbing down the needle.

Second, holding the wire by means of the punch, which remains in the eye, and the simultaneous movement of the traversing platform, which carries the wire forward for the subsequent operations.

Third, the concave or grooved burr, when used for forming needles in the manner described.

Fourth, the combination of the eccentric 16 and revolving burr 30, when so set with reference to each other as to give the required taper to the needle.

Fifth, the combination of the traversing platform 3, the eye punch 48, and cutter 39, operating in conjunction with each other as described.

Sixth, the combination of the cam D and the eye punch 48, when by reason of the breadth of this cam the eye punch is caused to retain its hold of the wire during its traverse towards the cutter, a distance equal to the length of a needle, substantially as herein described.

No. 38,988.—THOMAS SANDS, of Gilford, Belknap county, N. H.—*Improvement in Machine Knitting Needles*.—Patent issued June 23, 1863; antedated February 23, 1863.—Explained by the claim.

Claim.—A machine knitting needle that is rigid or inflexible at the bend, and flexible either upon the barb or upon the shank, or upon both barb and shank, substantially as herein described.

No. 38,989.—JACOB SHAVOR, of Troy, N. Y.—*Improvement in Stoves*.—Patent dated June 23, 1863.—The improvement consists in the manner of introducing air into the stove, and of fastening the upper, middle, and lower sections together. Air is admitted by a tube up the back of a fire cylinder, between the back corner flues, to the fire chamber, through the cone grate which surmounts the cylinder. The parts are bolted together by screw rods

and nuts, so that by the imposition of a nut on each section the remainder may hold firmly when the top is detached.

Claim.—The combination of the air tube E, the chamber B in the conical ring or grate A, communicating with the fire-chamber by means of the apertures i and the triangular flues, the whole being arranged and combined in the manner substantially as herein described and set forth.

Also, the method of securing the said upper and lower sections by means of the rods D D D D, with the nuts e e e e and upper nuts f f f f thereon, arranged substantially as herein described and set forth.

No. 38,990.—PETER SHOUDY, of Canajoharie, Montgomery county, N. Y.—*Improved Washing Machine*.—Patent dated June 23, 1863.—The suds box has a semi-cylindrical bottom, and the dasher shafts are pivoted to a transverse bar. The perforated dashers have a corrugated rubbing surface, and an independent reciprocating motion on their shaft, to and from the inclined boards.

Claim.—In combination with the concave circular-shaped wash box, the oscillating and perforated dashers b and the inclined boards d, substantially in the manner and for the purposes herein described.

No. 38,991.—EDWIN A. SKEELE, of St. Louis, Mo.—*Improvement in Fireplaces*.—Patent dated June 23, 1863.—This consists of a register plate over an open grate fire and under the throat of the chimney, whereby the flue space is graduated or entirely closed.

Claim.—The arrangement of the inclined adjustable damper C with reference to the bar f, plate d, screw h, fire back A, and frame B, all being constructed and arranged substantially as herein described for the purposes set forth.

No. 38,992.—ALLEN S. SWEET, jr., of Detroit, Michigan.—*Improvement in Smoke Stacks for Locomotives*.—Patent dated June 23, 1863.—This is a device for extinguishing sparks in the stack, and consists of an interior stack with perforated sides, within which is an upward blast of escape steam, and a narrowing, deflecting throat, surrounded by an exterior casing with a narrowing throat. The steam blast occupies the central portion of the inner stack, out of direct contact with the screens through which the results of combustion pass to their exit.

Claim.—In the stacks of locomotives the employment of the concentric deflector E, or equivalent contracted casing, arranged over the exhaust nozzle or nozzles, and within any suitable casing or casings of perforated material, so as to operate substantially in the manner and for the purpose herein set forth.

Also, in the stacks of locomotives the combination and arrangement of an inner perforated stack or strainer with a constructing ring or rings, a narrow annular space a, and an external stack of the form and character substantially as described; that is to say, the inner stack D G I, or its equivalent, the contracting ring E, and the outer chamber I K L are claimed, arranged substantially as described, so as to present a narrower space a around the ring E than is afforded above, substantially as and for the purpose herein set forth.

No. 38,993.—N. W. TAYLOR and J. W. BRIGHTMAN, of Cleveland, Ohio.—*Improvement in Paper-drying Machines*.—Patent dated June 23, 1863.—This is an improvement on the present inventor's patent of April 29, 1862. The inside of the dryer is divided by horizontal adjustable partitions, and the paper is passed in a continuous sheet, being guided and carried through the chambers by passing over and under a series of rollers, which are driven by pulleys on their shafts, which project through the casing. A blast of heated air is passed through the chambers by a fan, the air coming in contact with heated pipes previous to its entrance into the chambers.

Claim.—First, the combination of partitions G, the openings d, and the adjustable parallels h, arranged and operating as herein set forth.

Second, in connexion with a paper-drying machine, the adjustable platform P, rack and pinion P', shaft p, and crank p', when combined and operating as and for the purpose set forth and described.

Third, the rotating fan N'', in combination with the chamber H'', perforated partition H', and chamber L and steam pipes z, all arranged and operated substantially as and for the purpose specified.

No. 38,994.—ISAAC P. TICE, of New York, N. Y.—*Improvement in Concussion Fuze for Shells*.—Patent dated June 23, 1863.—The claims fully explain this invention.

Claim.—First, the construction of the tube or plug of a percussion fuze with two separate chambers or compartments, one for containing a fulminate and the other for containing sand or other hard granular substance, so arranged and combined, by means of a lock, that by the impact which is given to the projectile by the firing of the charge of the gun, the said lock may be unlocked to allow communication between the said chambers, to permit the admixture of their contents, substantially as and for the purpose herein specified.

Second, so constructing and arranging the parts of the above-mentioned lock that, though it shall be unlocked by the concussion produced by firing off the charge of the gun, the

chambers containing the fulminate and hard granular substance shall not be allowed to communicate until after the projectile has left the gun, substantially as and for the purpose herein set forth.

Third, the admixture of fulminates used in a percussion fuze with cotton, gun-cotton, wool, sawdust, or other soft material, substantially as and for the purpose herein described.

Fourth, the lining of the sides of the chamber provided in a percussion fuze tube or plug for containing fulminate with flannel, cloth, or other soft material, and the placing of cushions of soft material at the ends of the said chamber, substantially as and for the purpose herein specified.

Fifth, the employment in the percussion fuze of an explosive projectile of two fulminates, one of which is more sensitive and easily ignited, and the other of which burns more slowly or with a stronger flame, as fulminate of mercury, substantially as and for the purpose herein specified.

No. 38,995.—WM. H. TOWERS, of New York, N. Y.—*Improvement in Stirrups*.—Patent issued June 23, 1863; antedated June 18, 1862.—The stirrup is made with a shorter outer bar, so as to give an inclination downward and inward to the tread, for the purpose of better conforming to the bearing weight of the rider, and bringing the feet and legs to the proper position.

Claim.—Forming the outer side bars A of stirrups shorter than the inner ones B, for the purpose of giving the foot-rests or plates C a corresponding inclination downward toward the horse's side, substantially in the manner and for the purpose herein set forth.

No. 38,996.—EDWARD TRENHOLM, of Washington, D. C.—*Improvement in Snow Plough and Scrapers for Railroads*.—Patent dated June 23, 1863.—Scrapers of any desirable form are attached to helical springs, which are wound round bars or pendants from the car frame so as to give the required pressure without danger of jamming or catching obstructions.

Claim.—The helical springs G, constructed and employed in the manner described, for the attachment of scrapers of any suitable form to a framing by which they are carried.

No. 38,997.—MINER VAN AUKEN, of Amsterdam, Montgomery county, N. Y.—*Improvement in Knitting Machine Burrs*.—Patent issued June 23, 1863; antedated February 16, 1863.—The burr teeth are arranged on a hollow circular stock containing an oil chamber, and having a central stud box, which is closed at top, open at bottom, and perforated at the sides to communicate with the oil chamber. The object is to keep the central stud lubricated, and exclude the dust and fibrous particles.

Claim.—The combination in a knitting burr of the hollow stock A and stud box B, with one or more passages through its side, substantially in the manner and for the purpose described.

No. 38,998.—A. T. WILDER, of Laporte, Ind.—*Improvement in Sugar Pans*.—Patent dated June 23, 1863.—The pan is formed with a sectional cast-iron bottom and wooden sides; lips projecting downwards from the bottom of each of the upper sections join the bottom piece of the pan next below, making a series of steps; the level of the pans being lowered as they approach the chimney.

Claim.—The construction of the sections of the pan with the lips *e* thereupon, combined and operating together in the manner and for the purpose herein shown and described.

No. 38,999.—MOSES B. WRIGHT, of West Meriden, New Haven county, Conn.—*Improvement in Lamp Burners*.—Patent dated June 23, 1863.—The object of this improvement is to construct a burner which shall not become overheated by the flame nor require a chimney. The two wick tubes are arch-shaped in their horizontal section, and are raised by a serrated wheel on a shaft, which has a lateral vibration to engage either wick; the latter unite at their edges near the orifice of the burner to form a round wick, and the serrations in the plate near the orifice admit of the passage of air inside the wick, while outside a stream of air is interposed between the wick and the burner.

Claim.—First, having the wick wheel-shaft D made to vibrate substantially as and for the purpose herein shown and described.

Second, the combination of the wick tubes B and the wicks C C with the plate *b* and the upper part of the jacket A, substantially in the manner and for the purpose herein shown and described.

No. 39,000.—EDMUND F. BARNES, of New York, N. Y., assignor to STEPHEN D. LAW and EDWARD P. CURTIS, of Brooklyn, N. Y.—*Improved Paint Composition*.—Patent dated June 23, 1863.—The object of this invention is to provide a composition which shall not be subject to disintegration by atmospheric influences.

Claim.—The article of manufacture or composition of matter, hereinbefore described, composed of crystalline carbonate of lime, carbonate of lead, carbonate of zinc, and oil, mixed or compounded according to the principle and substantially in the proportions specified.

No. 39,001.—JAMES J. BURNET and WILLIAM BELLAMY, of New York, N. Y., assignor to GEORGE R. JACKSON, of same place.—*Improvement in Applying Locks to Safe Doors*.—Patent dated June 23, 1863.—The improvement consists in so adapting two or more locks to a door that though one may get out of order, or be tampered with, the other one remaining intact, the door may be opened; this is accomplished by causing the lock-bolts to shut against clamps, which, when both are shut, prevents the slipping of the bolt frame; but when the bolt of one lock is thrown back, the other clamp offers no resistance to the throwing of the bolt frame.

Claim.—The employment or use, on a safe or other door, of two or more locks G G', in connexion with the clamps H H' and an arm C, or an equivalent device, so arranged that the bolt frame B may be actuated or shoved back in order to unlock the door, by unlocking one lock only, as set forth.

No. 39,002.—RANDOLPH S. FOSTER, of Sing Sing, N. Y., assignor to Himself, CORNELIUS WALSH, and JOHN C. NOBLES, of same place.—*Improvement in Locks*.—Patent dated June 23, 1863.—This lock is intended for vaults or safes, and relates to that class of locks in which the bits, plates, springs, &c., which constitute the moving parts of a lock are attached to and carried by the bolt as it is moved in the lock case. The invention consists in the arrangement of slides or bits with the bolt, and with a brace in the lock case, so that the pins in the key entering from the door may retain a part of the slides or bits, the rest moving with the bolt, and thus virtually elongating some of the bits or plates, and bracing the bolt with the others, so that it cannot be forced back into the lock.

Claim.—First, the combination and arrangement of the piles of slides or bits with the bolt and with a brace in or on the lock case, for locking or unlocking the bolt, substantially as herein described and represented.

Also, in combination with the pins that hold and release the slides or bits and with the key-pins the pins *o* in the door to which the lock is attached, so that the lock can be conveniently attached to the door, and the bits made accessible from the outside, substantially as described.

No. 39,003.—RANDOLPH S. FOSTER, of Sing Sing, N. Y., assignor to Himself, CORNELIUS WALSH, and JOHN C. NOBLES, of same place.—*Improvement in Locks*.—Patent dated June 23, 1863.—To operate this lock the key is entered in the slot of the escutcheon, and its pins pressed against the pins in the lock until the necks of the latter are so arranged as that the slots in the cam will pass them. The knob is then turned, bringing the concentric slot in the escutcheon over the neck of the key to hold it in the lock; the cam projection throwing the main bolt against the action of the spring. The main bolt is retained by a spring bolt in its closed position, and the latter may be withdrawn by a projection on the cam during the reverse motion of the knob.

Claim.—First, the combination of the escutcheon and cam worked by the shank of the knob or lever, with an interposed series of pins, having necks thereon, and which must be properly arranged by a key before either the escutcheon or cam can be turned to operate the main bolt of the lock, substantially as described.

Also, in combination with a cam, or its equivalent, to operate a lock bolt, a spring bolt *m*, arranged inside of and operated inside of the lock, for locking back the main bolt, substantially in the manner and for the purpose described.

No. 39,004.—R. S. FOSTER, of Sing Sing, N. Y., assignor to Himself, CORNELIUS WALSH, and JOHN C. NOBLES, of same place.—*Improvement in Locks*.—Patent dated June 23, 1863.—This is a trunk or hasp lock, and the improvement consists in a series of tumblers, which constitute a multiple bolt, and engage the slots in the hasp. Each tumbler is pressed by a spring, and by the motion of a stud they are all raised so as to bring the keyholes in the tumblers in line; the key is then introduced, and the tumblers are freed; each falls till it rests upon its corresponding bit, removing all of them from contact with the hasp, which flies open. A bead around the hasp protects it.

Claim.—The combined use, and in the mode described, of a slide and key, with a pile or series of tumblers, for the purpose of arranging said tumblers to lock or unlock the hasp, substantially in the manner and for the purpose set forth.

Also, the notched hasp as fitted to and used with a multiple bolt, for greater security, as set forth.

Also, in combination with the hasp, the beadings *k i* for protecting or burying the hasp, substantially as described.

No. 39,005.—R. S. FOSTER, of Sing Sing, N. Y., assignor to Himself, CORNELIUS WALSH, and JOHN C. NOBLES, of same place.—*Improvement in Locks*.—Patent dated June 23, 1863.—The invention consists of a sliding escutcheon and bolt operated by cams on the shank of the knob, and so arranged that the escutcheon shall move first to cover the hole through which the bits of the key are introduced; the bolt is traversed by a series of pins with one narrow place on the shank of each which will permit the bolt to pass, and these are arranged to correspond with the bits on a key which is pushed against them so as to bring all the narrow necks of the pins in line with the slot in the bolt.

Claim.—First, the combination of the sliding escutcheon and the bolt with the shank I constructed and operating substantially in the manner and for the purpose set forth.

Second, connecting the escutcheon and the bolt to the shank by means of the slotted arms g h, so that the escutcheon shall lead the bolt at the first movement of the shank, substantially as and for the purpose described.

Third, the combination of the box pins and bolt, operating together and supporting each other, substantially in the manner herein described.

No. 39,006.—RANDOLPH S. FOSTER, of Sing Sing, N. Y., assignor to Himself, CORNELIUS WALSH, and JOHN C. NOBLES, of same place.—*Improvement in Locks.*—Patent dated June 23, 1863.—This is a trunk or hasp lock, and the improvement consists of a series of tumblers, each influenced by a spring and a bitted key which, entering, rotates a hub, which, with the bits, so arrange the tumblers as to withdraw them all from their engagement with the hasp and permit it to open. The continued revolution frees the tumblers and relocks them within the slot of the hasp.

Claim.—The combination and arrangement of the key, hub, bit-plate, and hasp-catch, so as to operate with each, in the manner and for the purpose set forth.

No. 39,007.—RANDOLPH S. FOSTER, of Sing Sing, N. Y., assignor to Himself, CORNELIUS WALSH, and JOHN C. NOBLES, of same place.—*Improvement in Locks.*—Patent dated June 23, 1863.—This is a mortise lock; the key is double-bitted with projections corresponding to the mortises in the bit-plates. The turning hub, which is operated by the key, has two cam projections which, together with the key, raise the bit-plates in their proper order to allow the stud on the bolt to pass into the mortise in each of them. Under certain circumstances the key operates both the locking and the latch bolt, while the latter may be operated by the handle. When freed from impediment, the bit-plates rest on the flat sides of the hub under the pressure of their springs.

Claim.—In combination with the two bolts and double-bitted key, the hub and bit-plates, arranged, constructed, and operating together, substantially in the manner and for the purpose herein described.

No. 39,008.—R. S. FOSTER, of Sing Sing, N. Y., assignor to Himself, CORNELIUS WALSH, and JOHN C. NOBLES, of same place.—*Improvement in Locks.*—Patent dated June 23, 1863.—This is a double bolt and key lock, and each bolt and key is capable of operating independently upon a set of bit-plates common to both. The lower bolt is operated by the key, which first arranges the bit-plates or tumblers for that purpose, and then, through its turning the hub, works the bolt. There are three openings in each tumbler, and two of them have branches which are traversed by pins upon the hubs in the act of throwing the bolt, for which purpose the branch openings in each tumbler are arranged in line; the bolts are then engaged by a projection from the periphery of the hub.

Claim.—Combining with two bolts in one and the same lock case—each bolt operated upon by its own key—the bit-plates F common to both bolts and both keys, in the manner and for the purpose herein described.

No. 39,009.—RANDOLPH S. FOSTER, of Sing Sing, N. Y., assignor to Himself, CORNELIUS WALSH, and JOHN C. NOBLES, of same place.—*Improvement in Locks.*—Patent dated June 23, 1863.—This is an improvement in drawer locks, and consists of a bitted key and a turning hub, which arrange and operate the tumblers and spring bolt, so that one revolution of the key and turning hub shall arrange the bit-plates, draw in and lock in the bolt, again rearrange the bit-plates, and allow the bolt to be shot out by its spring. The bit-plates, when arranged for the passage of the bolt, have their traversing-slot in line for the passage of a pin upon the shooting bolt.

Claim.—The combination of the key, turning hub, bit-plates, with a shooting bolt, the whole constructed and co-operating together substantially in the manner and for the purpose herein described.

No. 39,010.—RANDOLPH S. FOSTER, of Sing Sing, N. Y., assignor to Himself, CORNELIUS WALSH, and JOHN C. NOBLES, of same place.—*Improvement in Locks.*—Patent dated June 23, 1863.—The key is inserted through the escutcheon on the outer plate and enters a hub, which it revolves, operating the bit-plates for a distance, when, by further rotation, the salient surfaces on the bit of the key push back the bit-plates and allow the retraction of the staple of the hasp into which the upper projecting point of each bit was hooked. Each bit-plate has a spring to close it, and when closed, the bit-plates rest against the flat portion of the hub.

Claim.—The combination of the key hub, bit-plates and their openings, with a hinged hasp, and the cheek plates, the whole constructed and operating substantially in the manner and for the purpose herein set forth and described.

No. 39,011.—THOMAS GILLEN, of Philadelphia, Pa., assignor to Himself, THOS. M. COLEMAN, and WM. WILSON, Jr., of same place.—*Improved Safety Guard for Railway Cars.*—Patent dated June 23, 1863.—The improvement consists of a hanging shield on the end of a

arm which is pivoted to a pedestal beneath the car frame. Its design is to remove any obstructions from the rails in advance of the wheels.

Claim.—The arm F and shield G, constructed and arranged on the car in respect to the wheel substantially as and for the purpose set forth.

No. 39,012.—THOMAS GOODREM, of Providence, R. I., assignor to JOHN BARNES, of North Providence, R. I.—*Combined Spade, Fork, Hoe, and Rake.*—Patent dated June 23, 1863.—The blade has a cutting edge at one end, and teeth at the other, and is capable of being used in line with the handle, or at an angle therewith, so as to constitute either of the four tools mentioned, by the presentation of one or other of the effective edges in the required position relatively to the handle. For this purpose the blade is pivoted to a rod, which is socketed in the handle, and retained by a temper screw.

Claim.—Substantially, the within-described combined spade, fork, hoe, and rake, as a new article of manufacture.

No. 39,013.—MARTIN HEISEL and MARTIN NADIG, of Rochester, N. Y., assignors to DAVID R. BARTON, of same place.—*Improvement in Skates.*—Patent dated June 23, 1863.—Rising from the runner is a double post, or pair of supporting flanges, crowned by a collar which gives a point of attachment for the heel spur or screw.

Claim.—The combination of the removable heel-spur, clamping screw S, with the collar C, and the double posts p p, the former being cast to the latter, and they being rigidly attached to the runner by brazing, or other equivalent means, all in the manner and for the purpose specified.

No. 39,014.—SOLOMON T. HOLLY, of Rockford, Winnebago county, Ill., assignor to FREDERICK H. MANNY, of same place.—*Improvement in Harvesters.*—Patent dated June 23, 1863.—The improvements relate to the connexion between the tongue, reach, and easter wheel; and the purpose is to facilitate turning, especially in starting in on a new swath at the corner of a land. The tongue is attached by trunnions to the hub containing the easter spindle, permitting the motion of the tongue right or left, a segment being fixed to the tongue, which rotates the easter spindle faster than the tongue, so as to cause the easter in its axial rotation to move in the arc of the radius of the main driving wheel and enable the machine to turn at a right angle with a full cut in a new direction.

Claim.—First, hinging the tongue of a harvesting machine to the reach by trunnions attached to a hub that carries a easter spindle so constructed that the easter is caused to turn with its spindle, substantially in the manner and for the purpose set forth.

Second, the attachment of the reach of the harvesting machine to the tongue by means of a hinged hub and easter spindle when the spindle has a positive axial rotation imparted to it from the right or left movement of the tongue, and turns more rapidly than the tongue, substantially in the manner and for the purpose set forth.

Third, the combination of the segment ring M, the eccentric ring e, and the pinion g, or their mechanical equivalents, substantially in the manner and for the purpose described.

No. 39,015.—JAMES A. and HENRY A. HOUSE, of Brooklyn, N. Y., assignors to Themselves and AUGUSTUS G. SEAMAN, of same place.—*Improvement in Belt Tighteners.*—Patent dated June 23, 1863.—The invention consists of a lever pivoted at one end, and having a rigid bar at the other end, which rests on the upper side of the belt, passing from the top of the driving pulley; the lever also has, at a suitable distance from its pivoted end, a friction roller bearing against the under surface of the lower or returning strap, the two being so placed as to draw the parts of the strap toward each other, while a pawl over the roller checks any reverse motion by nipping the belt immovably upon the roller.

Claim.—The lever F, constructed substantially as described, for the purpose set forth.

Also, the combination of the lever F with the brake G, substantially in the manner described, for the purpose of stopping the belt when its motion is reversed.

No. 39,016.—PIERRE HENRI STANISLAS, Count d'Escayrac de Lanture, of Paris, France.—*Improvement in Telegraphic Signals.*—Patent dated June 23, 1863.—The invention consists in ignoring the lexical element of words and indicating them by signals according to an arranged tabulated system. As, for instance, the upper and side margins of the table being lettered or numbered, a word at the intersection of those lines is indicated by the two marginal letters, &c. The inflections of words as to mood, tense, &c., are indicated by an additional signal attached to the primary word; and adverbs, adjectives, &c., by additional signals to their respective verbs and substantives. These limits will not permit further details.

Claim.—The within-described universal analytic grammar of signals based on the substitution for the alphabetic transcription of words of certain appropriate conventional signals in combination with the separation of the lexical element from the grammatical element, substantially as herein specified.

No. 39,017.—B. D. STEVENS, of Lawrence, Mass., assignor to Himself, SAMUEL C. CROMBIE, and G. S. APPLETON.—*Improved Mode of Oiling Car Axles and Bearings.*—

Patent dated June 23, 1863.—Beneath the spindle of the axle is a roller journalled in a spring box; the lower edge of the roller rotates in a tank of oil and the spring keeps its upper edge in contact with the spindle.

Claim.—The peculiar car-axle oiling device A B and C, applied as and for the purposes stated.

No. 39,018.—B. D. STEVENS, of Lawrence, Mass., assignor to Himself, SAMUEL C. CROMBIE, and G. S. APPLETON.—*Improvement in Self-Oiling Journal Boxes and Bearings.*—Patent dated June 23, 1863.—Upon the journal is a ring whose lower edge dips into the oil chamber and carries up the oil, which is dispersed upon the upper and inner side of the boxing, spreads laterally upon the whole bearing surface, and drips back to the chamber, the oil being introduced through a hole in the bottom of the depression on the top of the boxing.

Claim.—First, the combination of the ring *a* with the opening *f* and chamber *E*, substantially as and for the purposes stated.

Second, the combination with the parts B C and D of a ring *a*, or its equivalent, upon the journal, substantially as and for the purposes stated.

No. 39,019.—AUGUSTE WEILLER, of New York, N. Y., assignor to EBERHARD FAWER, of same place.—*Improved Machinery for making Wooden Cases for Lead Pencils.*—Patent dated June 23, 1863.—Arc-shaped cutting and planing bits are arranged in segmental grooves in a disk; a series of disks thus furnished are mounted upon a mandrel, and the combined tool is used for facing the surface of a board and making the series of grooves therein for the insertion of the plumbago.

Claim.—First, the combination of the semicircular cutter D and semicircular planer E, as and for the purpose specified.

Second, the fitting of the semicircular cutter D and semicircular planer E between the two plates C C placed on a mandrel or shaft A, and provided with semicircular grooves *a* at their inner sides to receive the sides of the cutter and planer, as herein set forth.

No. 39,020.—PAUL CORBET, of Paris, France.—*Improved Composition for Paint.*—Patent dated June 23, 1863.—This is a mixture of two compounds:

The first—distilled water.....	750 parts.
oxalic acid.....	65 "
sugar.....	60 "
alkaline matter.....	100 "
soft soap.....	25 "

1000 "

Second composition—white lead, zinc or chalk.....	125 parts.
boiled drying oil.....	125 "
liquid siccativ.....	250 "
white petrific siccativ.....	250 "
soft soap.....	200 "
litharge.....	50 "

1000 "

The two compositions are mixed for using in the proportion of nine (9) of the former to one (1) of the latter.

Claim.—The improved composition for painting composed of two compounds or preparations, one a liquid and the other a siccativ compound, to be combined in the proportion and the manner substantially as hereinbefore described.

No. 39,021.—MATTHIAS SMITH, of Rochester, N. Y.—*Improvement in Bran-Dusters.*—Patent dated June 23, 1863.—The air which is admitted at the ventilator on top is determined downward and outward by the oblique wings on the vertical main shaft.

Claim.—Producing a downward current and centrifugal atmospheric pressure within the gauze cylinder C' of bran-dusters, by means of spiral wings W, in combination with a ventilator *o*, the parts being arranged and operating substantially in the manner and for the purposes set forth.

No. 39,022.—PHILO P. STUART, of Troy, N. Y.—*Improvement in Cooking Stoves.*—Patent dated June 23, 1863.—The improvements consist in the air chamber around the sides and ends of the grate communicating at bottom with the ash-pit, and through holes in the grate walls with the fire chamber; in the upward projection or bridge at the back of the fire with perforations through which air, entering at the fire doors and passing through the oven, is discharged into the flue; and a chamber around the base of the stove with an inclined flue-plate in the bottom flue and a corrugated plate over the oven behind the fire bridge.

Claim.—First, the separate and independent air chamber W X O and P, each separately

communicating with the ash chamber Q, and having perforated sides I E G and H communicating with the fire chamber M, in combination with the ash chamber Q, the whole being arranged and combined in the manner substantially as herein described and set forth.

Second, the ribs or upward projections B B, having apertures at or near the top thereof, in combination with the oven R with the apertures T' in the front doors Y, and with the fire chamber M, in the manner substantially herein described and set forth.

Third, the hollow walls or chambers *h h* extending the entire length of the oven and just below the bottom plate thereof and at the outer edge of said oven, in combination with the broad and inclined sheet flue A', in the manner substantially herein described and set forth.

Fourth, the corrugated oven plate A, in combination with the ribs or upward projections B B, with apertures therein, and with the oven R, in the manner substantially herein described and set forth.

No. 39,023.—ANDREW WALKER, of Claremont, Sullivan county, N. H.—*Improvement in Churns.*—Patent dated June 23, 1863.—The churn is divided into two chambers by a stationary and a revolving disk with corrugated or toothed surfaces in close contact; the cream is poured into the upper chamber and passes down at the centre, and finds its way out at the periphery from between the disks, having been broken and churned in its tortuous and confined passage between them. The proximity of the disks is adjusted by a screw-step at the bottom which supports the rotating disk-shaft.

Claim.—First, placing the disks in the churn, as described, for the purpose of providing a receptacle for the cream above them and inside of the churn, thereby dispensing with the receptacle usually employed outside of the churn for feeding the cream to the disks.

Second, the disk *h*, as constructed, when arranged to rest on the shoulders of the churn, as and for the purpose set forth.

Third, the set screw *a*, in combination with the stationary disk *h*, all arranged and operating in the manner and for the purpose set forth.

No. 39,024.—E. G. ALLEN, of Boston, Mass.—*Improvement in Rifling Fire-arms.*—Patent dated June 30, 1863.—The invention consists in forming the grooves nearly straight for some distance from the rear end and with an increasing obliquity towards the muzzle, so as to give the projectile the full benefit of the expansive force of the gases, and impart its rotation just before leaving the bore.

Claim.—The method of rifling or grooving the barrels of fire-arms by combining the irregular gain twist, as hereinbefore described, with the shallow curved depression, substantially as herein shown and set forth.

No. 39,025.—STEPHEN M. ALLEN, of Woburn, Mass.—*Improvement in Machines for Breaking and Dressing Flax, &c.*—Patent dated June 30, 1863.—This machine is constructed with a large fluted drum or cylinder and small fluted rollers, deriving their motion from each other and crushing the fibrous substance between them. Scutching blades overlapping each other are employed to throw off the shives and beat out any resinous matter, without breaking the fibre. The power of crushing and cleaning is regulated by means of screws attached to the sliding boxes in which the axles of the small rollers rest.

Claim.—First, in combination with a series of fluted rollers, geared by a revolving fluted drum, two fluted rollers so arranged as to engage with and be geared by, respectively, the first and last drum-gear roller, substantially as and for the purpose herein set forth.

Second, the combination of a series of fluted rollers, arranged about a central fluted drum, with one or more pairs of clusters of revolving, stripping, or scutching blades, arranged for operation substantially as herein described.

Third, the combination of two or more pairs of revolving scutching blades with intermediate check rollers, arranged and operating substantially as herein described.

No. 39,026.—ABRAHAM B. ANDERSON, of Brooklyn, N. Y.—*Improved Nursery Chair.*—Patent dated June 30, 1863.—This apparatus is adapted for the various uses of an easy-chair, a high-chair, a cradle, and a baby-jumper. The seat may be elevated to any desired height from the floor by means of extension legs. For the purpose of a cradle the foot-board is turned up and the back lowered to a horizontal position, and the couch thus formed, being suspended upon pivots, may receive a rocking motion. When it is to be used as a baby-jumper the seat is turned to a vertical position, a metallic ring, with the body belt and elastic saddle, secured in the adjustable or secondary frame, and the latter elevated as far as needful to suit the height of the child.

Claim.—First, the use or employment of the secondary framework B in combination with the framework A, when arranged and operated as herein shown, for the purpose specified.

Second, holding the framework B in position, when the same shall be elevated, in the manner and by the means herein fully described.

Third, in combination with the cam-shaped piece provided with pins, the sockets provided with the openings, for the purpose fully set forth.

Fourth, in combination with the framework Q, the use or employment of the slotted centre pieces K and side arms N, for side purpose shown.

Fifth, in combination with the same, the framework Q, operated as shown, for the purpose specified.

No. 39,027.—J. S. and T. B. ATTERBURY, of Pittsburg, Alleghany county, Pa.—*Improved Fruit or Preserve Jar*.—Patent dated June 30, 1863.—The object of this invention is to secure the covers of preserve jars so firmly as to exclude air from the contents, and, at the same time, allow them to be readily removable, and consists of a glass cover with a bevelled edge setting on a flaring-mouthed jar, the two secured tightly to each other by a gasket of India-rubber.

Claim.—First, the combination metallic and rubber annular band *d e*, constructed in the manner and for the purpose described.

Second, the combination metallic and rubber band *d e*, in connexion with the bevelled-edge jar cover B *d* and jar A, in the manner and for the purpose described.

No. 39,028.—JAMES BAILEY, of Prairie Township, Henry county, Ind.—*Improved Drag Saw*.—Patent dated June 30, 1863.—This arrangement consists in devices for securing portability and convenience in a hand machine for cross-cutting logs, and in a method of attaching the saw to the pitman.

Claim.—First, the arrangement of the inclined frame-pieces A A, in combination with the upright stand B, front and back sills C and D, and braces F F, in the manner described, and for the purpose herein specified.

Second, the truck wheels S S and handles T T, in combination with the arrangement of the guide F and braces G and H, and saw-blade attachment, substantially in the manner and for the purpose herein specified.

Third, the connecting link C, figures 2 and 3, in combination with the pitman strap A, and saw-blade strap B, in the manner and for the purpose herein specified.

No. 39,029.—SAMUEL M. BARNETT, of New York, N. Y.—*Improved Washing Machine*.—Patent dated June 30, 1863.—The object of this invention is to imitate the hand operation, spreading the clothes on the wash-board, applying the soap, rubbing and feeding the clothes along, so as to expose the entire garment to the action. This is accomplished by a reciprocating rubber and feed, with a swinging soap-box and other minor appliances.

Claim.—First, the arrangement of the reciprocating cross-head E, provided with rubbing rollers *d* and swinging soap-box G, and moving in the slotted hinged frame C, which is adjustable by a treadle D, in the manner and for the purpose substantially as shown and described.

Second, the adjustable spring *f*, in combination with the soap-box G, as and for the purpose set forth.

Third, the feed-arms H, in combination with the reciprocating rubber-head E, and soap-box G, substantially as and for the purpose specified.

Fourth, the arrangement of the swivel arm M with the furnace *r*, in combination with the frame A, which carries the wash-board B, as and for the purpose described.

No. 39,030.—A. C. L. DEVAUX, of King William street, London, England.—*Improvement in Granaries*.—Patent dated June 30, 1863.—This invention consists of a series of upright bins for grain, which are constructed with air spaces around them and central perforated tubes within them communicating with the spaces between the double walls, through all which passages a blast of air from a fan is driven, to secure the ventilation of the grain.

Claim.—The grain receptacle A, when made with perforated walls and an air space between the receptacles, in combination with the central perforated air tubes B, as herein shown and described.

Also, the lateral air pipes C, in combination with the central tubes B and receptacles A, as herein shown and described.

No. 39,031.—CHARLES N. BROCK, of Philadelphia, Pa.—*Improved Siphon Filter for Drawing Sirups, &c.*—Patent dated June 30, 1863.—The containing vessel has a pipe inserted in the lower side, which is connected by a jointed tube with a floating filter, composed of two parts, the lower one being a chamber of filtering material connecting with the jointed pipe, and the upper one forming the float, which causes the filter to remain near the surface of the liquid.

Claim.—Having the filter or filtering drawer C constructed with the float D immediately above it, in combination with the jointed pipe B, all in the manner herein shown and described.

No. 39,032.—JAMES C. CAMPBELL, of New York, N. Y.—*Improvement in Combined Pike and Revolving Fire-arm*.—Patent dated June 30, 1863.—This weapon consists of a pike or lance, to which is attached a cylindrical system of barrels, or revolving chambers: these by projections in the rear are made to reset the hammer by the rotation of the barrel and notch, and a spike in the butt, which may be protruded at will to stick the weapon upright in the ground, ready to hand.

Claim.—First, the combination with a lance of a many-chambered cylinder of similar character to that of a revolving fire-arm, fitted to rotate upon the pole or shaft of the lance, substantially as herein described.

Second, the combination of the series of ratchet-like teeth on the rear of the so-applied many-chambered cylinder, the sliding hammer and the spring, substantially as and for the purpose herein specified.

Third, the movable spike fitted and secured in the butt of the lance, pole or shaft, substantially as and for the purpose herein specified.

No. 39,033.—JOHN E. CHASE and JOSEPH TOY, of Simsbury, Hartford county, Conn.—*Improvement in Tape Fuse*.—Patent dated June 30, 1863.—The claim is perfectly clear and does not require explanation.

Claim.—The employment, as a covering for fuze, of tape composed of two warps and an interposed lap of cotton or other fibrous material, substantially as herein specified.

No. 39,034.—WILLIAM CORBIN CLARK, of Baltimore, Md.—*Improvement in Boot Trees*.—Patent dated June 30, 1863.—The invention consists in making the calf-piece of a rocker shape, vibrating upon a point under the impulse of a screw, which is provided with a point of impact by a slide in the shin-block of the tree, and capable of applying the force to any required part of the boot. The calf-piece has a slot, in which the screw works, and the latter has adjustable collars on its shank. From the instep of the last it projects forward in a wedge-shape, between side-stretcher blocks, so as to bring a lateral pressure upon the part occupied by the ball of the foot and the corresponding part on the other side.

Claim.—First, the construction and employment of a lever staff or "calf-stretcher piece" *ff*, formed with the double incline surfaces *g g h h i*, and provided with the elongated slot *j*, by which said lever staff is adjustable up and down, in and out, and whereby the leg, heel, instep, or toe of the boot may be acted on separately, by one single horizontal hand *n o*, substantially in the manner as set forth and described.

Second, the employment of an adjustable sliding stop piece *d d* attached to the tibia or shin-block *a a a a*, together and in combination with the horizontal tightening screw *n o* and lever staff piece *ff g g h h i j*, for the purpose as herein set forth and described.

Third, the construction of the attachable, angular or wedge-shape last *s s s s*, together with the attachable side-stretcher blocks *q q q q*, when combined, employed and operated in connexion with the lever staff *ff g g h h i j*, substantially in the manner and for the purpose set forth and described.

Fourth, the employment of adjustable collars *p p p p*, when combined and used with the adjustable lever staff or calf-stretcher piece *ff g g h h i j*, for the purpose and in the manner substantially as set forth and described.

No. 39,035.—LYMAN S. COLBURN, of Oberlin, Lorain county, Ohio.—*Improvement in Churns*.—Patent dated June 30, 1863.—In this churn the shaft is horizontal, and consists of a flattened piece with angular edges, and on its sides wings or beaters, set a little obliquely with the plane of rotation.

Claim.—The above-described dasher, having the flat oblique beater and the broad horizontal shaft, constructed and operated substantially in the manner and for the purposes set forth.

No. 39,036.—JAMES E. CHONK, of Poughkeepsie, N. Y.—*Improvement in Water Elevators*.—Patent issued June 30, 1863; antedated January 10, 1863.—The improvement is in the method of attaching or disengaging the loose roller on the shaft, so as to be engaged in the upward motion and allow the free descent of the bucket when rotated in the contrary direction.

The windlass roller is loose upon the shaft, and a sleeve or collar with a ratchet wheel slipping endwise on the shaft is engaged or disengaged with the roller by the rotation of the shaft, the latter carrying a pin which works in an oblique slot in the collar; a dog prevents the rotation of the ratchet wheel, except in one direction.

Claim.—The combination and arrangement of the shaft J, loose roller G, ratchet N, or its equivalent, and sliding tube M, substantially as described.

No. 39,037.—LAFAYETTE DOOLITTLE, of Bushville, Sullivan county, N. Y.—*Improved Planing Machine*.—Patent dated June 30, 1863.—This machine is intended for planing shingles, pickets, &c., which are fed in automatically, being taken one by one by a reciprocating head and pushed between the plane bit and the pressure roller.

The bits are duplicated, and a piece fed with each motion of the head.

Claim.—The stationary knives or planes D D and pressure rollers E E, in combination with the reciprocating plate or head G and the stops or gates J J, all arranged for joint operation as and for the purpose specified.

Also, the curved bar K when applied to the platform B, and in such relation with the planing mechanism as to discharge the shingles or other articles planed, laterally from the machine, as set forth.

No. 39,038.—N. T. EDSON, of New Orleans, La.—*Improvement in Steam Engines*.—Patent dated June 30, 1863.—This is a vibrating cylinder engine. The steam chest acting as a valve has ports, and is held against the cylinder by a roller, plate, and stay attached to the shaft.

The steam pipe is connected to the moving chest by a joint held against the chest by a plate, and an arrangement of a moving block in the eccentric frame regulates the opening of the ports, and the speed is controlled by the connexion of these parts with the governor, by means of the angle rod and lever.

Claim.—First, the using of a steam-chest for a slide valve, in combination with the roller *g*, plate *h*, and stay *j*, substantially as set forth.

Second, the joint Fig. 3 in combination with the plate 4, by which the gland 2 is held against the packing.

Third, the combination of the eccentric frame *m* and block *a*, for the purposes specified.

Fourth, the combination of the eccentric rod *p*, governor rod *u*, angle lever *v*, and lever *r*, when acted upon by the governor to regulate the speed of the engine.

No. 39,039.—LUCIUS EVANS, of Fayetteville, Onondaga county, N. Y.—*Improved Wringing Machine*.—Patent dated June 30, 1863.—The rollers are covered with elastic material, their journals wrapped with a Fig. 8 band, so as to make them rotate together on motion being imparted to the lower one; the upper one is journaled in sliding boxes under the pressure of elliptic springs.

Claim.—The arrangement and combination of the cross-band and pulleys with elastic rollers, when arranged and combined with the elliptic springs *K* and the sliding boxes *I*, as herein described and for the purposes set forth.

No. 39,040.—ADDISON C. FLETCHER, of New York, N. Y.—*Improvement in Condensers for Steam Engines*.—Patent dated June 30, 1863.—The invention consists of a rotary fan in connexion with a chamber containing a series of parallel radiators, into which the exhaust steam is delivered, whereby air is driven through the intervening spaces and warmed for supplying the boiler furnace, while the steam in the radiator is condensed.

Claim.—The arrangement of the rotary fan to draw the air directly through the box or chamber *B*, and between the radiators *A A*, without the intervention of pipes or passages, substantially as and for the purpose herein set forth.

No. 39,041.—EDWARD C. GILLETTE, of San Francisco, Cal.—*Improvement in Heating Apparatus*.—Patent issued June 30, 1863; antedated February 21, 1863.—The invention consists of an attachment to a stove for heating purposes, and has a lower and upper chamber communicating with the stove respectively, and connected by pipes, around which is an air chamber receiving fresh air from without by means of a pipe, and discharging it through an urn in contact with a trickling stream of water from a cup.

Claim.—First, the urn-shaped vessel *I*, annular perforated ring *d*, concave sprinkler *n*, and water vessel *J*, arranged in combination with the air chamber and operating in the manner and for the purpose described.

Second, the arrangement of the upper and lower compartments *B D*, having ingress and egress openings *K L*, communicating with each other through the flues *b*, in combination with the cold-air pipe *G*, air chamber *C*, and exit tube *H*, when used with the vaporizing apparatus set forth in the preceding claim, substantially as described.

No. 39,042.—P. J. GINDRE and JOHN DOERLER, of Cincinnati, Ohio.—*Improvement in Ovens*.—Patent dated June 30, 1863.—This portable oven is supported by iron standards upon the axles of a wagon, and entirely enveloped by furnace or flue space except at the door.

This circular oven in its horizontal section has a turn-table in its interior for convenient filling and discharging. The space under the turn-table and above the roof of the furnace is provided with ventilating apertures.

Claim.—First, the arrangement of the oven *A*, placed concentrically within and entirely enveloped by the portable furnace *B*, in combination with a cart or wagon, substantially as set forth.

Second, a portable oven, circular in its horizontal section, and having an elevated and revolving floor *E*, capable of discretionary ventilation on its under side, as and for the purposes set forth.

Third, in the described adaptation to a portable oven, the ventilating chamber *a'*, interposed between the floor *E* and bottom *a'* of the oven proper, and having registered communications *F f* with the external air, substantially as and for the purposes set forth.

No. 39,043.—W. D. GUSEMAN, of Morgantown, Monongalia county, Va.—*Improvement in Fire Grates*.—Patent dated June 30, 1863.—The fire grate protrudes into the room, and has a metallic flue leading to the chimney, which is provided with a curved sliding plate coming down to the grate bars to act as a blower, and also a damper plate to close the flue-opening when required.

Claim.—The damper *G*, when arranged as shown and used in connexion with the flue *F*, the sliding blower or screen *D*, and the front and bottom grates *B C*, as and for the purpose herein set forth.

No. 39,044.—WILLIAM C. HERDER, of Miami Town, Hamilton county, Ohio.—*Improvement in Farm Gates*.—Patent dated June 30, 1863.—This gate has oblique brace bars and chord rods with connecting rods for setting up the braces.

Claim.—The combination of the bars *B B'*, one or more, and the adjusting chord-rods *D G*, one or more, with the connecting rod *E*, in the manner herein shown and described.

No. 39,045.—JAMES P. HERRON, of Washington, D. C.—*Folding and Ruling Paper*.—Patent dated June 30, 1863.—This invention consists of a method of ruling paper in lengths, with a hiatus for a folding space, and in rolling it around a roller, with a covering for more convenient transportation.

Claim.—First, the ruling and folding Figs. 1 and 2, substantially as set forth.

Second, the rolling or packing, as described and shown in Fig. 5.

Third, the cutting of the paper into the form shown in Figs. 1 and 2, in combination with the ruling and folding shown in said Figs. 1 and 2, substantially as described.

No. 39,046.—SIMEON HEYWOOD, of Claremont, Sullivan county, N. H.—*Improved Shingle Machine*.—Patent dated June 30, 1863.—In this machine the shingles are cut by a circular saw from the bolt which is clamped on a sliding frame in connexion with a tilting bed to so present the block to the saw as to secure the requisite taper to the shingle.

Claim.—The combination of the bevelled tilting bed *G'*, shaft *l*, and supporting bars *p*, with the adjustable bars *H*, reciprocating frame *D*, levers *E F*, dogs *G*, and saw *C*, in the manner and for the purpose herein shown and described.

No. 39,047.—ALONZO HITCHCOCK, of New York, N. Y.—*Improvement in Steam Boilers*.—Patent dated June 30, 1863.—The improvement consists in bolting the ends of the flues to plates which constitute the ends of the boiler, and are removable to admit of repair, cleaning, &c.

Claim.—Securing the flues of steam boilers to heads which may be removed from the shell, substantially in the manner described and for the purpose set forth.

No. 39,048.—CHESTER HOISINGTON, of Seward, Winnebago county, Ill.—*Improvement in Dog-Cutting Machine*.—Patent dated June 30, 1863.—The machine consists of a sled and driver's seat with a V-shaped knife attached horizontally to the runner, so as to share off inequalities in the ground, such as muskrat houses, ant hills, &c.; the scraper attached to a beam following to distribute the same, and a roller to level and condense it.

Claim.—First, the sled provided with the knife *A* and seat *F*, as and for the purposes set forth.

Second, in combination with the sled, the adjustable scraper *B*, constructed and operating as and for the purposes set forth.

Third, the combination of the roller *C*, provided with the box *E*, with the sled and scraper *B*, in the manner and for the purposes set forth.

No. 39,049.—JOHN P. JAGER, of Eureka, Winnebago county, Wis.—*Improvement in Threshers*.—Patent dated June 30, 1863.—The improvement consists of a rocking frame with ribs on its under side, striking into a corresponding bed or platform with a drawing motion; the subsequent cleaning process being executed by a screen and fan.

Claim.—The combination of the rocking beater frame with a fan and screen, substantially in the manner and for the purposes set forth.

No. 39,050.—MELVIN JINCKS, of Steuben county, N. Y.—*Improvement in Churn Dashers*.—Patent dated June 30, 1863.—The vertical shaft is hexagonal in section. In each side are radial arms with thin blades set obliquely, at an angle, say, of 45°, to the axis, which are thinner and wider at their outer ends.

Claim.—The arrangement of the arms *b* in the shaft *A*, as and for the purpose herein described.

No. 39,051.—JAMES J. JOHNSTON, of Alleghany, Pa., and JAMES E. WEAVER, of Temperanceville, Alleghany county, Pa.—*Improvement in Machine for Hulling Barley, &c.*—Patent issued June 30, 1863; antedated March 6, 1863.—This machine is used for taking the hulls from barley, and making what is termed "pearl barley." It consists of a revolving drum in a case of a corresponding shape, the adjacent surfaces being roughened by a coat of emery; and an arrangement of a lifting bar provided for distributing the grain in the case, so as to secure an equal action on all the grain.

Claim.—The use of the wooden drum *A*, with bevel or conformed sides, in combination with the bevelled or conformed sides *d* of the case, and elevating bar *a*, said drum and sides being coated with emery or its equivalent, as herein described and for the purpose set forth.

No. 39,052.—MORTON JUDD, of New Britain, Hartford county, Conn.—*Improvement in Sash Fasteners*.—Patent dated June 30, 1863.—This appliance is for locking the sash together, and consists of a joint by which the clamping lever is attached to the plate, having its flanged hub working in a socket with an interposed spring.

Claim.—First, the lever *c* with the flange 3 around the hub 2 setting over the flange *b* on the plate *a*, as specified.

Second, the hollow hub 2 and spring 4 to retain the lever *c* in position, as specified.

No. 39,053.—JOHN M. D. KEATING, of New York, N. Y.—*Envelope Machine*.—Patent dated June 30, 1863.—The blanks, previously cut, are carried by a series of motions under the plunger, when the bed for the face of the envelope is raised by a cam, and the plunger being elevated the flaps are lapped over and pressed down by a series of devices too numerous to specify; the cams working the counter-shafts now raise the levers and open the flap-folders, when the face bed swings down and discharges the envelope.

Claim.—First, the adjustable bed in combination with the folding mechanism, substantially as described, whereby the machine can be readily adjusted to fold the envelope loose or tight and for varying thicknesses of paper, substantially as described and set forth.

Second, in combination with the folding mechanism the plate *II* covering the aperture in the form, thereby preventing the blanks from catching or displacement as they are seized and carried under the plunger, substantially as described and set forth.

Third, in combination with a movable form for carrying the blanks and a folding mechanism, substantially as described, the sleeve shaft 4 to work the form, substantially as described.

No. 39,054.—GEO. LISSENDER and JOHN LACEY, of Chicago, Ill.—*Improvement in Holders of Tools for Grinding*.—Patent issued June 30, 1863; antedated March 1, 1863.—This consists of a frame supported by legs upon the grindstone frame, and to the bridge piece of the frame, which is vertically adjustable by screws, is a sliding pendant rest in which the tool is placed, having in addition to its longitudinal a rolling motion.

Claim.—First, the movable bed pieces *C C*, posts *D D*, and guide *E*, constructed, combined, arranged, and operating substantially as set forth.

Second, the clamp *H*, constructed substantially as described, turning on journal 2, and suspended from the guide *E* by means of the pendent slides *F F*, as and for the purpose set forth.

Third, the stone *A*, frame *B*, adjustable bed pieces *C*, posts *D*, with their adjustable screws 5, the guide *E*, clamp *H*, and pendent slides *F*, constructed, combined, and arranged substantially as described.

No. 39,055.—JOHN A. LLOYD, of St. Paul, Minn.—*Improvement in Churns*.—Patent dated June 30, 1863.—Attached to a vertical shaft are four radial dashers, constructed alternately of wooden slats and of wire netting; these have a reciprocating rotary motion by means of a pinion on the shaft engaged by a segment wheel.

Claim.—The wooden slat dashers *C C* in combination with the wire dashers *A A*, lever bracket, gear, and tub, all operating in the manner and for the purposes set forth.

No. 39,056.—SAMUEL N. LONG and M. E. HATHAWAY, of Chatham, Mass.—*Improvement in Locks*.—Patent issued June 30, 1863; antedated June 9, 1863.—This lock has a series of guard wheels provided with slotted annular flanges, the slots being adapted to allow the passage of projections on the bolt; the guard wheels are moved by and connected to the disk index wheels and the series set on any required combination on which alone will all the slots correspond with the salient pins on the bolt. The bolt and latch are operated by a cam on the knob shaft.

Claim.—First, the guard wheels *A* constructed with annular flanges *f*, slotted at *a*, and serrated on their inner and outer surfaces, all as herein shown and described and for the purposes set forth.

Second, the described combination of the guard wheels *A* and index wheels *D* with clamp nuts *d* for connecting or disconnecting them, as explained.

Third, the combination of the bolt *B*, latch *E*, and cam *C*, all constructed and arranged as herein shown and described, so that the bolt and latch may be operated either simultaneously or separately, as explained.

No. 39,057.—JOHN C. LOVE, of Pittsburg, Pa.—*Improved Furnace for Burning as Fuel Tar, Oil, &c.*—Patent dated June 30, 1863.—This invention consists in the application of a series of long shallow trays placed between the grate-bars with a space between them to admit a free passage for the air, the tar or oil being supplied from a heater through a series of small pipes leading to the trays, the heater being placed in such proximity to the furnace as to liquefy the tar, &c., before passing it to the trays.

Claim.—The use and combination of a series of long shallow troughs or trays with a box or heater used for supplying tar or oil to said troughs through a series of pipes leading to the

troughs or trays aforesaid, and placing said box or heater in such close proximity to the furnace as that the tar or oil shall become heated so as to generate gas before passing into the troughs or trays, for the purposes herein shown and set forth.

Also, constructing the grate-bars and trays that they may be reversed, for the purposes herein shown and set forth.

No. 39,058.—J. MASON, of Louisville, Ky.—*Improvement in Drums*.—Patent dated June 30, 1863.—The invention consists in having two straining cords, one for each head hoop, connected by double hooks to each other on the periphery of the drum.

Claim.—The employment or use of the plates *D* provided each with two hooks *a a'* or pulleys and attached to the body or cylinder of the drum, as described, in connexion with the straining cords *E E'*, hoops *B B'*, and with or without the hooks *C*, all arranged as and for the purposes set forth.

No. 39,059.—C. MEZEIX, of New York, N. Y.—*Improvement in Lubricating Axle Boxes*.—Patent issued June 30, 1863; antedated November 9, 1861.—The spindle of the axle is boxed in, and a pin eccentrically attached to its end works a hollow plunger which pumps up oil from a chamber and by means of an upward recurving spout discharges it upon the journal bearing.

Claim.—The arrangement of the reciprocating piston *f*, pump barrel *F*, and ascension tube *g* in combination with the reservoir *A* surrounding the axle box *B*, the whole being constructed and operating substantially in the manner and for the purpose shown and described.

No. 39,060.—THOMAS M. NEAL, of Pittsburg, Pa.—*Improvement in Running Gear of Locomotives*.—Patent dated June 30, 1863.—The car wheels have wide flanges upon their inner faces upon which are friction rollers on a crank shaft driven by the motor. The motion of the car wheels is thus derived through the rollers from an auxiliary shaft, two of which may be connected by pitman or otherwise to drive the two pairs of wheels of the truck or car.

Claim.—Transmitting motion from the crank shafts to the wheels bearing on the rails by means of the friction rollers operating in the manner and by the means described and for the purpose set forth.

Second, securing the bearings of the crank shafts in the same pedestals wherein the bearings of the axles rest, and so arranging the crank shafts with relation to the wheels bearing on the rails as that said wheels and crank shafts shall take the entire weight of the locomotive, as herein described and for the purpose set forth.

No. 39,061.—J. N. NEWELL, of Des Moines, Iowa.—*Improvement in Brick Machine*.—Patent dated June 30, 1863.—This machine is mounted on a truck carrying a hopper in which oblique rotating arms mix the clay preparatory to its issuing into the moulds which are on the periphery of a cylinder on the traction wheels of the machine. The travelling wheels move the machinery, and the moulds have plungers which are retracted and advanced so as to admit the clay and exclude the bricks which fall upon the ground between the tracks of the wheels; the moulds are sanded from a box as they rise empty after dropping the bricks.

Claim.—First, the rotating mould cylinder *I* provided with sliding plungers *ff* when used in connexion with the traction wheels *L L*, and fitted in a mounted frame *A* provided with a frame-elevating or adjusting mechanism, and all arranged in such a manner as to admit of the mould cylinder being rotated either by traction or any extraneous power, as herein set forth.

Second, the combination of the mould cylinder *I*, hopper *B*, provided with rotating rods *c*, sand box *M*, and scraper *S*, all fitted or placed in a mounted frame *A* and arranged for joint operation, as and for the purpose specified.

Third, the rod *O* provided with the cam *Q* in combination with the fixed cam *R* and the adjustable plate *N*, to which the axles *u u* of the wheels *B* are attached, all being arranged as shown, to admit of the adjustment of the frame *A*, as and for the purpose specified.

Fourth, the rotating oblique rods *c* when used in combination with a rotating mould cylinder *I*, for the purpose set forth.

No. 39,062.—D. J. OWEN, of Springville, Susquehanna county, Pa.—*Improvement in Straw Cutters*.—Patent dated June 30, 1863.—The upper feed-roller is connected with its shaft by means of a coiled spring, so that it has a vertical play independent of its shaft to conform to the varying thickness of the material passing under it.

Claim.—Connecting or attaching the tubular feed-roller *M* with its shaft *L* by means of the coil springs *N N* and disks or heads *d' d'*, and arranged specifically as herein shown and described, in combination with the feed-roller *E'*, cam *J*, pawl *F*, and ratchet *d*, all combined and arranged to operate conjointly as and for the purpose herein set forth.

No. 39,063.—JOHN J. PALMER and A. PLAMONDON, of Chicago, Ill.—*Improvement in Grain Separators*.—Patent dated June 30, 1863.—The improvement consists of a deflecting board forming a spout or discharging board to direct the grain from the hopper to the shaking shoe across the current of air from the fan.

Claim.—The board F attached to the shoe or box C, and arranged relatively with or applied to the hopper G, so as to form a continuation of the inner side b thereof, to operate as and for the purpose herein specified.

No. 39,064.—WM. PORTER, of Mystic River, New London county, Connecticut.—*Improvement in Slide Valves for Steam Engines.*—Patent dated June 30, 1863.—This is an improvement in the construction and arrangement of the main slide, cut-off slide, and back plate working in the steam-chest above the cylinder; the cut-off slide working on ways in the main slide and retained on its bearing by the pressure of steam above it, while the main slide has an upper bearing on the back plate which moves on wedge-formed faces and is adjustable at one motion by means of a screw-rod passing through and clamped by jam nuts on the outside of the steam-chest. The escape of steam between the upper face of the main slide and the back plate is indicated by a drain pipe; when this occurs, the required adjustment of the back plate downwardly to the main slide may be made by the above-mentioned screw-rod.

Claim.—First, the arrangement of the surface M, main slide faces B B' B'', cut-off slides X X' and ports b b', all substantially in the manner and for the purpose herein set forth.

Second, the construction and arrangement of the back plate M, steam-chest A, wedge faces m m, and single set of adjusting means M', or their equivalents, substantially as and for the purpose herein set forth.

Third, the arrangement of the draining passages or pipes N N' relatively to the sliding adjustable back plate M and to the balance face B'' of the main slide, substantially as and for the purpose herein set forth.

No. 39,065.—WASHBURNE RACE, of Lockport, N. Y.—*Improvement in Pumps.*—Patent dated June 30, 1863.—The metallic plunger moves freely in the chamber, and a disk of leather above screwed down upon the plunger makes the water joint; there is an enlargement in the upper part of the chamber surmounted by a narrowed neck.

Claim.—The combination of the grooved metallic water-packing piston B and leather packing a, or its equivalent, arranged in such a manner that the metallic portion slides easily in the cylinder and forms the guide, while the leather portion produces a more perfect packing without being subject to great wear, substantially as herein set forth.

Also, the groove or enlargement I in the pump, with the contracted opening m above, by which means the water is prevented from overflowing and a greater pressure is produced in the spout, substantially as described.

No. 39,066.—JOSEPH ANTOINE JEAN REDIER, of Paris, France.—*Improvement in Watches.*—Patent dated June 30, 1863.—The object of the invention is to wind up and set the hands of a watch without opening it. The former is effected by a shaft projecting through the side, which is armed in the interior with a pinion which engages the winding wheel; and the latter purpose is effected by a projecting stud, by which a ratchet motion is communicated to the index movements.

Claim.—First, the combination of the shaft T, pinion P, and wheels H R, arranged and employed as described, to wind the watch.

Second, the combination with the above parts, or their equivalents, of the knob M, lever K L, and pinions i n, for setting the hands.

No. 39,067.—J. FRANKLIN REIGART, of Washington, D. C.—*Improved Means for Speed in the Propulsion of Vessels.*—Patent dated June 30, 1863.—The invention consists of a revolving wheel on a shaft projecting from the prow to remove the water from the path of the vessel and thereby decrease the resistance.

Claim.—A self-acting wave-propeller and breaker revolving and operating in advance of the vessel for the purpose of accelerating its speed, by dividing the waves and opening a way to relieve the vessel from the resistance of the water.

No. 39,068.—E. B. REQUA, of Jersey City, N. J.—*Improvement in Power Windlass.*—Patent dated June 30, 1863.—This improvement consists of a shaft on which is keyed a disk, and rotates a drum with a disk attached. At one end of the shaft is a fixed centre, and at the other end is a movable centre, which may be advanced towards the other by means of a screw and lever, so as, by the impingement of the sleeve against the end of the drum, to bring the disks together and make them revolve as one. The fixed disk is driven by some prime motor, and when the disks are in contact the drum will revolve therewith, and wind up the rope for instance; but by the recession of the movable centre the drum is freed from contact with the motor disk, and the rope is unwound with a rapidity dependent upon the suspended weight and the more or less perfect disconnection of the salient adjacent faces of the disks.

Claim.—First, the combination of fixed and movable centres or centre-bearings with a drum and the friction surfaces of fast and loose disks, or their equivalent, substantially as described.

Second, the construction and use of the sleeve or cap as arranged on the shaft and intervened between the centre-bearing and drum, for the purposes set forth.

Third, imparting the end thrust required to effect and maintain the contact of the friction or clutching surfaces by means of a screw fixed in the lever, or its equivalent, in combination with the sleeve or other competent device, arranged and used substantially in the manner and for the purposes specified.

No. 39,069.—HENRY W. SAFFORD, of Philadelphia, Pa.—*Improvement in Hanging Venetian Blinds.*—Patent dated June 30, 1863.—The cord by which the blinds are operated passes over sheaves in hangers suspended from the window casing; the suspension cords are likewise supported upon sheaves in the same bracket, their axes being parallel to the slats to permit their rotation in modifying the obliquity of the blind slats.

Claim.—The combined arrangement described of the open pulleys C C' C'' with the suspending cords D D' and the single set of hoisting cords E E', the whole operating together substantially in the manner described and for the purposes specified, whether the said pulleys be attached directly to the window frame or to a separate supporting board attached thereto and forming part of the blind, as described.

No. 39,070.—MICHAEL SCHALL, of New York, N. Y.—*Improved Composition for Casts, Fancy Articles, Toys, &c.*—Patent dated June 30, 1863.—This is a composition of stearine and terra alba, by adding the latter to the liquefied stearine.

Claim.—The application of terra alba for "rendering" stearine matter to produce casts of fancy articles, toys, and confectioners' ornaments of every variety, substantially as herein described.

No. 39,071.—SAMUEL SELDEN, of Erie, Pa.—*Improved Case or Box for Holding Oil, &c.*—Patent dated June 30, 1863.—The oil package consists of two boxes fitted closely, the inner one made of sides rabbeted together and into the ends, and the outer consisting of four sides, secured by dovetails or otherwise and strengthened by transverse strips, the object being to preserve the inner box from injury and consequent leakage.

Claim.—An oil package, consisting of a box A, made of four boards a, rabbeted together and to heads b, and of a casing B surrounding the box A, in the manner and for the purpose substantially as shown and described.

No. 39,072.—MOSES SHELDON and W. H. CHASE, of Calais, Washington county, Vt.—*Improvement in Spouts for Conveying Sap.*—Patent dated June 30, 1863.—Each length of these spouts is made from a simple piece of wood, chamfered or thinned at its lower end and hollowed out along its entire surface interiorly, except at the other end, where it is formed with plain surfaces on its inside to adapt it for receiving tightly the lower outside end of the next length above it.

Claim.—The within-described spout as a new article of manufacture, the same being formed in lengths having an angular exterior E F and a corresponding interior B C at one end, and being rounded and chamfered substantially as represented by M M', for the purpose herein set forth.

No. 39,073.—HENRY LIDDALL, of San Francisco, Cal.—*Improvement in Grain Separators.*—Patent dated June 30, 1863.—This improvement, designed to more perfectly clean and separate the grain, consists of imperforated and wire-screen vibrating surfaces, with conveyers, spouts, and elevators for returning portions of the grain to be again operated upon; but the present limits will not allow a detailed account of the various devices, or a description of the tortuous course of the grain.

Claim.—First, the conveyer C, when used as and for the purpose set forth.
Second, the trough or gutter D, or an equivalent thereto, for the purpose described.
Third, the cut-off or dividing pieces H and I, when made as described, and used for the purpose set forth.

Fourth, the pieces N and O, in combination with pieces M, for the purpose set forth.

Fifth, the unperforated surfaces L and screens K, in combination with screens J, for the purpose set forth and described.

Sixth, the return chambers T, spouts 3, conveyer V, spout 7, and elevator A B, for the purpose of returning a part of the grain, as set forth and described.

Seventh, the process of returning a part of the grain to pass through the screening apparatus again at the same time, and with the regular supply of grain, as herein set forth.

No. 39,074.—HENRY D. SMITH, of New York, N. Y.—*Improved Machine for Cutting Out Bayonet Scabbards.*—Patent dated June 30, 1863.—The inclined oblique knives on the upper and lower cylinders are so arranged as to cut up the strip of leather into trapezoidal pieces, with the edges bevelled, so as to form a lap joint when brought together. The leather is fed upon an endless apron and roller, and the side of the strip is brought to a width by disk-knives on the upper roller.

Claim.—First, having the inclined oblique knives of one cylinder arranged in reverse position to those of the opposite cylinder, so that each edge of each scabbard and blank will be cut with an inward bevel, substantially as herein shown and described.

Second, the combination with the knives, arranged as above described, of the feeding device C, as herein shown and set forth.

No. 39,075.—ROBERT STUART, of Elmira, N. Y.—*Improvement in Cut-off Valve Gear.*—Patent dated June 30, 1863.—This cut-off movement is effected by means of the vibrating lever and the piston under the upper cross-head, upon which are hooked rods, the tendency of the constant pressure under the piston being to instantly restore the vibrating lever to its normal central position as soon as the parts are freed from the controlling action.

Claim.—First, the cylinder C and piston D, in combination with the vertical platform and braces G, when constructed and operating substantially as described and for the purposes set forth.

Second, the combination of a cross-head H and connecting rods I with a cut-off valve, substantially as and for the purpose described.

No. 39,076.—S. B. STEWART, of Centre township, Indiana county, Pa.—*Combined Collar and Hames for Horses.*—Patent dated June 30, 1863.—The casing of the collar is fastened directly to the hames, the filling being behind, thus uniting the two. The connexion below is made by a socket and ferrule on the respective hames, secured by a plate, hook, and staple.

Claim.—First, the combination of the collar A and hames B, substantially as described, so that they shall form but one piece, as set forth.

Second, the combination of the tenon C, ferrule D, strap d, staple e, and hooks e', as described, for the purpose of uniting the two sides of the collar, as set forth.

No. 39,077.—P. L. SUINE, of Shirleysburgh, Huntingdon county, Pa.—*Improvement in Boilers for Culinary Purposes.*—Patent dated June 30, 1863.—A pipe from the upper portion of the boiler, and included within its sides, carries down the steam and fumes, and discharges them at an orifice below the upper stove plate into the flue.

Claim.—A boiler for culinary purposes, constructed with an internal tube or pipe communicating at its upper end with the interior of the boiler, and provided at its lower end with a hole or opening, so that said tube or pipe, when the boiler is fitted in a hole in the top plate of the stove, will be below the stove plate, and form a communication between the tube or pipe and the flue of the stove, substantially as and for the purpose herein set forth.

No. 39,078.—GEORGE W. SWETT, of Troy, N. Y.—*Improvement in Purifying Iron and Steel by means of Blasts of Air.*—Patent dated June 30, 1863.—This vessel is to hold molten cast iron, while a blast of dry air is passed around the coiled tube and through the perforated bottom, being disseminated through the iron, and depriving it of a portion of its carbon.

Claim.—The use of the apparatus above described, in the manner and for the purpose above specified.

No. 39,079.—DANIEL E. TEALE, of Norwich, Chenango county, N. Y.—*Improvement in Water Elevators.*—Patent dated June 30, 1863.—The improvement consists in the arrangement of a pawl and catch, the former engaging with the ratchet teeth on the drum, and the latter used in connexion with a projection on the eccentric rim to throw back the pawl to allow the bucket to descend under the control of the brake, which is brought into action by the engagement of the prolongation of the crank with lips on the eccentric. Stops are used, attached to the frame, to cause the cord to rewind on itself when it has reached a certain limit.

Claim.—First, the catch or click k placed upon the pawl F, and operated by the hook i and by the projection p, placed upon the outer edge of the rim G, as set forth.

Second, in combination with the cylinder B and cord, or its equivalent, the stops s s, moving in the slots r r of the arms A A, as and for the purposes set forth.

No. 39,080.—EDWIN A. THOMAS, of Philadelphia, Pa.—*Improvement in Putting up Caustic Alkalies.*—Patent dated June 30, 1863.—The alkali is poured while melted into a glass or earthen jar, and sealed with a non-corrosive cement.

Claim.—A package of caustic alkali enclosed in a glass, stone, or earthenware jar, sealed with a non-corrosive cement, as and for the purpose specified.

No. 39,081.—HAMILTON E. TOWLE, of New York, N. Y.—*Improved Joint for Pipes.*—Patent dated June 30, 1863.—The improvement consists in fitting the ordinary flanges with a supplementary flange, or pair of flanges, sufficiently flexible to permit the contraction and expansion, and in covering the interior of the joint with a sliding sleeve corresponding with the diameter of the pipes.

Claim.—The combination of the flexible flange or flanges with an internal sleeve, substantially in the manner described and for the purpose specified.

No. 39,082.—JAMES W. TUFTS, of Medford, Mass.—*Improved Refrigerator for Soda-Water and Sirups.*—Patent dated June 30, 1863.—This invention consists in a cooler containing a series of sirup chambers with passages leading from them through the ice-chamber; also, a soda vessel with pipes of inlet and discharge.

Claim.—The new or improved sirup refrigerator or cooler, consisting of the series of main

sirup-holders or chambers a, the series of auxiliary lateral chambers c, and the ice-chamber b, the whole being arranged and so as to operate together substantially as explained.

Also, the arrangement of sirup and soda vessels or holders a a and c c, and the ice or refrigerating vessels or chambers b, the whole being substantially as specified.

No. 39,083.—ROBERT VAILE, of Cromwell Terrace, Westbourne Green, Middlesex county, England.—*Improved Submerged Propeller.*—Patent dated June 30, 1863; patented in England April 28, 1862.—The invention consists of paddles operated so as to expose their surface to the water to be "feathered" on their entering and issuing from the water, and mounted on endless chains driven by drums with projecting rims or collars having indentations to receive the links of the chains. The floats work in grooved guides, and are furnished with projecting arms and friction rollers.

Claim.—Driving endless chain propellers by means of drums with a collar or collars on shafts and chains to which floats are attached, the collars and chains being constructed and the attachment effected in the manner hereinbefore described.

Also, connecting the floats to the endless chains by means of spindles working in lines formed in a piece with links in the endless chains, as hereinbefore described.

Also, the means of causing the floats to assume and retain their respective positions for entering the water, for producing their greatest propelling effect in the water, for feathering on leaving the water, and for returning to again enter the water, consisting of guides and grooves, and of appliances on the floats, all acting substantially in the manner hereinbefore described.

No. 39,084.—A. F. WARREN, of Brooklyn, New York.—*Improvement in Pens.*—Patent dated June 30, 1863.—The improvement consists of a flexible band or clasp lying in a notch and around the nib of the pen between the point and shoulder.

Claim.—The flexible and elastic band or clasp B applied to a pen, substantially as and for the purpose herein specified.

No. 39,085.—ALEXANDER WATKINS, of London, England.—*Improvement in Watches.*—Patent dated June 30, 1863.—The invention consists in so arranging the escapement wheel with its axis in the same plane with the staff of the balance and pivot of the escapement lever that the leverage exerted by the escapement wheel on the two pallets is equal, and the distance from the pivot of the escapement lever to the notch of the fork is equal or nearly equal to the distance from the faces of the pallets.

Claim.—Having the axis of the escapement lever placed equidistant between the pallet faces and the notch of the fork i c, in combination with the arrangement of the three axes k' i' k' on the same plane, as and for the purpose herein shown and described.

No. 39,086.—DAVID T. WILLIAMS, of San José, Santa Clara county, Cal.—*Improved Soda-Water Fountain.*—Patent dated June 30, 1863.—This consists of a portable soda-water fountain with a pipe leading from the lower part of the chamber to the nozzle and provided with a valve; the heads being secured by outwardly turned flanges and screws to the cylindrical portion.

Claim.—As an improved article of manufacture, a soda-water fountain constructed of sheet-metal with its head B B fitted and secured in it, substantially as shown, and provided with a tube C, eduction pipe D, and discharge pipe H, the eduction pipe D having two passages d d within it, and provided with a valve f fitted in a chamber e, as herein described.

No. 39,087.—C. C. WILSON, of Kenawee, Henry county, Ill.—*Improvement in Car Coupling.*—Patent dated June 30, 1863.—The catch or link detainer consists of a disk pivoted to and rotating vertically in the draw-head, and provided with a notch which is engaged by a pawl in its closed condition, and also having a deep hook-shaped recess for the detention of the coupling link.

Claim.—First, the plate C, of circular or approximate form, and provided with a shoulder e, in combination with the stop or bar F and loop H, or its equivalent, all arranged relatively with each other and in connexion with the draw-head A to operate as and for the purpose specified.

Second, the jog d, in the back part of the recess a, for the purpose of holding the link in a horizontal position, as specified.

No. 39,088.—FRANKLIN WOODS, of Chicago, Ill.—*Improvement in Stoves.*—Patent dated June 30, 1863.—The outer pipes, which are connected with the upper part of the fire, conduct a portion of the heated air and gases downward and then up through the side pipes to the fire-chamber.

Claim.—The pipes and flues B B' G G' F F' and E E', and openings a a', in combination with the fire-chamber A, the several parts being arranged and operating as and for the purpose specified.

No. 39,089.—WILLIAM WRIGHT, of Hartford, Conn.—*Improved Method of Operating Cut-off Valves of Steam Engines.*—Patent dated June 30, 1863.—This is an improvement on the present patentee's patent of January 3, 1854, and consists of an arrangement to lift and

let down the puppet valve by the rotation of the shaft and hub, the point of the stroke at which the cut-off takes place being determined by the revolution of the sleeve on the hub, which modifies the extent of the cam-formed projection.

The present improvement is designed to cause the return of the valve by a positive motion by the devices recited in the claim.

Claim.—The combination of the pin *e* held in its relation to the face of the cam by the collar *d* and the slotted plate *b* with the toe of the lift-rod, in the manner and for the purpose substantially as set forth.

No. 39,090.—ELIJAH YOUNG, of Tuscarora, Livingston county, N. Y.—*Improvement in Grain Separators.*—Patent dated June 30, 1863.—The improvements are in the construction of the sieve which is placed within the shaking shoe and intended to separate the grades of grain by perforated plates and wire screens of appropriate mesh and position; the grain is received first upon a perforated plate, and then rolls on to a wire screen under the rear portion of which is a second perforated plate; the grain that passes through these falls upon an inclined cheat screen to its exit.

Claim.—First, a sieve constructed partly of wire gauze and partly of a perforated plate, substantially as described.

Second, a sieve constructed as above described, in combination with a separator *F*, attached to the under side of the rear end of the sieve, said plate *F* to be either plain or perforated, fixed or adjustable.

Third, the adjustable strips *H*, or their equivalents, for the purpose set forth and substantially as described.

Fourth, the combination of the sieve *E*, and the adjustable discharging screen *K*, for the purpose set forth, when constructed and arranged substantially as described.

No. 39,091.—THOMAS S. BIGELOW, of Lake Mills, Jefferson county, Wis., assignor to Himself, LUTHER E. PORTER and SAMUEL M. ROWE, of same place.—*Improvement in mode of Stopping and Starting Cars.*—Patent dated June 30, 1863.—This invention consists in an arrangement, whereby, by throwing certain parts into gear by means of a lever, a spring is wound up, whose resistance immediately "breaks" up and stops the car; the spring remaining compressed until it is desired to start, when the gearing being reversed, the spring aids as a propelling force to start the car onwards.

Claim.—First, the combination of the clutches *d d'*, the mitre wheels *F F'* and *E*, the revolving shaft *A* and the spring *S*, constructed, arranged and operating substantially as and for the purpose herein delineated and set forth.

Second, the combination and arrangement of the mitre wheels *M I*, the drums *N P*, chains *p p'*, and ratchet wheel *R*, constructed and operating as and for the purpose specified and shown.

Third, the arrangement of the mitre wheel *E*, with the adjustable sleeve *b* and the spring *S*, for the purpose herein specified.

Fourth, the arrangement of the lever *L* and the rods *i l k* and *h*, with the levers *m n*, substantially as shown, for the purpose of operating the clutches *d d'*, as specified and described.

Fifth, the combination of the lever *D*, the revolving rod *C*, and the movable support *a*, for the purposes herein specified and shown.

No. 39,092.—REUBEN W. DREW, of Abingdon, Plymouth county, Mass., assignor to ALFRED B. ELY, of Newton, Mass.—*Improvement in Sewing Machines.*—Patent dated June 30, 1863.—This is an improvement in machines which use waxed threads, as in leather work, and consists in applying the flame of a lamp to the metallic horn through which the thread passes so as to render the thread pliable.

Claim.—The application of heat by or through the flame of a lamp, gas burner, or their equivalents, to waxed thread sewing machines, in the manner substantially as described, for the purpose of warming the thread and rendering it pliable.

No. 39,093.—JAMES FARGUSON, of Dubuque, Iowa, and CHARLES S. BURT, of Dunleith, Ill., assignors to the said JAMES FARGUSON.—*Improvement in Grain Separator.*—Patent dated June 30, 1863.—The grain from the hopper falls upon a series of ridged riddles with centrally inclined discharging boards underneath; the riddles are supported in a shaking shoe, which is supported by suspension rods and by spring rods adjustable vertically by screw and nut; the motion is derived from an eccentric, sleeve and rod, attached to a support in the centre of the shoe; and the fan case, which is divided horizontally, is supported by a bracketed arm.

Claim.—First, the application of a rigid or flexible support *b2* to grain riddles so that a connecting rod *J* and an eccentric *G*, within a closely fitting strap *f*, may be arranged and employed for operating the riddles, substantially as and for the purpose described.

Second, the arrangement of the spring screw rods *a' a'*, made adjustable, in combination with a rigid or flexible support *b2*, an eccentric *G* and a connecting rod *J*, all in the manner substantially as described, and so that the riddles may be adjusted without affecting the eccentric as set forth.

Third, the arrangement of the hinged devices *F F'*, in combination with a riddle which parts the grain at the centre, and with a bottomless hopper placed over the ridge of the riddle, all in the manner substantially as described.

Fourth, the combination of the many-armed bracket *L* and a fan-box made with a horizontal joint and adapted to form a vertical junction with the blast spout *C*, substantially as described.

No. 39,094.—C. B. GARLINGHOUSE, of Allensville, Switzerland county, Ind., assignor to Self, GEORGE B. GARLINGHOUSE and J. DICKASON, of same place.—*Improvement in Crank Wrists.*—Patent dated June 30, 1863.—The wrist consists of two cones, a set screw bolt and nut, by which, as the parts become loose by wear, they may be set up into their seats.

Claim.—The construction of crank wrists, the cones *b* and *c*, adapted to the pitman *E*, and arranged in reference thereto, substantially in the manner and for the purpose herein shown and described.

No. 39,095.—JONATHAN H. GREENE, of Christiansburg, Wapello county, Iowa, assignor to JAMES B. HOIGSKIN, of New York, N. Y.—*Improved Water-proof Varnish for Paper, Cloth, &c.*—Patent dated June 30, 1863.—Composition: one pint, by measure, of linseed oil; one of India-rubber cement; six of benzine; applied with a brush.

Claim.—The combination of linseed oil, India-rubber, and benzine, or some equivalent solvent, substantially as and for the purpose set forth.

No. 39,096.—W. D. HARRAH and H. P. JONES, of Davenport, Iowa, assignors to Themselves, and IRA M. GIFFORD, of same place.—*Improvement in Binding Attachment for Reapers.*—Patent dated June 30, 1863.—This device is operated by an attendant, and binds the machine with wire from a reel. The grain is raked on to the bars, resting transversely upon them and the wire. The operator shoves forward an arm, which by a link brings forward the other arm embracing the gavel and bringing the wires together and passing them into a slot where they are twisted by the rotation of a winch, the wire cut, and the sheaf removed.

Claim.—First, the two arms *C D*, arranged and connected together as shown, in connexion with the bars or gatherers *H H*, for the purpose of gathering the grain in compact form for binding, as herein set forth.

Second, the clamp *E*, formed of the fixed bar *c*, pivoted bar *d*, and catch *G*, in connexion with the rotary twisting arm *R* and knife *O*, as and for the purpose described.

Third, the combination of the gearing *Q K L M*, cam *I*, and lever *N*, arranged as shown for rotating the twisting arm *R*, and operating the knife *O* at one operation or manipulation, as set forth.

Fourth, the pressure arm or lever *U*, arranged as shown and in connexion with the reel *S*, to operate as and for the purpose herein set forth.

No. 39,097.—DENNIS HARRIGAN, of Winchester, Middlesex county, Mass., assignor to ALFRED B. ELY, of Newton, Mass.—*Improvement in Signal Bell and Brake Attachment for Railroad Cars.*—Patent dated June 30, 1863.—The object of this invention is to take up and keep under control and in working order the slack of the signal and bell cord of a railroad train. When the cars come together, as in stopping or backing, the fixed bunter on the forward car strikes against the sliding bunter, pushing it backward, and causing the ends of the arms to approach each other, and receding the point from the bunter. The cord being attached through the eye-bolts, is thereby kept taut and prevented from hanging down.

Claim.—In combination with the jointed arms *O P*, placed on or under the roof of the car and working horizontally, the movable bunter *T* and rigid bunter *Y*, for the purpose of making a compensating attachment for a car, brake, or bell rope, substantially as described.

No. 39,098.—DANIEL G. HARRISON and JABEZ REYNOLDS, of Cincinnati, Ohio, assignors to HARRISON and WILSON, of same place.—*Improvement in Apparatus for Cooling Coffee.*—Patent dated June 30, 1863.—This machine is for cooling coffee after it has been roasted. The coffee is fed into the revolving cylinder, and by its spiral interior flanges is passed to the other end, where it is discharged into a spout, and taken up by an elevator, and thence by a chute to any vessel prepared to receive it.

Claim.—The rotating cylinder *A*, with or without the internal spiral plates *h*, in combination with the elevator *F* and chutes *I*, one or more, all arranged for joint operation as and for the purpose herein set forth.

No. 39,099.—C. C. HINCHMAN, of Clarksboro', Gloucester county, N. J., assignor to Self, J. M. HINCHMAN, and J. R. HINCHMAN, of same place.—*Table for Reciprocating Saws.*—Patent dated June 30, 1863.—The invention consists of an adjustable bed supported upon a segment, to saw bevelled edge stuff, such as ship timbers, &c. The required inclination for a bevel of a certain angle is indicated by a graduated arc and index finger on the edge of the table.

Claim.—First, the table composed of the top *A* and base *B*, the former having segmental plates *D* adapted to rollers on the base, and the whole being arranged and operating, and being combined with a reciprocating saw, substantially as specified.

Second, in combination with the top A of the table and its segmental plates D, the pinion F, gearing in teeth formed on one of the said plates, the said pinion being operated by the gearing herein described, or any equivalent to the same, for the purpose specified.

Third, in combination with the adjustable top A of the table the graduated quadrant M, for the purposes set forth.

No. 39,100.—GREEN B. McDONALD, of Louisville, Ky., assignor to Self and DENNIS LONG, of same place.—*Improved Arrangement of Valves for Steam Engines*.—Patent dated June 30, 1863.—The object of this invention is to reduce the dead space in the eduction-valve chamber, and the consequent waste of steam; and this is accomplished by an arrangement of parts shown in the illustration, by which the valve being located nearer to the cylinder, the dead space is diminished.

Claim.—The arrangement relatively to each other of the valve chamber C, nozzle E, valve seat a, valve D, and exhaust pipe F, substantially as herein described with reference to Fig. 2.

No. 39,101.—JOHN JACOB MILLER, of Chicago, Ill., assignor to Self and ERNST PRUSSING, of same place.—*Improvement in Lamps*.—Patent issued June 30, 1863; antedated February 14, 1863.—A conical deflector is placed above, being supported by the wick tube and supports arms which are suspended in contact with the flame, the inside of the deflector forming a guide to direct the air upon the resulting gases. A reflector is attached by jointed rods to a collar on the neck of the lamp.

Claim.—First, in combination with a wick tube of any suitable form, a conical deflector with straight sides, of equal vertical length, converging at an angle of about forty-five degrees to the perpendicular, and an aperture at top formed with sides parallel with the top of the wick tube, all substantially as herein set forth.

Second, supporting the said deflector adjustably upon the wick tube by means of rods j projecting from a flanged and slotted tube G, fitting upon the said wick tube with a yielding pressure.

Third, the collar I, jointed rod J j, and clamp screws j, employed in the manner described, to support a reflector, shade, or other article in any desired position.

No. 39,102.—WILLIAM PAINTER, of Fallston, Harford county, Md., assignor to CHARLES PAINTER, of Owing's Mills, Md.—*Improvement in Lamp Burners*.—Patent dated June 30, 1863.—The burner is surmounted by a cap, which forms a throat for the flame to occupy, while inclined sides bring a stream of air from below, and a flaring opening admits the expansion of the width of the flame. The lower part of the burner sets over the cylinder, which is socketed in the cap of the lamp.

Claim.—First, having the side pieces h h and the ends g g constructed and arranged in reverse inclined positions, in the manner herein shown and described.

Second, the combination of the attachment above specified with the tubes F A, the latter being screwed into the fountain or body B of the lamp, and enclosing the wick-adjusting wheels b, as set forth.

No. 39,103.—ABBY H. PRICE, of New York, N. Y., assignor to THE MAGIC RUFFLE COMPANY, of same place.—*Improvement in Ruffles*.—Patent dated June 30, 1863.—Explained by the claim.

Claim.—The within-described corded ruffle as a new article of manufacture, the same being formed of a gathered strip A attached to a folded binding B, or its equivalent, by a single series of machine stitches D, with a cord C, enclosed, substantially in the manner and for the purpose herein set forth.

No. 39,104.—BENJAMIN L. WHITE, of Westford, Middlesex county, Mass., assignor to Self and A. NUTTING.—*Improvement in Boot and Shoe Lasts*.—Patent dated June 30, 1863.—The lower edge of the last is protected by metallic plates, within which are strips of rubber occupying the place where the pegs enter in pegging on the sole. The object is to facilitate the drawing of the last, and to form a guide for trimming without cutting the last.

Claim.—The employment of the India-rubber or elastic peg-strips E, in combination with the inclined grooves a', plates D, formed as shown, and the last A, all in the manner and for the purpose herein shown and described.

No. 39,105.—JOHN S. FISK, of Youngstown, Mahoning county, Ohio.—*Improvement in Nail-plate Feeders*.—Patent dated June 30, 1863.—By this machine the nail plate is fed forward, at intervals, to a distance equal to the width of a nail, and after each feed motion is retracted and elevated so as to turn the plate without interfering with the shears or other parts of the machine, and the carriage retracted, throwing the working parts out of gear when the plate is exhausted.

Claim.—First, retracting the nail plate preparatory to turning the same, by means of one or more cams o' o', and a lever V, and afterward restoring it by means of a spring p', all substantially as described.

Second, the combination of one or more cams o' o', lever S, and rod R, for raising the plate, substantially as described.

Third, the rocking box R', employed in the described combination with the plate rod P and elevating rod R.

Fourth, the combination of the lever T, rack u, and pinion u', or their described equivalents, for inverting the plate.

Fifth, the hinged nut F, employed in the described combination with the endless screw D and carriage C, to advance the latter and permit its retraction.

Sixth, the combination of the levers H G', rod J, spring catch I, stationary cam X, and spring j, operating substantially as and for the purpose set forth.

No. 39,106.—A. H. LANGHOLZ, of Chicago, Ill.—*Improvement in Riding Spurs*.—Patent dated June 30, 1863.—The curved plate is fitted into the back of the heel of the boot; into the slot in this plate the forked bent ends of the spur shank are inserted, and are there held by the engagement of the spring in the socket. To remove the spur, the pin is pushed in, which disengages the spring.

Claim.—The curved plate A, arranged with its spring C, pin D, and slot E, in combination with the forked and notched ends of the stay H, forming a movable spur.

No. 39,107.—H. C. ADDIS, of Springfield, Ill.—*Mode of operating of Churns*.—Patent dated July 7, 1863.—The churn is of the usual reciprocating kind. The upper part of the dash rod is connected with an arm attached to a rock shaft, which is supported by an upright framing and provided with a pendulum which equalizes the movement of the dash rod. A treadle is attached to the platform on which the churn and framing are placed and is connected by a cord or chain to a spring attached to the rock shaft. By applying the foot of the operator to the treadle it gives motion to the rock shaft and the arm gives a reciprocating movement to the dash rod.

Claim.—The combination of the spring L, and treadle I, with the rock shaft D, weighted pendulum F, adjustable arm C, adjustable pivoted dasher rod B, and churn A, all in the manner and for the purpose herein shown and described.

No. 39,108.—THEODORE BAKER, of Stillwater, Saratoga county, N. Y.—*Improvement in Potato Diggers*.—Issued July 7, 1863; antedated July 2, 1862.—The object of this invention is to so construct a potato digger to be drawn by animal power that the flaring bars, set to run a proper depth, shall, by the forward motion of the machine, be made to rotate the cylinder and raise the potatoes, to shake them loose from the earth, from whence they are carried through by the spiral arms and discharged in a row behind the machine.

Claim.—The arrangement of the flaring bars E, and the spiral arms L, attached to the shaft F, constructed and operated as and for the purpose specified.

No. 39,109.—WILLIAM BAKEWELL, of Pittsburg, Alleghany county, Pa.—*Improvement in Metallic Cartridge*.—Patent dated July 7, 1863.—This improvement consists in making the cartridge case of such a shape that it shall be made to fit more loosely in the bore by the act of firing, thereby facilitating its discharge; this is done by making it of any curved or polygonal figure in a cross section which will assume a more circular sectional shape from the effects of the explosion.

Claim.—The use of metallic cartridges so constructed that that portion of the case which enters the charge chamber or breech of the fire-arm (whether tapering or having its sides parallel to its axis) shall be of such shape that a cross section at right angles to its axis will be an ellipse, triangle, square, or other curved or polygonal figure, the perimeter of which will be less than the circumference of a circumscribed circle, so that the cartridge fitting closely in the charge chamber when the piece is loaded, shall, by the expansive force of the discharge, have its longest diameter reduced sufficiently to loosen it when the piece is fired, substantially as hereinbefore described.

No. 39,110.—JOSEPH BEAUDREAU, of Fond du Lac, Wis.—*Improvement in Shingle Machines*.—Patent dated July 7, 1863.—This improvement consists in an endless chain carriage, carrying heads which support bolts of timber, which, by the rotation of the belt, are successively fed to the horizontally revolving saw, in a proper position to have a shingle cut from the under side of each; also in an elastic pressure tilting table under the face of the bolt, and some minor appliances adapted to the details of the process.

Claim.—First, the endless-chain carriage constructed of segment-formed links h1, h2, cross-bars or ties h3, the latter at each end, projecting beyond the links and forming guides h4, which travel in ways m, and thereby support the bolts as they are successively fed to the saw, in a proper position to have a shingle cut from the under side of each bolt, in combination with the tilting table n, and horizontally revolving circular saw c, when the whole is arranged to operate in the manner and for the purpose specified.

Second, the tilting table n, and triangular shaft n4, in combination with the spring s and arm n6, or their equivalents, when arranged to operate in the manner and for the purpose specified.

Third, the pins a, projecting from the under side of the endless-chain carriage, in combination with the gear or toothed wheel n5, and triangular shaft n4, when arranged to operate in the manner and for the purpose specified.

Fourth, the worm or screw *d'* and helical spring *d2*, in combination with the bevelled toothed cog-wheel *c* and shaft *f*, when arranged to operate in the manner and for the purpose specified.

No. 39,111.—JESSE BECKLEY, of Cincinnati, Ohio.—*Composition for Sealing Preserve Jars*.—Patent dated July 7, 1863.—The object of the invention is to provide a cheap and wholesome composition for sealing jars which shall not be liable to crack. It consists of the following preparation: Take coal tar and boil it twelve hours; then, to one hundred pounds of inspissated tar, stir in thirty-seven (37) pounds of beeswax, and cool for use.

Claim.—The composition for sealing preserve jars, composed and compounded as set forth.

No. 39,112.—ALFRED BERNEY, of Jersey City, Hudson county, N. J.—*Improvement in Projectiles for Rifled Ordnance*.—Patent dated July 7, 1863.—The improvement here described is situated at the base or rear of the projectile, and consists of a prolongation of part of the central portion of the ball toward the rear, around which a hollow conical collar fits against packing in the rear of the projectile.

Claim.—The combination with the polygonal extension *b* of the depression *a a*, notches *d d*, and the hollow conical packing ring *B*, formed with a shoulder *e*, all the parts being constructed, arranged, and combined to operate together in the manner herein shown and described.

No. 39,113.—BENJAMIN F. BETTS, of Tonawanda, Erie county, N. Y.—*Improved Machine for Cutting Thin Lumber*.—Patent dated July 7, 1863.—The invention consists in giving an oblique motion to the sliding box and a diagonal position to the knife, thereby giving to the latter a "draw cut," also in the arrangement of the eccentrics for varying thickness of lumber required.

Claim.—The combination and arrangement of the sliding box with oblique motion, thereby giving by movement of the block a drawing out to the knife, in combination with the diagonal position of the knife attached to the immovable bed-plate, and the arrangement of eccentrics for elevating or depressing the movable bed-plate.

No. 39,114.—H. L. BREVOOR, of Brooklyn, N. Y.—*Instrument for Indicating the Depth of Water in Cisterns*.—Patent dated July 7, 1863.—This is an improvement on R. Shaler's patent No. 15,624, and consists in placing the diaphragms and spring inside the cylindrical box for convenience and safety. In nautical use, the pressure of the column of water on the air in the pipe and diaphragm chamber causes the latter to expand and rise, carrying with it the rack which rotates the pinion on whose shaft is an index figure on the graduated face. On the recession of the water the spring closes the elastic chamber.

Claim.—The arrangement of the flexible diaphragms *b b'*, to form an expanding chamber within the box *A*, and in combination with a spring *i*, substantially as herein specified.

No. 39,115.—ALEXANDER M. BRISTOL, of Detroit, Mich.—*Improvement in Teapots*.—Patent dated July 7, 1863.—Swinging upon journals attached to the sides is a suspended teapot with a spout on each side communicating, the one with the outer and the other with the inner chamber.

Claim.—As an improved article of manufacture, a teapot and water urn, arranged and combined in the manner substantially as set forth.

No. 39,116.—ASA L. CARRIER, of Washington, D. C.—*Improved Mosquito Bar*.—Patent dated July 7, 1863.—A frame consisting of four jointed ribs of an arch-shape pivoted to a central clasp, and operated from the outside by handles, which actuate levers under the ribs, and thus suspend them. The handles locked together by a link, in connexion with tension cords, preserve the integrity of the shape.

Claim.—First, a portable insect shield so constructed as to be operated from the outside, substantially as described, by means of levers *A* and *B*.

Second, levers *A'*, constructed and operating as described, in combination with levers *B*.

Third, levers *B*, constructed and operating as described, for the purposes set forth.

Fourth, the clasp *C*, constructed and operating as described, for the purposes set forth.

Fifth, the braces *D*, constructed and operating as described, in combination with the tension cords *1* and *2*.

No. 39,117.—ANDREW CLABAUGH, of Altoona, Blair county, Pa.—*Improvement in Locks*.—Patent dated July 7, 1864.—The object is to construct a lock, which also actuates a bar laid crosswise against the inside of the door, and which can only be raised at the loose end, which fits in the nosing, by the key. This is accomplished by the operation of the ward of the key which depresses the slide *F*, then by contact with the edge *b*, rotates the disk *C*, throws back the slide *D*, and continuing, raises the slide *B* and the bolt *H*. A second revolution raises the bolt to a point where it is free of the nosing *5*. A semicircular slide *K* is so arranged that it will be struck by unskillful handling of the key, and will trip the slide *B*.

Claim.—The disk *C* provided with the spring *g*, the slide *D*, tumbler *F*, and slide *B*, all arranged and combined to operate in connexion with the bolt *H*, as and for the purpose specified.

The semicircular slide or guard *K*, when combined and arranged with the disk *C*, slide *D*, tumbler *F*, and slide *B*, for the purpose specified.

No. 39,118.—STILLMAN A. CLEMENS, of Rockford, Winnebago county, Ill.—*Improvement in Mole Ploughs*.—Patent issued July 7, 1863; antedated December 27, 1862.—The mole is attached to the toe of the cutter-bar foot by a pivot, so as to have a vertical vibrating play; and the cutter-bar is attached to the under side of the plough beam in such a manner as to allow play for the cutter in the mortise in the beam, through which it passes.

Claim.—First, the mole *a* attached near its forward end by a pivot pin near to the front edge of the lower end of a cutter-bar *b*, substantially as described and for the purposes specified.

Second, a cutter-bar *b* attached to a mole plough beam *h*, by the herein described or an equivalent mode which allows free pendulous and hinge movements to the cutter-bar, substantially as described and for the specified purposes.

No. 39,119.—GEORGE F. CLEMONS, of Springfield, Mass.—*Improvement in Machines for Preparing Tine from Tangled Flax Strain*.—Patent dated July 7, 1863.—The flax is fed between feed rollers under a scutching cylinder working in a concave, and from thence by an endless apron, by a narrowing passage, is passed to the breaking rollers, and afterwards to the fanning and beating cylinder and the discharge apron. The latter cylinder is constructed with concavities in its ends, connecting with holes in its periphery, so as to produce a blast of air by centrifugal motion. It also has teeth to operate upon the fibre and wings or fans to produce a concurrent action.

Claim.—First, the breaking rollers *K*, cylinder *H* constructed with concave ends *j*, and having holes *k* made in it and provided with teeth *h*, and wings *i*, and the open endless apron *J*, when all are combined and arranged to operate as and for the purpose herein set forth.

Second, the side pieces or strips *g g*, placed over the endless apron *F* for the purpose of reducing the width of the same, when said side strips or pieces are used in connexion or combination with the cylinders *D H*, concaves *E I*, breaking rollers *C C' K*, and endless apron *J*, for the purpose herein set forth.

No. 39,120.—JOHN WEBSTER COCHRAN, of New York, N. Y.—*Improvement in Breech-loading Fire-arms*.—Patent dated July 7, 1863.—When the recoil block is thrown down for the re-loading of the piece, the extension rod is working in a guide chamber within the butt of the gun, and acting as a guide and guard to the dependent portion of the vibrating recoil block, and at the forward portion of the same, the plates *j'* and *j* coming in contact, throw the hammer back to a half-cock.

Claim.—First, the safety guard or guide *i* in connexion with the recoil block *b*, as set forth.

Second, the arm *j* attached to the hammer *f*, for throwing it back to half-cock by coming in contact with another lever or spring *j'*, when opening the breech by throwing the recoil block down as described.

No. 39,121.—ABIEL CODDING, Jr., of North Attleboro, Bristol county, Mass.—*Improvement in Hooks and Eyes for Connecting Cords*.—Patent dated July 7, 1863.—These sockets, with hooks and eyes respectively attached, are made with serrations on their open ends, so as, after the cord is introduced, to be bent down upon and into the cord.

Claim.—The improved socketed hook and eye, having the socket tubes *a* thereof provided with serrations, teeth, or prongs, arranged in the manner and for the purpose as specified.

No. 39,122.—EDWARD COX, of Point Pleasant, Clermont county, Ohio.—*Improvement in Seed-Planters*.—Patent dated July 7, 1863.—Upon the tongue and axle of a pair of wheels are mounted a seed-box and hopper; the revolving axle passes through the box and operates pulleys by means of a belt connecting them, and upon this belt are cups which dip up the grain and discharge it at a spout.

The upper roller, over which the endless band passes, is maintained at a suitable distance from the other roller, so as to keep the band stretched, by being placed in a sliding journal-box under the impulse of a spring.

Claim.—The arrangement of the slide *H* and spring *J* with the pulleys *E G*, belt *I*, seed-cups *h*, concave *F*, box *D*, spout *K*, gate *M*, and seed hopper *L*, all in the manner herein shown and described.

No. 39,123.—BENJAMIN CRAWFORD, of Pittsburg, Pa.—*Improvement in Locomotive Boilers*.—Patent dated July 7, 1863.—The steam passes out of the steam dome down the usual pipe towards the smoke-box, but is discharged into a chamber with flues coincident with those in the ordinary boiler, the said chamber being located between the smoke-box and the termination of the boiler proper; in this chamber the steam is more perfectly vaporized before passing to the cylinder. A vertical diaphragm in this super-heating chamber causes the steam to descend in contact with the flues, and again ascend so as to expose it to the heated surface.

Claim.—First, the arrangement of the super-heating tubes *c c* in line with the flues *a a*, when the chamber which contains the tubes *c c* is constructed with a vertical diaphragm *g*, and the whole enclosed by the case *E* of the boiler, substantially as and for the purpose set forth.

Second, the combination of heads *d d'*, flues *c c*, steam pipes *D G*, and diaphragm *g*, arranged and operating substantially as herein described and for the purpose set forth.

No. 39,124.—D. G. DAVISON and E. PULLEN, of Prospect Plains, Middlesex county, N. J., and J. S. DAVISON, of Cranberry, Middlesex county, N. J.—*Improvement in Plumb, Level, and Square.*—Patent dated July 7, 1863.—The stock is hollow, and has a swinging plumb within, which is seen through the apertures in the side. A spring rod projects through the casing, which, when closed, holds the plumb-bob against the side of the case.

Claim.—The mode of combining a plumb, lever, and square together, by means of forming that part of the square wherein the plumb is hung hollow or like a case, with an opening on either side at the lower part so that the plumb can be easily seen and brought to an exact perpendicular, by means of marks or other indications as above set forth and as shown in the various figures, or when the aforesaid combination is attained by other means, substantially the same as those herein arranged and described.

No. 39,125.—THOMAS L. DAVIS, of Jersey City, N. J.—*Improved Valve Chest for Steam Engines.*—Patent dated July 7, 1863.—This consists of a cylinder within a casing, the former traversed by a rod and two disk valves, which alternately bring one end of the cylinder in connexion with the steam in the casing, and the other end with the exhaust opening between the disks.

Claim.—The arrangement of the open-ended valve cylinder *B* within the casing *A* in such manner that a steam jacket or space *a* is formed between them, which surrounds or nearly surrounds the whole length of the said cylinder, and which communicates with the said cylinder at the ends thereof for the induction of the steam thereinto, substantially as and for the purposes herein specified.

No. 39,126.—HORACE H. DAYTON, of Worcester, Mass.—*Improvement in Corsets.*—Patent dated July 7, 1863.—The corset has a lacing opening in the back and clasps in front. The shoulder straps are attached near the lacing on the back and nearly around to the arm-pits in front, and are united on the back by an elastic band to keep them from slipping off the shoulders and to act as a shoulder brace. The lower part of the corset is spread for skirt attachment.

Claim.—A corset combining the adjustable shoulder-straps *D*, body *A*, and extensor *J*, or the equivalent thereof, substantially as shown and described.

No. 39,127.—WILLIAM S. DEISHER, of Hamburg, Berks county, Pa.—*Improvement in Cooking Stoves.*—Patent dated July 7, 1863.—This improvement refers to the arrangement of flues and openings for the circulation of air. There is a double plate at the ends of the fire chamber with external doors, and a space behind the said chamber; also, one with a sliding register plate over the oven.

Claim.—First, the flues *H H*, provided with openings *H'* and *i*, in combination with the air-heating space *J* and flue *L*, when arranged in the manner and for the purposes specified.

Second, the combination of the flues *H* and *L*, with the openings *b* and *s'*, valves *M S*, and oven *C*, when arranged in the manner and for the purpose specified.

No. 39,128.—JAMES M. DICK, of Buffalo, N. Y.—*Improvement in Hay Elevators.*—Patent dated July 7, 1863.—This consists of a screw, which is passed down into the hay in the manner of a cork-screw, by the rotation of the handle, while the bolt causes them to revolve together; after being raised to the point desired the bolt is withdrawn, which allows the screw to rotate in the swivel and thus discharge the hay. The hook may be used to prevent rotation, or be placed out of the way in a staple.

Claim.—First, the employment of the screw *B*, in the manner and for the purpose herein described and set forth.

Second, the bolt *D*, in combination with the flange *E* and screw *B*, when used for the purpose herein specified.

Third, the hook *L*, in combination with the handle *A* and screw *B*, when used as herein set forth.

No. 39,129.—H. W. DOPP, of Buffalo, N. Y.—*Improvement in Coal-oil Heaters.*—Patent dated July 7, 1863.—The vaporization is effected by heating the retort by a flame of alcohol in the trough around it, and then by the turning of the handle at the end of the stem, allowing the vaporized oil to pass out to be ignited; after which it generates enough heat against the adjacent metallic surfaces, in passing by conduction to the retort, to keep up the distillation of the oil and emission of vapor.

Claim.—First, the adjustable small disk *a*, in combination with the perforated distributing plate *A*, for the purpose as set forth.

Second, the mode of vaporizing coal-oil of any gravity, or other hydro-carbon liquids, for heating and cooking purposes, by means of a retort, without wicking or packing of any kind or form, so arranged that the supply of oil enters into the retort below the point of vaporization, as described.

Third, the combination of retort *C* and draw-off valve *H*, for the purpose described.

No. 39,130.—JOHN JAMES DOYLE, of New York, N. Y.—*Improvement in Tackle or Purchase Blocks.*—Patent dated July 7, 1863.—The two upper pulleys are of different diameters, and fast on the same shaft; the chain passes over both in the same direction, and the effective action is according to the circumference of the larger, minus that of the smaller.

Claim.—The employment or use in tackle blocks of ratchets *E* and pawls *F*, arranged and combined with pulleys *D*, and either with or without the flanges *G*, to operate as herein set forth.

No. 39,131.—DANIEL A. DRAPER, of East Cambridge, Mass.—*Improved Spring Catch for Lamps.*—Patent dated July 7, 1863.—This metallic spring strip is attached to the wick tube, passes upward through the deflector holder, inside of the parapet, and recurves outwardly so as, in its advanced position, to embrace the foot flange of the lamp, or by retraction to set it free.

Claim.—The construction of the spring catch and its application or arrangement relatively to the deflector holder and the wick tube, the whole being substantially as above described.

No. 39,132.—GEORGE W. DUBUISSON, of Jerusalem South, Queens county, N. Y.—*Improved Clod-Crusher and Harrow.*—Patent dated July 7, 1863.—This consists of a sled with a full bottom like a stone boat, and a harrow hinged behind, which may be doubled forward on top of the sled for transportation.

Claim.—The combination of the clod-crusher *A* and harrow *C*, connected by hinges or joints *D*, and arranged substantially as herein shown and described.

No. 39,133.—ROBERT NELSON EAGLE, of Washington, D. C.—*Improved Riding Stirrups and Hoods.*—Patent dated July 7, 1863.—The wooden frame is bent so as to bring the ends converging to a point at the top where the strap is applied to retain them in position and to furnish the means of suspension.

The front of the stirrup is furnished with a hood or toe-piece suitably applied to the frame.

Claim.—First, a stirrup frame of wood bent as described, with arms close together at their upper ends, in combination with a cap, strap, or band applied to the inside or outside, or both inside and outside of the frame to sustain the means of suspension, substantially as set forth.

Second, a toe-piece or hood of leather or analogous material, stamped or prepared by dies in proper form, adapted to fit within or on the outside of the frame, or partially within and partially on the outside, substantially as set forth.

No. 39,134.—TIMOTHY EARLE, of Smithfield, Providence county, R. I.—*Improved Egg Beater.*—Patent dated July 7, 1863.—The beater consists of a pear-shaped skeleton frame with arc-shaped cutting edges, and retained vertically by a handle, while it is rotated by the reciprocating movement of a rack which engages a pinion on the shaft.

Claim.—The use of a series of cutting edges *a a a a*, when attached to a frame *A* which is capable of being rotated, substantially as described for the purposes specified.

No. 39,135.—THOMAS ELKINTON, of Philadelphia, Pa.—*Improvement in the Manufacture of Alkaline Silicates.*—Patent dated July 7, 1863.—Explained by the claim.

Claim.—Manufacturing silicate of soda by permitting a supply of the ingredients of which it is composed to fall on to the bed of a furnace, down which, as well as down other beds if required, the fused silicate flows in a continuous stream to the outlet opening, and while taking its course is subjected to the direct heat of the furnace, as described.

No. 39,136.—WILLIAM H. ELLIOT, of Plattsburg, N. Y.—*Improvement in Breech-loading Fire-arms.*—Patent issued July 7, 1863; antedated January 23, 1863.—The sliding breech-piece is retracted by means of a lever which is pivoted to it and to a link, forming a toggle joint, so as, by the upward motion of the lever, to expose the rear of the barrel for the insertion of the cartridge, and by depression to return the breech-piece in its guides to its closed position pressing against the rear of the cartridge.

Claim.—First, the use of the sliding breech *d*, lever *h*, and link *g*, when these devices are arranged and employed substantially as herein specified, in relation to each other, and to the rest of the arm.

Second, the use of the sliding breech *d*, lever *h*, and link *g*, when these devices are arranged and employed, substantially as specified, in relation to each other, and when the sliding breech moves back and forward upon shoulders or guides, which are so curved as to conform to the shape of the arm, as set forth.

No. 39,137.—HENRY FLETCHER, of Providence, R. I.—*Improvement in Braiding Machines*.—Patent dated July 7, 1863.—The object of this improvement is to dispense with the guide cap usually required over each of the gears and within the race circle; and it consists in the combination of a switch cam on the racer with pins carried on the race plate, so that during the movements of the racer around in each of the openings of the race plate, the cam, by contact with one of these pins, shall be caused to turn the racer aside and direct it from the opening in which it may be moving to the next opening.

Claim.—The combination of the switch cam C of the racer with one or more pins D D, or the equivalent thereof, raised on the race plate, the same being arranged so as to operate substantially in the manner and for the purpose as hereinbefore specified.

No. 39,138.—JOSEPH FLETCHER, of Providence, R. I.—*Improvement in Braiding Machines*.—Patent dated July 7, 1863.—The object of this improvement is to afford a better support for the racer, and prevent the bearing and friction of the racer on the top surface of the race way or race plates; and it consists in supporting the racers on the driving wheels, the base of the racer projecting under a recess in the plate.

Claim.—An improvement in the braiding machine, the same consisting in having the racers and driving wheels or gears and supports of the racers so constructed that the weight of the racer shall be borne on each of the said driving gears while in the act of being driven by such gears.

Also, the combination of the recessed plate D, or its equivalent, with the racer base b and the driving wheel or gear C on which such plate is affixed, such plate being for the purpose, and to operate in manner, substantially as hereinbefore explained.

No. 39,139.—JOSEPH J. FULLER, of Brooklyn, N. Y.—*Improved Fabric for Roofing*.—Patent dated July 7, 1863.—Sheets of paper are steeped in the following mixture: One gallon linseed oil and three pounds flour of sulphur raised to 280° Fahrenheit, and incorporated. Mix with one barrel coal tar, and add three gallons of blood as a drier.

Claim.—Preparing sheets of roofing paper with the water-proofing compound set forth, in the manner specified.

No. 39,140.—CHARLES DANA GIBSON, of New York, N. Y.—*Improvement in Ventilating Railroad Cars*.—Patent dated July 7, 1863.—A blast of air is generated by a right and left hand screw in a cylinder placed upon the tender of the locomotive, the screws working toward the centre, and the blast conducted by pipes to the several cars.

Claim.—The arrangement of a shaft C, provided with right and left handed screw-wheels N and M, in the water-tank of a locomotive tender above the level of the water, in combination with suitable openings in the sides of the tender, and with an escape pipe P on the top of the tender, and operated in the manner and for the purpose as described and set forth.

No. 39,141.—HERMAN GLASS, of Honeoye Falls, Monroe county, N. Y.—*Improved Wringing Machine*.—Patent dated July 7, 1863.—The improvement consists in the method of attaching the wringer to the side of the wash tub, which is by means of slots in the lower end of the standards, and a clamping bar to fit the exterior surface of the tub, which is pressed against the same by means of temper screws.

Claim.—The standards A A, provided with the straight and bevelled opening c c, the curved clamp G, connected with the cross support b by the guide pins g g, and elastic strips h h, and the tightening screws i i, the whole arranged, combined, and operating substantially as and for the purpose herein set forth.

No. 39,142.—JOHN A. GRUVER, of West Union, Fayette county, Iowa.—*Improvement in Beehives*.—Patent dated July 7, 1863.—This consists of a frame on which the hives are supported, and an enclosing shed above them with supporting shelves for honey-boxes and doors for changing or examination.

Claim.—A bee-house or bee-palace provided at its sides with horizontal shelves e e and flaps or doors E to receive the spare honey-boxes I, and also provided with horizontal internal ledges d to support the hives, a door D at each end, and an inverted pyramidal lower part a with a flap H, the house or palace being supported by a suitable framing A, all constructed and arranged as and for the purpose set forth.

No. 39,143.—LEVI HALL, of Henrietta, Jackson county, Mich.—*Improved Hame-Tug*.—Patent dated July 7, 1863.—The part of the tug extending back from the hand is divided so as to include the end of the trace between its two portions; it is fastened by two transverse screws.

Claim.—First, by making hame-tugs for harnesses in two separate parts except the forward end where the hame rivets on, so as to admit the trace between the two pieces of the hame-tug.

Second, by fastening the trace to the hame-tug by two bolts or thumb-screws, in the manner herein described and represented by the drawings.

No. 39,144.—E. C. HARRINGTON, of Fair Plains, Montcalm county, Mich.—*Improved Shoe Fastening*.—Patent dated July 7, 1863.—The side seam of the boot is closed by means of detachable bands carrying hooks which engage in eyelets on the sides of the opening.

Claim.—The elastic detachable bands D, as applied to the shoe, substantially as described.

No. 39,145.—SANDY HARRIS, of Philadelphia, Pa.—*Improvement in Balances*.—Patent dated July 7, 1863.—The invention consists in substituting for the ordinary scale-beam a graduated arc with a single weight suspended on an arm which is pivoted to the chord of the arc, and which has a vibrating motion carrying the weight and an index-finger attached around the inside of the graduated arc.

Claim.—The manner, mode, and means, substantially as set forth and described, of arranging, moving, and denoting the movements of the weight to and from the fulcrum or knife-heads, for weighing purposes, or for testing the pressure of steam, and whether used in this or any other form of balance.

No. 39,146.—DAVID W. HARSHBARGER, of Myersburg, Bradford county, Pa.—*Improvement in Grain Separators and Cleaners*.—Patent dated July 7, 1863.—The grain falls upon a shaking screen, and from thence between hulling stones, the lower one having an upper convex face, and the runner, whose step is vertically adjustable, bearing a corresponding concave face; from the stones it passes to a beating fan in a case, whose concave bottom is perforated, and the light refuse drawn away by an exhaust fan.

Claim.—The arrangement and combination of the concave and convex hulling stones I I', spindle G, adjusting beam L, cam-wheel d, rock-lever D, vibrating screen C, and conveyer H, in such a manner that the grain is screened and conveyed to the stones, and said stones are adjusted without affecting the action of the screen, substantially as herein set forth.

Also, the fan-beater N, revolving in the chamber M, the perforated bottom m, compartments n o p, and the auxiliary exhaust fan P, the two fan chambers being connected by the passages q r, the whole arranged, combined, and operating substantially as and for the purposes specified.

Also, the specific arrangement of the whole machine, whereby a draught is produced between the stones and through the grain, from the time of its ingress to its exit, substantially as herein described.

No. 39,147.—JAMES P. HERRON, of Washington, D. C.—*Device for Preserving Postage Stamps*.—Patent dated July 7, 1863.—The improvement consists in folding back the sheet of stamps so that a piece of tin foil of half the size of the stamp sheet shall be interposed between the gummed surfaces.

Claim.—To preserve postage stamps, &c., after being damp or wet, from adhering and drying together, or to surfaces injuring them or rendering them useless, as specified and set forth.

No. 39,148.—GEORGE B. ISHAM, of Burlington, Vt.—*Bill and Currency Holder*.—Patent dated July 7, 1863.—The interior of the box is divided up into compartments of convenient size for bills and currency of the various denominations, a lid with a shank sliding and retained in grooves lying upon the notes to keep them flat. The lids are fastened down by bands extending from hooks and around their handles when it is necessary to pack for transportation.

Claim.—The arrangement of the trap-doors B, provided with cross-shaped projections k, in combination with slots l in the rear walls of the several compartments of the tray A, constructed and operating as and for the purpose herein shown and described.

Also, the arrangement of the hooks m on the front walls of the several compartments in combination with springs n and with the handles j of the trap-doors B, constructed and operating in the manner and for the purpose substantially as specified.

No. 39,149.—LUMAN F. JOHNSON, of Buffalo, N. Y.—*Improved Skate*.—Patent dated July 7, 1863.—The curved runner is attached to the foot piece by means of slipping into dovetailed grooves in disks under the tread, and the shape or bow of the runner is modified by a screw bolt between the tread and the runner, which forces them apart.

Claim.—First, the application and use of a lifting screw shaft F, placed between the skate runner and wood for the purposes and substantially as set forth.

Second, the metal disk C, having an undercut dovetail notch in combination with a runner bent at both ends and fitted in said notch, as a means of fastening the runner to the wood, substantially as described.

No. 39,150.—LOUIS JOUBERT, of Paris, France.—*Improvement in Combined Knapsack, Tent, and Litter*.—Patent dated July 7, 1863.—The invention combines all the parts necessary to make a litter, or half a tent, and the supports and stays necessary, with the knapsack in such a manner as to bring them within the space and weight for transportation on the back of the soldier.

Claim.—The arrangement of the knapsack A with straps *k k'*, poles E E', cross-bar F, with hinged legs *e*, straps *f*, and canvas D, all combined and operating in the manner and for the purpose substantially as herein shown and described.

No. 39,151.—SAMUEL U. KING, of Windsor, Vt.—*Improved Bit-Stock*.—Patent dated July 7, 1863.—The crank shank is attached to the handle by means of a pin on the former resting on a washer in the sleeve socket, which screws into the handle; on the end of the shank is a pivot which rests against a steel plate.

Claim.—The improved bit-stock, as having the shank and handle pivoted together as described, and combined with a chambered sleeve, made and applied to both in the manner and so as to operate therewith substantially as specified.

No. 39,152.—SAMUEL LAGOWITZ, of Newark, N. J.—*Improved Carpet Bag Frame*.—Patent dated July 7, 1863.—The improvement consists in making the jaws and cover of bent wood, on account of the superior stiffness and lightness compared with metal, and the greater facility for attachment of the covering material.

Claim.—Having the cover B made of elastic wood, and attached to one of the wooden jaws A by stays, all as herein shown and described.

No. 39,153.—E. B. LARCHER, of New York, N. Y.—*Improvement in Lamp Wicks*.—Patent dated July 7, 1863.—At the upper end of a common wick is a section of asbestos, which is fed by the ordinary wick without waste of material.

Claim.—For the wicks of lamps, the holder containing asbestos, substantially as described, in combination with common wicking extending down into the reservoir of the lamp, substantially as and for the purpose specified.

No. 39,154.—ALEXANDER B. LATTA, of Cincinnati, Ohio.—*Improvement in Lamps*.—Patent dated July 7, 1863.—The cylindrical oil chamber is surrounded by a casing, the space between them being occupied by a rising column of air, which impinges upon all sides of the flame, and causes it to consume all its combustible products without the aid of an elevated chimney.

Claim.—The connexion of a common burner with the inverted metallic chimney C by means of solder, so as, when used with a single metallic cone, to make a conductor of heat from the flame to the air inside the chimney, thereby rarefying the air and producing an upward current therein.

Second, the combination of the inverted chimney C with the oil chamber G, when used with a single metallic cone, so as to direct the current of air passing between the inverted chimney C and the oil chamber G against the flame on all sides, thereby sustaining the flame without the aid of a glass, chimney, or other appliances.

No. 39,155.—J. M. LE COUNT and G. R. BOYNTON, of Hartford, Washington county, Wis.—*Improved Sap Spiles*.—Patent dated July 7, 1863.—The sheet metal spiles are formed by being wrapped around a rotating mandrel in a concave bed, the edges being turned and inserted in a longitudinal slit in said mandrel, and the latter revolved; the other edge is then inserted, and the motion reversed. The spile is removed by raising an upper journal on the small end, which frees that end of the mandrel.

Claim.—First, a machine for forming sap spiles from sheet metal, when constructed in a similar manner and for the purposes herein described.

Second, the combination of the several parts of said machine, when constructed in like manner and for the purposes hereinbefore described.

No. 39,156.—GEORGE W. LUDLOW, of Elizabeth, Union county, N. J.—*Improvement in Boots and Shoes*.—Patent dated July 7, 1863.—A spring is inserted along the back seam, between the upper and the lining, to prevent sagging of the leather.

Claim.—The application of a spring *b* to the back seam of a boot or shoe, in the manner and for the purpose substantially as shown and described.

No. 39,157.—JOHN MAYHER, of East Hampton, Hampshire county, Mass.—*Improvement in Oil Cans*.—Patent dated July 7, 1863.—The air is admitted at the bottom through a pipe into an air reservoir, from whence it passes by another pipe to the main chamber.

Claim.—First, taking the air in at the bottom of the can A, instead of at the top, as specified.

Second, the arrangement of the conical reservoir D with the tube F, in combination with the air tube E, extending up through the bottom of the can A, as and for the purpose shown and described.

No. 39,158.—D. L. MILLER, of Madison, Morris county, N. J.—*Improvement in Baling Presses*.—Patent dated July 7, 1863.—The invention consists in the method of operating the follower by means of right and left hand screws on a driving shaft, and gearing on worm wheels fitted on shafts at the ends of the press box; the said shafts having conical pulleys

which by means of ropes draw up the follower. The driving shaft is raised so that its screws are out of contact with the worm wheels by the rotation of the shaft, to which its journals are connected by rods.

Claim.—The ropes or chains C, and the cones G G on the shafts F F, in combination with the driving shaft J, worm wheels H H, and screws I I, all arranged substantially as and for the purpose herein set forth.

Second, having the driving shaft J fitted in rods K K, which are connected to cranks on a shaft L, substantially as shown, for the purpose of throwing the screws I I in and out of gear with the wheels H H, as herein specified.

No. 39,159.—WILLIAM MILLS and O. H. BURDETT, of New Athens, Harrison county, Ohio.—*Improved Gas Apparatus for Domestic Use*.—Patent dated July 7, 1863.—The carburetted hydrogen from the retort is passed through a tar-collecting chamber, and then through a second purifying chamber, when it follows a rising zigzag passage made by a series of inclined passages of semicylindrical form united at the ends, so as to compel the gas to follow the path thus provided, by which it is brought into a more lengthened contact with the water in the chamber; from there it passes through the perforated bottom of the lime chamber, where the impurities are still further eliminated, and thence into the gas holder, or directly to the supply pipe.

Claim.—First, the arrangement of the concaves E, or their equivalent, forming a zigzag or winding passage in the interior of the purifier, constructed and operating in the manner and for the purpose substantially as described.

Second, the arrangement of a line chamber in the movable lid F of the purifier in combination with the flexible tube I, constructed and operating as and for the purposes set forth.

No. 39,160.—JOHN MORRISON, of Birmingham, Warwickshire, England.—*Improvement in Folding-Guides for Sewing Machines*.—Patent dated July 7, 1863.—The improvement consists of two plates or strips of sheet metal situated parallel to each other, and at distance apart sufficient to allow the fabric to pass readily between them, and be twisted into a screw-like form, so as to double over the edge of the stuff preparatory to sewing.

Claim.—The improvement in or addition to sewing machines hereinbefore described and illustrated in the accompanying drawing—that is to say, an instrument or apparatus constructed and operating as herein described, so as to regulate the width of the fold, and to be attached to or used in connexion with sewing machines, for the purpose of folding or doubling the edge or edges of the fabric or material to be sewed, substantially as herein described, the said instrument or apparatus consisting essentially of the two guiding plates *k i*, and of two plates or strips *a b* of sheet metal or one plate folded, as herein described, and the levers *n* or *l*; the said plates or strips *k i* being situated parallel or nearly so to one another, and the said plates or strips *a b* being twisted into a screw-like form, and either or both grooved or plain on their inner or opposed surfaces.

No. 39,161.—HENRY M. NAGLEE, U. S. A., of San Francisco, Cal.—*Improved Automatic Sounding Apparatus*.—Patent dated July 7, 1863.—The rod is pivoted to the side of the vessel, and its lower end trails on the bed of the river, indicating on an arc the depth of soundings.

Claim.—The within-described self-sounding apparatus composed of a rod or its equivalent hung to the side of the vessel and permitted to traverse the bed of the river or harbor, substantially as set forth, for the purpose specified.

No. 39,162.—HENRY M. NAGLEE, U. S. A., of San Francisco, Cal.—*Improvement in Apparatus for Detecting and Exploding Submarine Torpedoes*.—Patent dated July 7, 1863.—This consists of a float or raft with a projecting arm, with its submerged end provided with hooks or projections to interlock with the anchor chains or trigger lines of torpedoes.

Claim.—First, searching for and exploding torpedoes by means of a raft A, or other suitable object permitted to float with the tide or current from a vessel at anchor, and having the appliances herein described or their equivalent, to be operated from the deck of the said vessel, the said appliances being such as to cut or to catch, seize or become entangled with the discharging cords of the torpedoes, as herein set forth.

Second, the lever B, its plates H and pawls *i*, or other similar appliances, the whole being attached to the raft A, or other floating object, and the lever being controlled by a cord or rope G, communicating with the vessel M, all substantially as set forth for the purpose specified.

No. 39,163.—ROBERT NEWTON, of Philadelphia, Pa.—*Improved mode of Lacing Boots*.—Patent dated July 7, 1863.—The lace passes through holes in the boots and through the loops of a tongue fastened to the guard piece.

Claim.—Securing boots and shoes by laces passing through holes in the leg and through a tongue, when the latter is formed and arranged in respect to the boot or shoe as described, for the purpose specified.

No. 39,164.—GEORGE NIDERKORN and JOHN DUBERNET, of New York, N. Y.—*Improved Guide for Scroll Saws*.—Patent dated July 7, 1863.—The saw is continuous, running over a driving and guide wheel of equal diameter, and the working side of the saw is stayed by a horizontally adjustable guide on a depending rod attached to the frame.

Claim.—The arrangement of the horizontal adjustable slotted guide *g* in the box *e*, attached to the vertically adjustable square rod *c*, in combination with the endless band saw *A*, constructed and operating in the manner and for the purpose herein shown and described.

No. 39,165.—JOHN H. J. O'NEILL, of New Haven, Conn.—*Improvement in Bridle Bits*.—Patent issued July 7, 1863; antedated May 15, 1863.—The bar of the bit has thimbles on its lateral portions and a gag upon its centre. The levers, which extend downward from the axis of the bit, have a series of open rings, through either of which the curb rein may be passed, to give the required leverage on the horse's mouth.

Claim.—First, the open adjusting rings described, when the same are used in combination with the bridle bits in the manner and for the purposes substantially as herein set forth.

Second, the combination and arrangement described of the bar *B*, gag *A*, thimbles *N N*, and levers *P P*, constructed and operating substantially in the manner and for the purpose as herein set forth and described.

No. 39,166.—M. ORMSBEE, of New York, N. Y.—*Improvement in Pasting and Mounting Photographs, &c.*—Patent dated July 7, 1863.—The frame carries two rollers covered with rubber, and arranged in different planes with regard to the handle. Above the outer roller is a paste reservoir, with a sponge beneath to filter the paste through gradually. The other roller is used for pressing down the print to its mounting.

Claim.—First, covering the pasting and rolling-down or pressing rollers with rubber, or its equivalent, substantially as and for the purpose described.

Second, the arranging of the pasting and pressing-down rollers in different planes with regard to the handle, substantially as described.

Third, the combination of the paste reservoir, pasting and pressing rollers, frame, and handle, for the purpose of pasting and pressing or rubbing down with one instrument, substantially as described.

No. 39,167.—SAMUEL N. PAGE, Salona, Clinton county, Pa.—*Improvement in Balancing and Ventilating Millstones*.—Patent dated July 7, 1863.—The stone is balanced by weights which are adjustable on a circular track or ring attached to the periphery of the runner, and this hoop is supported by brackets or wings, which cause an outward current of air to circulate between the stones, to prevent clogging.

Claim.—First, the weights *F*, provided with set-screws *c*, and fitted to slide on a circular way *E*, which is supported in a position concentric with the stone by flanches or wings *b* projecting from the circumference of the same, as and for the purpose specified.

Second, the flanches or wings *b* projecting from the runner stone, in combination with the inclined partition *J*, box *I*, fender *k*, and opening *j*, when constructed and arranged to operate in the manner and for the purpose specified.

No. 39,168.—BERNARD PALAZOT, of Bordeaux, France.—*Improvement in Furnaces*.—Patent dated July 7, 1863.—Patented in France July 31, 1862.—The improvement consists in an aperture across the furnace in front of the grate giving passage to a current of air, the volume of which is regulated by a register; also of an archway formed by a plate above the fire bridge, to concentrate the passage of the flame.

Claim.—The improved combination of the vaulting or plate *C* with the air entry *A* and register *B*, applied to boiler and other furnaces, the whole constructed and arranged in manner and for the purpose substantially as herein specified and shown in the figures of the annexed drawing.

No. 39,169.—ISRAEL PECK, of Southold, Suffolk county, N. Y., and W. H. H. GLOVER, of New York, N. Y.—*Improved Device for Drawing Off and Skimming Oils, &c.*—Patent dated July 7, 1863.—The skimmer is supported on the surface of the liquid by floats, and the upper stratum which is gathered by it is passed down a pipe and through a nozzle or stuffing box out of the cistern.

Claim.—The combination of the floats *B B B D* with the saucer *A* and pipe *C*, substantially in the manner and for the purpose herein shown and described.

No. 39,170.—MORITZ PINNER, of New York, N. Y.—*Improvement in Travelling Kitchen*.—Patent dated July 7, 1863.—The frames are made so as to hold the kettles and covers in position, and they are connected by a steam pipe with the boiler; the whole frame being suited to be mounted on a wagon, or detached, as the exigencies of the service may require.

Claim.—The construction of a locomotive cooking apparatus by connecting a steam generator or cooking range, boilers, and steam pipes with movable frames, constructed substantially as above set forth, which frames contain and hold the boilers in place while the vehicle containing the whole apparatus is in motion.

No. 39,171.—O. W. PRESTON, Jr., and CHARLES BARRY, of Corning, N. Y.—*Improvement in Sad-irons*.—Patent dated July 7, 1863.—The improvement consists in constructing the iron with a shell, in which a sliding heater is placed so that the iron may be applied to and heated by a coal-oil lamp, and serve as a draught chimney for the same; a relay of irons being used, so that in this manner the lamp may be constantly provided with a chimney.

Claim.—The iron *D*, composed of a shell *c* and a sliding or adjustable heater *f* fitted within it, and arranged substantially as shown, so as to serve while being heated as a draught chimney for the lamp, as set forth.

No. 39,172.—WILLARD S. RAY, of North Adams, Berkshire county, Mass.—*Improvement in Steam Traps*.—Patent dated July 7, 1863.—The orifice of the waste pipe is within a spherical chamber, the other end of the pipe being attached to a fixed point in line with the pipe, and at a little distance from it is a plunger working in a stuffing box in the chamber constituting a valve, which closes the end of the pipe on the longitudinal expansion of the latter by the heat of the steam. A pipe on the lower side of the chamber carries off the water of condensation; a weighted lever applied to the outer end of the plug balances the pressure of the steam against its end. When the pipe is filled with water, the length of the pipe is reduced so that the water is discharged, but the higher temperature of the steam closes the orifice.

Claim.—The plunger or valve *E*, weight *G'*, and stop *J*, combined with each other and with the expanding pipe *B* and box *A*, or its equivalent, to operate substantially as and for the purpose herein specified.

No. 39,173.—FRANCIS ROBBINS, of Acton, Middlesex county, Mass.—*Improved Chuck for Turning Staves*.—Patent dated July 7, 1863.—The staves are held in the chuck by their chamfered ends being sprung to the required bulge by internal disks on the shaft, the heads being screwed up toward each other by nuts.

Claim.—The heads *F* and *G*, in combination with the shaft *C* and nuts *b*, or their equivalents, arranged and operating in the manner substantially as set forth for the purpose specified.

No. 39,174.—WM. ROSE, of Halesowen, Worcestershire, England.—*Improvement in the Quality and Ornamentation of Metals*.—Patent dated July 7, 1863.—Explained by the claim.

Claim.—For the purposes of ornamentation and strength, the piling or combining of metals into a billet, so that the lamina of the metal of some of the bars shall be at right angles to that of some of the other bars in the pile, for the purpose of giving the mass, when worked, a checkered appearance throughout, as herein more fully set forth and specified.

No. 39,175.—SOCRATES SCHOLFIELD, of Norwich, Conn.—*Improved Life-Preserver*.—Patent dated July 7, 1863.—This is an apparatus whose orifices are to be placed in connexion with the mouth and nostrils, and having a floating valve in a chamber below, which allows the ingress of water into the chamber as long as the apparatus is out of water, but closes when it is submerged.

Claim.—The combination of a floating valve *F* with the pipe *B*, or its equivalent, substantially as described.

Also, the combination of a floating valve *F* with the pipes *C C'*, or their equivalent, substantially as described.

No. 39,176.—THEOPHILUS E. SICKLES, of Kennett Square, Chester county, Pa.—*Improvement in Condensers for Steam Engines*.—Patent dated July 7, 1863.—The invention consists in the combination of an air pump and surface condenser with a blower to force a current of air through the latter, for the purpose of condensing the steam and heating the air.

Claim.—The combination and arrangement in a condensing steam engine of an air pump and surface condenser with a blower to force a current of air through the condenser, to effect the condensation of the steam and to heat the air, substantially as set forth.

No. 39,177.—ALFRED E. SMITH, of Bronxville, West Chester county, N. Y.—*Improvement in Wagon Hubs*.—Patent dated July 7, 1863.—A revolving linch-pin works in a groove on the spindle and against the end of the boxing, being retained in place by a screw-cap with a shoulder which abuts upon the linch-pin.

Claim.—The use of the ledge *M* formed on the inside of the screw-cap *L* in combination with the revolving linch-pin *K* and axle *A*, for the purpose hereinbefore set forth.

No. 39,178.—SAMUEL J. SMITH, of New York, N. Y.—*Hand Stamping Press*.—Patent dated July 7, 1863.—The two stamps swing upon one gudgeon, and their rotation is limited by a pin projecting into a slot in the pintle. The impression is given upon a pad on the bed, and the stamp is inked in a flat cup on the arm supporting the gudgeon.

Claim.—First, the combination of a swinging stamp with the inking table and impression bed, when said inking table is elevated above the impression bed for the purposes specified.

Second, two arms swinging on one gudgeon and carrying different stamps, substantially as specified, in combination with inking and impression tables, so placed that either stamp can be inked and impressed, as set forth.

Third, the adjustable inking table *l* formed as a shallow flat cup setting upon the arm *c*, as and for the purposes specified.

Fourth, the shallow cup and cloth pad forming the inking table, in combination with a stamp fitted upon an arm and gudgeon to swing from such inking cup to the impression table, as set forth.

No. 39, 179.—CHARLES W. STAFFORD, of Burlington, Iowa.—*Improvement in Sabot for Projectiles*.—Patent dated July 7, 1863.—The sabot receives the force of the explosion upon an area larger than that of the ball, guides the ball to the mouth of the piece, and then separates from it. The ball in its wooden-banded casing is mounted upon a conical abutment rising from the rear disk.

Claim.—First, a sabot constructed with a conical shell *C*, to form an abutment between the disk *A* and the rear of a spherical or other shot.

Second, a sabot constructed with a disk *A*, flange *B*, conical disk *C*, rings *E E' E'' E'''* and band *G*, substantially as described, for use in connexion with a sub-calibre shot or shell.

No. 39, 180.—CHARLES W. STAFFORD, of Burlington, Iowa.—*Improvement in Projectiles*.—Patent dated July 7, 1863.—At the rear of the sub-calibre bolt is a sabot with an expansible packing ring and conical front face, in the centre of which the rear of the bolt is socketed; the projectile is supported forward by a hollow spherical protuberance.

Claim.—First, an elongated shot *A*, guided and supported within the bore by a hollow spheroidal band *C*, which may continue with it in its flight, and by a sabot *D*, which, after receiving the full explosive force of the charge, will separate from the shot by atmospheric resistance, substantially as explained.

Second, the detachable conical-faced sabot *D* and expansible packing disk or cup *E*, constructed as described, in combination with the sub-calibre bolt *A*, for the purposes specified.

No. 39, 181.—A. J. STEVENS, of San Francisco, Cal.—*Improvement in Slide Valves for Steam Engines*.—Patent issued July 7, 1863; antedated April 29, 1863.—The improvement is to prevent the pressure of the steam in the cylinder on the exhaust side of the piston, after the port has been closed by the lap of the valve on the inside, and consists in the substitution for a single anti-compression valve of the sliding kind, of two puppet valves operated upon directly by the steam. It also consists in protecting the back of the main valve from the pressure of the steam, and providing communication between the anti-compression valve chest and the atmosphere by means of a follower and gland above the said chest.

Claim.—First, the connected puppet valves *g g'* applied in combination with separate chambers *e e'* and in relation to the main valve, substantially as and for the purpose herein specified.

Second, the follower *C*, combined with the valve by means of an internal gland *E*, and otherwise applied, as herein specified, to serve not only for the protection of the back of the valve from the pressure of steam, but as a means of communication between the anti-compression valve chest and the exhaust pipe or atmosphere, as herein set forth.

No. 39, 182.—ISAAC STRAUB, of Cincinnati, Ohio.—*Improvement in Sugar Cane Crushing Mill*.—Patent dated July 7, 1863.—The object of the improvement is to prevent the accumulation of stalks or other matter between the journals and their bearing or between the ends of the rollers and the frame; and it consists in leaving wide spaces at the ends of the crushing rollers, between them and the top and bottom plates of the frame, and in interposing directly above and below the bite of these rollers curved guards or fenders to deflect the passing cane from contact with the surfaces where they would be liable to be wrapped or otherwise detained.

Claim.—The arrangement of projections *G G'* on the under side of the top plate *A* and on the upper side of the bottom plate *A'*, and so that the ends of the rollers for only a small portion of their extent, and immediately at the point where the crushing is performed, shall abut against them, all substantially in the manner and for the purpose described.

No. 39, 183.—THEODORE R. TIMBY, of Saratoga Springs, N. Y.—*Improvement in Solar Time Globes*.—Patent dated July 7, 1863.—The invention consists in the arrangement of a globe on a horizontal axis with a revolving adjustable annular dial encircling it, and with a stationary index or pointer, so that by the index the culminating time of the sun on any part of the globe can be observed, and at the same time the clock or mean time can be read off for a certain location for which the dial has been adjusted.

Claim.—The arrangement of the toothed ring *D*, and adjustable dial *C*, revolving once in twenty-four hours, in combination with the globe *A* secured to the revolving ring and adjustable in the same and with the stationary index *F*, all constructed and operating in the manner and for the purpose substantially as shown and described.

No. 39, 184.—LEVI L. TOWER, of Cambridgeport, Mass.—*Currency and Stamp Box*.—Patent dated July 7, 1863.—The box is provided with receptacles of suitable number and size for the different denominations of bills, and the lid has clips or retainers on its inside for currency or stamps.

Claim.—Combined stamp and currency box having its parts *A* and *B* provided, respectively, with receptacles and retainers, constructed and arranged substantially in the manner and for the purposes set forth.

No. 39, 185.—JAMES TURNER, of New York, N. Y.—*Improved Composition for Lubricating*.—Patent dated July 7, 1863.—Composed of paraffine, ten gallons; saponified red oil, two gallons; lime water or alkaline lye, six gallons; sawdust, forty-five gallons. Intended for the axles of vehicles and gearing.

Claim.—A lubricating compound made of the ingredients herein specified, mixed together in the manner and about in the proportion set forth.

Also, the use of sawdust in combination with fatty substances and alkaline lye or lime water, as and for the purpose specified.

No. 39, 186.—THOMAS and ISRAEL J. WARD, of Lane Depot, Ogle county, Ill.—*Improvement in Harvesters*.—Patent dated July 7, 1863.—The cutting apparatus precedes the horses. The improvement consists of two frames which are jointed together by sleeve pintles through which the pitman passes to drive the sickle; the inclination and elevation of the frames being regulated by ropes attached to arms on the two frames respectively, and passing one to a sleeve and the other to a shaft operated by a crank in front of the driver.

Claim.—The two frames *A I*, connected together by the hinges or joints *d*, as shown, in connexion with the draught bar *D*, connected at its front end to the frame *A* by hinges or joints *b b*, the two frames having arms *U Y* attached to them, which are connected by cords *V Z* to the shaft *X* and tube *W*, all arranged substantially as and for the purpose specified.

Also, the tubular joints or pintles *d* for connecting the two frames *A I*, in combination with the pitman *J* for driving the sickle *K*, when arranged as shown, to admit of the adjustment of the two frames without interfering with the sickle-driving mechanism.

No. 39, 187.—JOHN C. WHITIN, of Northbridge, Worcester county, Mass.—*Improvement in Carding Engines*.—Patent dated July 7, 1863.—This improvement consists in combining the plan of carding by stationary top cards or flats with the continuous stripping cylinder; the fault of the former is its choking and becoming filled with seed, dirt, &c., and of the latter method in its letting too much refuse pass into the sliver; the present improvement consisting in working with the cylinders and finishing with the top cards.

Claim.—Combining the self-stripper of Wellman with the cylinder stripper of Gambrill and Burgee, essentially as above described.

No. 39, 188.—W. H. WILLARD, of Cleveland, Ohio.—*Improved Row-Lock*.—Patent dated July 7, 1863.—The thole pins are pivoted to plates on the thwarts of the boat, and are capable of folding over toward each other, in which position they are retained by a spring which bears against their lower edge.

Claim.—The herein-described construction of a row-lock, consisting of the plate *A*, thole pins *D*, plates *F*, and springs *G*, the several parts being arranged and operating substantially as and for the purpose specified.

No. 39, 189.—SAMUEL WILLIAMSON, of Cincinnati, Ohio.—*Improvement in Casting Boxes for Carriage Axles*.—Patent dated July 7, 1863.—This consists of a two-part hinged metal flask, the portion of the gate below the sprue forming the fin, and the box being cast upon a chill with a sand core for the oil-chamber.

Claim.—The cast-iron flask *H H*, gate *A*, in combination with the sand core *C* attached to the chill *E*, operating in the manner and for the purpose substantially as set forth.

No. 39, 190.—MOSES P. WILMARTH, of Smithfield, Providence county, R. I.—*Improvement in Self-lubricating Bolster for Spinning Machines*.—Patent dated July 7, 1863.—The upper end of the bolster is made with a recess or cavity surmounted by a cap, which has a concave channel on its upper face, in which is an orifice. In the annular space on the end of the bolster is a disk of fibrous material, which conveys the oil to the bearing of the spindle.

Claim.—The arrangement of the cap *C* with the absorbent *E* and annular recess *c*, or their equivalents, substantially as described, for the purpose specified.

No. 31, 191.—MICHAEL WITT, of Columbus, Ohio.—*Photographic Printing Frame*.—Patent dated July 7, 1863.—The invention consists of a rebated frame, in which the negative is placed, being securely held by a spring back, with a spring pad or cushion, and divided into two parts, so that one may be opened to inspect the progress of the printing, while the other, remaining closed, prevents the sliding of the paper.

Claim.—The application of the self-adjusting spring cushion to the two flaps or backs of the frame, arranged and operated for the purpose set forth and shown, or any other arrangement substantially the same, for the accomplishment of the same end.

No. 39,192.—WM. WOODBURY, of Gloucester, Mass.—*Improvement in Fishing Tackle for Deep-sea Fishing*.—Patent issued July 7, 1863; antedated October 2, 1862.—This improvement is to give a certain degree of elasticity to the line in the vicinity of the hook, to prevent the fish tearing away in the first plunge, which liability is owing to the unyielding character of the line in the direction of its length. It consists in the interposition of a spring in convenient position in the line not far from the hook.

Claim.—Introducing the spring *g*, or its equivalent, into the length of the fishing line in the neighborhood of the hook, substantially in the manner and for the purpose specified.

No. 39,193.—JOHN ADT, of Waterbury, Conn., assignor to Himself and ELISHA TURNER.—*Centring Anvils*.—Patent dated July 7, 1863.—The clamping blocks slide in radial mortises in a rotating cap, and rise sufficiently above the surface of the latter and the point of the centre punch to seize the bar to be centred. The under side of the blocks are provided with teeth, working in a stationary scroll, so that, when the cap is rotated, the blocks are drawn nearer to or away from the centre punch. The blocks in all cases being equidistant, any article placed between them will be centred by being driven upon the punch.

Claim.—The centre punch *b*, in combination with the cap *c*, block *g*, and scroll *f*, as and for the purpose specified.

No. 39,194.—CHARLES ATKINSON, of Moline, Rock Island county, Ill., and JOSEPH ATKINSON, of Newbury, Orange county, Vt., executors of WILLIAM ATKINSON, deceased, late of Brooklyn, N. Y.—*Improved Dredging and Excavating Machine*.—Patent dated July 7, 1863.—This invention consists of a series of appliances to be used in combination with a suction dredging boat or carriage, said appliances consisting of reciprocating or rotating spade cutters, or chisel-pointed cutters; of a rotary boring tool, which, in combination with the casing in which it works, may act as a pump; of a rotary boring tool in a swinging carriage; of a cutting cylinder and of a chopping, cutting, or raking blade, the different devices being adapted to cut, bore, pick, break, or tear up deposits of mud or other matters from the bed of rivers, &c., or of swamps, &c., to facilitate their removal by mechanical means or the action of the current.

Claim.—First, the employment, in combination with what has been herein termed the suction dredging boat, or with any other boat or carriage, of a system of reciprocating spade cutters *F F*, operating substantially as and for the purpose herein specified.

Second, the employment, in combination with the suction dredging boat, or any other boat or carriage, of a system of reciprocating and rotating spade cutters *I*, applied to operate substantially as and for the purpose herein set forth.

Third, the employment, in combination with the suction dredging boat, or any other boat, of a system of reciprocating and rotating chisel-pointed cutters *K*, applied and operating substantially as and for the purpose herein set forth.

Fourth, the employment, in combination with the suction dredging boat, or other boat or carriage, of a rotary boring tool *L*, applied and operating substantially as and for the purpose herein described.

Fifth, the cylindrical casing *M*, applied in combination with a screw-like construction of the tool *L*, to form a pump, substantially as herein specified.

Sixth, the employment, in combination with the suction dredging boat, or any other boat or carriage, of a rotary boring tool or system of cutters *P*, arranged in a swinging carriage *Q*, substantially as and for the purpose herein specified.

Seventh, the employment, in combination with the suction dredging boat, or any other boat or carriage, of a cutter cylinder carrying a series of cutters *S S*, and operating substantially as and for the purpose herein specified.

Eighth, the employment, in combination with the suction dredging boat, or any other boat or carriage, of a chopping, cutting, or raking blade *X*, applied and operating substantially as and for the purpose herein set forth.

No. 39,195.—LOUIS BADER, of Philadelphia, Pa., assignor to Himself and CHRISTIAN F. ELEVERT, of same place.—*Improvement in Coal-oil Lamps*.—Patent dated July 7, 1863.—The object of this invention is to so construct a lamp that the flame may be made to burn with brilliancy and steadiness without the aid of a chimney. This is accomplished by a combination of four chambers arranged in respect to each other and to the wick to accomplish the purpose desired.

Claim.—The burner composed of cases enclosing chambers *J K L* and *M*, arranged in respect to each other and to the wick, and communicating with each other, substantially as described, for the purpose specified.

No. 39,196.—OLIVER R. CHASE, of Birmingham, England, assignor to CHASE & CO., of Boston, Mass.—*Improved Machine for Manufacturing Lozenges*.—Patent dated July 7, 1863.—The paste, after having been reduced and sugared on both sides, passes from the main-delivery apron to the extra-delivery apron, so as to be seen on both sides. From thence it is passed over the edge, and, while hanging, the hollow cutters advance and cut off the lozenges, the paste being stamped against a surface apron, which rests upon a cutter-board

and is supported by a comb-plate. The lozenges as cut are discharged through the hollow cutter upon a discharging apron or boards laid thereon.

Claim.—The combination and arrangement of the extra-delivery apron *G* with the main-delivery apron *F*, or carrier, of the reducing and sugaring apparatus, and with the mechanism for stamping the lozenges from the paste, the object of the said delivering apron, when used as set forth with the main-delivery apron or carrier, and the apparatus for reducing the paste and sugaring it on both sides, being to enable the sheet of paste to be seen on both of its sides before passing it to the cutters.

Also, the combination and arrangement of the delivery apron *G*, the cutter-band *H*, the series of cutters *L*, and the lozenge-discharging apron *N*, the same not only enabling the sheet of paste to drop vertically and fall upon its own weight preparatory to and after being cut, but causing the cutters to discharge the lozenges on a discharging apron or boards placed thereon, in the manner as set forth.

Also, the arrangement and combination of the surface-charging apron *I* with the cutter-board *H*, the delivery apron *G*, the series of cutters *L*, and the lozenge-discharging apron *N*, arranged as specified.

Also, the arrangement and combination of the comb-plate *O* with the cutter *L*, and their stamping-board *H*, or device for supporting the paste while it is being stamped.

No. 39,197.—WILLIAM DARKER, Jr., of Philadelphia, Pa., assignor to J. B. THOMPSON, of same place.—*Improvement in Circular Looms*.—Patent dated July 7, 1863.—The warp threads are arranged in a circular form, being suspended from a point above; they are governed by a series of leaders by which they are alternately advanced and reeled, allowing the passage of the crescent carrier with the weft thread spool to pass between them, the inner warp thread for the time being deflected to admit the passage of the carrier by the inner edge of the crescent, and the leaders being operated by a cam underneath the carrier. The crescent is driven and supported by a circular system of groove-edged pulleys, whose inner edges project within the outer circle of warp threads, the driving band encircling them outside of the sphere of operations.

Claim.—First, the employment, for acting upon the warp threads in a circular loom to produce an open shed for the introduction of the weft, of a series of leaders *D D*, applied and operating substantially as herein specified.

Second, the employment, for passing the weft thread or threads through the open sheds of the warp in a circular loom, of a carrier *G*, supported by a surrounding series of grooved pulleys *G G*, which serve both to sustain it in its proper position and to give it rotary motion, substantially as and for the purpose herein specified.

Third, the cam *K* attached to the carrier *C* and operating through the agency of levers *L* and wires *k k*, or their equivalents, to produce the operation of the leaders *D D*, substantially as and for the purpose herein specified.

No. 39,198.—JARVIS DAVIS, of Buffalo, N. Y., assignor to PATRICK SMITH, of same place.—*Improvement in Breech-loading Fire-arms*.—Patent dated July 7, 1863.—The improvement consists of a cartridge retracting hook, which is operated by means of a link which connects it to the hammer. The bar carrying the hook rests upon a spring plate which is depressed by locking down the hinged breech piece upon the retracting bar, so as to throw the hook out of range with the cartridge flange when the breech piece is closed.

Claim.—The hooked bar *G*, operated by the hammer, substantially as described, in combination with the block *G'* and hinged abutment *C*, so that the hooked bar is thrown out of engagement with the cartridge when the hinged abutment is closed, substantially as set forth.

No. 39,199.—AIMABLE A. GRANDELLE, of New York, N. Y., assignor to THOMAS BROWN, of same place.—*Improved Composition for Dyeing the Covers of Railroad Seats*.—Patent dated July 7, 1863.—After cleansing the seats the grease is removed by the application of sulphuric ether, alcohol, and water. They are then treated with the following composition: rose aniline, one pound; sulphuric ether, one pound; alcohol, eight pounds; water, thirty-two pounds; apply with a brush at a temperature of 150° Fahr.

Claim.—The composition of matter herein described for dyeing cushions and other articles, prepared and employed in the manner herein set forth.

No. 39,200.—BRYAN S. HILL, of Amity Township, Erie county, Pa., assignor to Himself and STERLING DOOLITTLE, of same place.—*Improved Washing Machine*.—Patent dated July 7, 1863.—The machine has a reciprocating dasher in the bottom of the suds-box, and two pounders which have a nearly vertical motion upon the clothes, which are pushed up, the inclined planes occupying the lower corners of the box so as to be turned over and expose a fresh surface; the oscillating arm which communicates these motions, derived from a lever, is stepped into the lower dasher and has a cross-head on which the pounders are pivoted.

Claim.—The combination of the pounders *F B* and *B* and the inclined plane *G*, substantially as set forth for the purpose specified.

No. 39,201.—HENRY W. HOLLY and ALBA F. SMITH, of Norwich, Conn., assignors to ALBA F. SMITH, of same place.—*Improved Roller for Wringing Machines*.—Patent dated July 7, 1863.—The roller is made of alternate small flanged disks and large soft ones with a suitable covering, and all held together by spurred clamps at the ends.

Claim.—First, in the construction of soft and elastic rolls the employment of soft pieces C C, hard pieces B B, and the splined or equivalent shaft A A', arranged to operate together in the manner and for the purpose herein set forth.

Second, in connexion with the yielding pieces or disks C C and hard pieces B, arranged as specified, the employment of the projections b b', or either of them, arranged substantially as and for the purpose herein set forth.

Third, the combination of the tightly fitted covering G, with disks of soft material C, and suitable means of confining the same, substantially as and for the purpose set forth.

Fourth, the spurred plates or wheels at one or both ends of the roll, as represented by E, arranged as represented relatively to the open plate D, covering G, and pin H, or their respective equivalents, for the purpose herein set forth.

No. 39,202.—JOSIAH MILLER, of Moore Township, Northampton county, Pa., assignor to HARRISON TRUMBOWER and WM. C. KLEPPINGER, of same place.—*Improved Composition for Paint*.—Patent dated July 7, 1863.—Composition for sixteen gallons of paint: take five gallons linseed oil, one pound alum, eight ounces cream tartar, one ounce saltpetre, four pounds flour paste, and eleven gallons of water.

Claim.—A paint mixture prepared substantially as hereinbefore set forth.

No. 39,203.—W. T. MUNGER, of Branford, New Haven county, Conn., assignor to THOMAS KENNEDY, of same place.—*Improvement in Door Locks and Latches*.—Patent dated July 7, 1863.—The latch bolt is made in a separate piece from the "horseshoe," and operated by the knob so as to be inserted after the lock is placed in position on the door, and whether for the right or for the left hand. It is secured by entering the shank and then turning a cam by a slot on the outside so as to raise the shank and make the hole in the latter engage with a pin on the "horseshoe."

Claim.—First, the combination of the horseshoe E, latch bolt D, and cam H, or its equivalent, substantially as herein specified.

Second, the combination described of the latch bolt D and cam H, for the purpose substantially as herein specified.

No. 39,204.—ELIZA M. SEABURY, of Brooklyn, N. Y., administratrix of JACOB SEABURY, deceased.—*Improved Composition for Preparing Paints*.—Patent dated July 7, 1863.—The body of the composition consists of "Vermont clay," modified as to shade by boneblack, umber, &c.

Claim.—The pigments herein described composed of a combination of the ingredients specified, as and for the purposes set forth.

No. 39,205.—REUL W. WHITNEY, of South Berwick, York county, Me., assignor to Himself and A. GRAFTON NEALY.—*Improvement in Churns*.—Patent dated July 7, 1863.—An upright pivoted lever is attached to the side of the churn, and from the lever projects a curved arm, which enters the top of the churn and carries a flat pivoted dasher with a strut or stay catching in a notch in the dasher to preserve the latter in position when it comes in contact with the cream.

Claim.—The improved churn as not only constructed with the lever C and the curved arm D, arranged relatively to the reservoir A and the dasher E, as specified, but as having the strut F combined and arranged with the curved arm D and the dasher E, so as to operate substantially as described.

No. 39,206.—J. A. AYRES, of Hartford, Conn.—*Improved Screw-Driver*.—Patent dated July 14, 1863.—The screw-driver is of the nature of a hand-vice to hold a turn-screw blade which is reversible at one end, having an ordinary edge, and at the other being slotted so that in screwing the jaws of the vice together the sections are thrown out of line with each other and caused to bind against the opposite sides of the slit in the head of the screw.

Claim.—First, a screw-driver, formed or composed of a shank B slotted longitudinally and provided with a set screw C and a detached or removable bit or turn-screw D, substantially as set forth.

Second, having the bit or turn-screw D provided with two prongs b b, formed by slotting the bit or turn-screw longitudinally with a lateral projection c, or an equivalent device or arrangement, so that the prongs will be thrown out of line with each other by screwing up the set screw C made to bind in the slot f of the screw, substantially as herein described.

Third, the reversible bit or turn-screw D provided at one end with the two elastic or yielding prongs b b, and at the other end with the ordinary turn-screw a, so that either may be used as desired.

No. 39,207.—CYRUS W. BALDWIN, of Boston, Suffolk county, Mass.—*Improvement in Sewing Machines*.—Patent dated July 14, 1863.—The improvement consists in a peculiar

and simple arrangement of parts whereby two eccentrics on a single shaft, with their bands, rods, studs, levers, &c., are made to effect a shuttle-stitch movement.

Claim.—The vibrating bars or levers N and O, as operated by the eccentrics F and G, by means of the bands H and I, the rods J and K, and the studs L and M, or their equivalents, in combination with each other and with the loops or lower needle, operated as above described and for the purpose herein set forth.

No. 39,208.—CHARLES F. BAXTER, of Boston, Mass.—*Improved Bottle-stopper*.—Issued July 14, 1863; antedated January 16, 1863.—The object of this improvement is to provide a stopper which shall firmly hold its place in the neck of the bottle against internal pressure, but be readily removable by manipulation. This is effected by making it of elastic material and open at the end entering the bottle, whether with or without a shoulder on the inside of the neck of the bottle and corresponding projection on the stopper.

Claim.—First, an elastic stopper having a hollow or cavity opening into the end entering the bottle, substantially as shown and described.

Second, the combination of a stopper having said cavity opening into the end entering the bottle b and shoulder or enlargement c, substantially as shown and described.

Third, the combination of a stopper having said cavity in the end described, and shoulder or enlargement with a bottle having a corresponding groove d, substantially as shown and described.

No. 39,209.—HENRY W. BILL, of Cuyahoga Falls, Summit county, Ohio.—*Improvement in Punching Machines*.—Patent dated July 14, 1863.—The object of this improvement is to provide for the punching of plates of varying widths at opposite edges or in two lines simultaneously; and this is accomplished by two punches having the same driving mechanism and adjustable to and from each other, with a sliding carriage having an intermittent action graduated to the motion of the punch, said carriage actuated by a pawl and rack running upon rollers which follow a straight or curved track, according to the requirements of the case.

Claim.—First, the combination of two punches with the same driving mechanism in such manner that they may be adjusted at different distances apart, to provide for the punching of plates of various widths at opposite edges or in two lines simultaneously, substantially as herein described.

Second, the employment, in combination with two punches adjustable at different distances apart of an intermittently moving carriage, so arranged as to present the plate to both punches in such manner as to cause the punching of the holes in both edges of the plate or in two rows at a desired distance apart, substantially as herein specified.

Third, the employment, in combination with two punches, arranged as described, for guiding the movement of the plate carriage in straight or curved lines, as may be described, of a variable system of guide rollers operating in combination with a straight or curved rack, or a straight or curved groove, or its equivalent, on or in the carriage, substantially as herein set forth.

Fourth, the employment for producing a variable feed movement of the plate carriage of a rack with radiating teeth, as shown in figure 6, and a laterally movable pawl, operating in combination with such rack, substantially as herein specified.

No. 39,210.—A. STEWART BLACK, of New York, N. Y.—*Improvement in Apparatus for Tempering Umbrella Ribs*.—Patent dated July 14, 1863.—The invention consists in making the dies with a square hole, hollowed in one die piece, the other piece presenting a flat surface; these dies enclosed in a suitable casing being exposed to gas-burners to maintain the die at a certain uniform temperature for tempering and straightening the rods.

Claim.—First, constructing the tempering die with a square hole, corresponding in size to the wire to be tempered, in order that the wire may be straightened in all directions and the flattened portions of the wire be brought on line with each other, as and for the purposes specified.

Second, constructing the tempering die with grooves in one of the half pieces coming opposite the flat surface of the other half piece, whereby the tempering dies are more easily made and kept in order, as set forth.

Third, the tempering dies constructed, substantially as specified, and enclosed in a suitable casing in combination with gas-burners, applied substantially as shown, whereby the temperature of the said tempering dies is easily regulated and maintained with uniformity, as set forth.

No. 39,211.—ROBERT BRAGG, of San Francisco, Cal.—*Improved Skid for Discharging and Loading Vessels*.—Patent dated July 14, 1863.—The invention consists in an arc-shaped continuation of the skid or hollow track, which, curving upwards, checks the descent of the barrel or package.

Claim.—The construction and application of the circular arc B, as attached to the skid A, operating substantially as described and for the purposes set forth herein.

No. 39,212.—A. G. BROWN, of Lima, Allen county, Ohio.—*Improved Washing Machine*.—Patent dated July 14, 1863.—This machine consists of a stationary tub with a reciprocating washing board, upon which the clothes are held by the operator. The washboard is driven by treadle, drum, band, smaller wheel, crank, and pitman.

Claim.—The combination of a stationary washing tub with a reciprocating washing board, under the arrangement and for operation substantially as herein set forth.

No. 39,213.—LASSLO CHANDORR, of New York, N. Y.—*Improvement in the Manufacture of Alkaline Carbonates*.—Patent dated July 14, 1863.—The process described consists in putting in contact a solution of sulphuret of sodium or potassium, some cream of lime, and a current of carbonic acid. During the disengagement of the latter a beater keeps the matter agitated, to prevent the deposition of lime and of oxysulphuret of calcium, and to expose the carbonic acid freely to the solution, which is heated by a worm of steam to quicken the reaction and disengage the sulpho-hydric acid as soon as formed.

Claim.—First, the formation of the carbonates of potash and soda by the transformation of the sulphurets of potassium and sodium into bicarbonates of the same bases, by the process and substantially in the manner described.

Second, the manufacture of the sulphuret of sodium by the decomposition of the sulphuret of barium, substantially in the manner described.

Third, the manufacture or production, by the process described, of the sulphate and carbonate of baryta.

Fourth, the use of limes for the purpose and in the process described.

No. 39,214.—G. W. COLE, of Canton, Fulton county, Ill.—*Improvement in Corn-stalk Cutters*.—Patent dated July 14, 1863.—This machine is intended to cut up into small pieces the corn-stalks standing or lying in a field, so as to enable them to be ploughed under and be out of the way of cultivation. It consists of a rotating cutter head, which revolves by its impact on the ground, and cuts by pressure on the stalks as it passes over them. The cutter head is journaled in a swinging frame attached to the main frame, which is supported on wheels, and the stalks are gathered by swinging spring hooks into the path of the cutter head. The forward end of the cutter frame is adjusted, as to pressure, by the curved rods which pass from the counterpoise weight I to the block K, and by means of the windlass at the rear of the cutter frame. A second swinging frame at the rear of the other affords seat and foot-board for the driver.

Claim.—First, the combination of the two swinging or adjustable frames E F attached to the frame A and to each other, as shown, and provided respectively with the cylinder of cutters H and the foot-board G, arranged substantially as and for the purpose herein set forth.

Second, the adjustable bar or weight I applied to the frame E, substantially as shown and used in connexion with the curved rod J, staple f', and pin A, or an equivalent fastening, for the purpose herein set forth.

Third, the adjustable hooks N N in combination with the springs O O, arranged substantially as and for the purpose set forth.

Fourth, the windlass L applied to the frame A in combination with the frames E F, for the purpose specified.

No. 39,215.—GORDEN CONSTABLE, of Cannonsville, Delaware county, N. Y.—*Improvement in Machine for Loading Hay*.—Patent dated July 14, 1863.—Attached to a wagon is a frame which has at its rear a traction roller and endless rake, working on vertical standards which elevate the hay and discharge it into another endless rake, which carries it forward and drops it into the wagon, in which a roller is placed to compress it; the necessary motion for the latter is given by causing the wagon to have an intermittent reciprocating motion relatively to the frame, by which it is advanced and receded and the roller caused to roll back and forth in the wagon bed. The motion is obtained by endless racks, gearing into pinions on the shaft of the forward rollers of the frame.

Claim.—The sliding endless rakes E E in the framing A, in combination with the pinions d' on the axle D of the wheels B, all arranged to operate substantially as described.

Also, the roller L fitted between the lower ends of the rack bars l l, arranged substantially as shown, when said roller is used in combination with the endless rakes Q A' and the wagon J, for the purpose specified.

Also, placing the rake Q in a vertically adjustable frame P, arranged as shown, to admit of the adjustment of said rake relatively with the ground, as set forth, and also for the purpose of rendering it operative, as described.

No. 39,216.—HORACE C. DIMMICK, of St. Louis, Mo.—*Improvement in Projectiles for Rifled Ordnance*.—Patent dated July 14, 1863.—The general shape of this shot is cylindrical, with a steel band around its forward end and a chamfered recess in its face. The forward part is made of wrought-iron and the rear of cast-iron, with an interposed disk of lead and the two iron portions dowelled together. The central portion of the rear projects hemispherically, and its outer rear portion consists of a band of wrought-iron, with a coating band of

Babbitt metal which engages the rifling. The band is supported upon arms from a ring around the rear of the cylindrical portion of the projectile.

Claim.—The construction and shape of the steel and wrought-iron front, in combination with the lead and cast-iron portion, as arranged with the bands N and P, for the purpose of giving the projectile perfect rotation and making it more certain in its action, as herein described.

No. 39,217.—FRANK DOUGLASS, of Norwich, Conn.—*Improvement in Buckles*.—Patent dated July 14, 1863.—The buckle consists of two pieces—a swinging frame which is socketed in a stationary loop, the latter carrying a clamp over which the strap is bent in fastening and then run through the loop of the stationary part.

Claim.—The swinging frame A, in combination with the stationary loop c, socket B, and tongue D, substantially as herein specified.

No. 39,218.—JAMES B. EADS, of St. Louis, Mo.—*Improved Defensive Armor for Marine and other Batteries*.—Patent dated July 14, 1863.—This improvement consists in a method of securing the armor plating to the sides of a vessel by means of angle-iron projecting from the said sides, and dowel pins which interlock the layers of plates.

Claim.—The employment of the angle-iron bars g, in combination with the armor plates E and dowel pins f, constructed and arranged as herein described and represented, for securing the armor of war-vessels, and making a system of breaking joints, substantially as herein set forth and represented.

No. 39,219.—GEORGE EHRSAM, of New York, N. Y.—*Improvement in Hemp Machine*.—Patent dated July 14, 1863.—The leaves of the Agave Americana (or other similar vegetable production) are fed by revolving feed rollers to the drum, which is a frustum of a cone having combs on its periphery, with teeth increasing in fineness toward the base of the drum; the latter revolves within a cap, which is open at the base of the cone, and the leaves being fed in at the smaller end of the drum are, by the gradually increasing speed, caused to roll over and over and eventually out at the base.

Claim.—First, the employment or use of a conical drum A, carrying a series of combs F, and working within or under a cone cap G, in the manner and for the purpose substantially as herein shown and described.

Second, discharging the clean fibres over the large end of the cone drum A through the open side of the cap G, in the manner and for the purpose substantially as specified.

Third, making the teeth of the combs F of gradually increasing fineness from one toward the other end of the drum, as and for the purpose set forth.

Fourth, giving to the feed rollers an oblique position in relation to the main shaft of the drum, substantially as and for the purpose specified.

No. 39,220.—SAMUEL L. FRITS, of Ashburnham, Worcester county, Mass.—*Machine for Dressing Chair Backs*.—Patent dated July 14, 1863.—The invention consists of a reciprocating segment carriage placed on an adjustable bed, so as to carry the stuff in a circular track beneath the pressure rollers and the rotary cutter head, to dress the stuff to the requisite concave shape for chair backs.

Claim.—First, the reciprocating segment bed E, placed on the adjustable way B B, and operated substantially as shown, in combination with the pressure rollers M M and the rotary cutter N, all arranged as and for the purpose specified.

Second, the arrangement and combination of the shaft X provided with the cams Y Y, the arm W, pawl V, ratchet U, the levers P A', cam T, socket R, with pin Q, the spring i on the journal of the cutter N, and pins l l at the side of the bed E, all arranged as and for the purpose herein set forth.

No. 39,221.—W. A. THOMAS, of Shelby, Richland county, Ohio.—*Improvement in Bee-hives*.—Patent dated July 14, 1863.—The frames are made semicircular, of hoops fastened at their ends by a bar; over the frames is a painted and sanded board to prevent the bees from attaching comb to it or render it difficult to remove it and get at the comb frames. A sliding board beneath the slot in the bottom of the hive is provided with chambers as a trap for moths. A semi-cylindrical box with a slot is placed at the side and is rotated so as to open or close that entrance, while a tray below catches the dust and affords a place for the deposit of the eggs of the bee moth.

Claim.—First, the semicircular comb frames A, in combination with a semicircular case B, arranged as and for the purpose specified.

Second, the sand board E, which forms a partition between the comb frames and honey boxes above, constructed as and for the purpose set forth.

Third, the moth traps F, in combination with the adjustable bottom board G, arranged and operating in the manner and for the object described.

Fourth, the adjustable front entrance H, in combination with the moth box I, arranged and operating as specified.

No. 39,222.—GEO. B. FOWLER, of Chicago, Ill.—*Improvement in Adding Machines*.—Patent dated July 14, 1863.—This is an improvement on Young's patent of July 24, 1849, in respect to the mode of disposing the figures on the lower surface of the slides, and on the upper surface of the bed; and also in the mode of indicating the result of the calculation.

Claim.—The arrangement of the apparatus *b* in the under side of the platform or bed *A*, to operate in combination with the figures on the under side of the slides *B*, and with said slides, strips *C*, and caps *D D'*, in the manner and for the purpose herein shown and described.

No. 39,223.—E. OTIS FRINK and CURRAN E. McDONALD, of Indianapolis, Ind.—*Improved Lock and Bolt*.—Patent dated July 14, 1863.—These improvements consist in peculiarities of construction, the detail of which cannot be condensed within the bounds of an abstract.

Claim.—First, the bolt *F*, when the same is constructed and operated substantially as set forth.

Second, the knob *SS*, when the same is constructed and operated substantially as set forth.

Third, the annular plate *E*, and the bent wire *b b'*, when the same are constructed and operated substantially as set forth, or any other substantially the same.

Fourth, the escutcheon tube *IS*, when the same is constructed as aforesaid, combined with the said key *No. 12*, and the said spring *k k*, otherwise substantially as set forth.

Fifth, the said key *No. 12*, when the same is constructed and operated in the manner and for the purpose as aforesaid, or any other substantially the same.

Sixth, the said cylindrical slide *No. 10*, with its springs *h* and *k k*, when the same are constructed and operated substantially as set forth.

Seventh, the shank *A A'* of the said knob *SS*, when the same is constructed and applied substantially as set forth.

Eighth, the said file-faced tumbler *l l'*, when the same is constructed and operated substantially as set forth.

Ninth, the slot *z z* of the said escutcheon tube, when constructed and applied substantially as set forth.

Tenth, the lock, as a whole, when the same is constructed and operated substantially as set forth, or any other substantially the same.

No. 39,224.—C. B. GALENTINE, of Brooklyn Centre, Cuyahoga county, Ohio.—*Improvement in Carriage Springs*.—Patent dated July 14, 1863.—The upper and lower portions of the elliptic spring are tied by a bifurcated rod to the perch or coupling pole a little behind the fore axle, so as to keep the springs from being upset upon the axles or strained by pitching of the carriage body.

Claim.—The application of a self adjusting triangular brace to land carriages, in such a manner as to retain the parts of the springs and their attachments in their proper relations, and thus to secure the parts from undue strain or breaking by the motions of the carriage.

No. 39,225.—SAMUEL GISSINGER, of Alleghany City, Pa.—*Improvement in Churns*.—Patent dated July 14, 1863.—In the centre of the dasher frame is a perforated pump chamber and a piston, whose rod is operated by the same wheel which drives the dasher shaft pinion; the object is to agitate as effectually as possible the contents of the churn by the creation of counter currents.

Claim.—The combination of the pump, dashers and breakers, when used in connexion with a churn, and operated in the manner and by the means described and for the purpose set forth.

No. 39,226.—LYMAN GOULD, of Norwich, Conn.—*Moulding Machine Feed*.—Patent dated July 14, 1863.—The improvement consists in the method of adjusting the pressure of the rolls to the varying requirements of the stuff, by means of a screw and spring at each end acting upon the frame in which the rollers are journaled, so as to accommodate the face of the rollers to bevelled stuff which is being fed to the cutters.

Claim.—First, the raising the feed-rolls combined, each end independent of the other, by the use of the crank screws *M* and *K*, by which the rolls are tilted to any required angle from a horizontal position, in order to bear on bevelled stuff, to feed it through under the rolls and cutters.

Second, the combination of the frame *B* with the columns *C C C C*, the top frame *S*, the bolts and nuts *b b b b*, with the arrangements for holding, guiding, and giving pressure to the rolls, substantially as and for the purposes specified, the whole forming a neat and convenient frame for use in the manner and for the purposes herein specified.

Third, the arrangement of the boxes *D D D D*, the spring *G*, and the rods *N N*, sliding in the slots *P P*, to adjust themselves to any position of the rolls.

No. 39,227.—W. H. GWYNNE, of White Plains, Westchester county, N. Y.—*Improvement in the Manufacture of Illuminating Gas*.—Patent dated July 14, 1863.—The invention consists in providing a bench of three or more gas retorts, in one of which is placed a super-heating and distributing coil; all these retorts are filled with anthracite coal, and the steam

decomposed in the first retort passing through the coal in the others, more highly carbonizes the gas than could be done in one retort, and thereby producing illuminating gas.

Claim.—Carbonizing hydrogen gas, by passing it through a sufficient quantity of anthracite coal to render it fit for illuminating purposes, substantially as described.

No. 39,228.—JOSEPH F. HAMILTON, of Pittsburg, Pa.—*Improvement in Cut-off Valve Gear for Steam Engines*.—Patent dated July 14, 1863.—The object is to make a variable cut-off operated by the governor. The cam rod of the engine is attached to the rock shaft, imparting an oscillating motion to the lifters which come in contact with the regulating arms and lift the frame to which the valve is attached. The said arms are moved in and out by means of rock levers, &c., from the governor rod, and the distance to which the valve is lifted depends upon the extent to which the arms are projected inside of the frame.

Claim.—The arrangement of the regulating arms *h*, lifters *i*, spring *g*, frames *m* and *c*, arms or levers *j* and *n*, when used in connexion with the governor and rock shaft or eccentric engines, the whole being arranged, constructed, and operating substantially as herein described and for the purpose set forth.

No. 39,229.—JOSEPH F. HAMILTON, of Pittsburg, Pa.—*Improvement in Variable Cut-off Valve Gear for Steam Engines*.—Patent dated July 14, 1863.—The valve rod and valve are lifted by the trigger attached to the rock shaft, which impinges upon the under side of the regulating arm which projects through a box on the valve rod, being controlled in the degree of its projection by a rocking lever actuated by the governor rod. When the regulating rod projects but little, it soon drops off the trigger and cuts off the steam. The arrangement is duplicated, so as to act at each end of the cylinder.

Claim.—The arrangement of the lifters *j*, triggers *k*, spring *l*, regulating arms *h*, arms or levers *m* and *n*, and link *d*, when used in connexion with a governor and rock shaft or eccentric of engines, the whole being arranged, constructed, and operating substantially as herein described and for the purpose set forth.

No. 39,230.—JACOB HARDER, of Lock Haven, Clinton county, Pa.—*Improvement in Baling Presses*.—Patent dated July 14, 1863.—The follower of the press is operated by hand or by means of pulley ropes attached at each end of a vibrating lever, whose pintle, passing through the follower rod, works in a sinuous groove between two double racks; spring pawls upon the lever engage with these racks on each side alternately as the lever is worked to and fro, and press the follower into the box.

Claim.—Operating the follower *B*, through the medium of the lever *D*, provided with the sliding pawls *h h*, and connected to the follower rod *C* by a joint, the pintle *f* of which works in sinuous grooves *d d* between racks *c c*, arranged one above the other below the follower rod *C*, substantially as and for the purpose herein set forth.

No. 39,231.—H. G. HOOD, of Harlan, Allen county, Ind.—*Improvement in Fences*.—Patent dated July 14, 1863.—The end battens of the panel are made wide, so that the boards may have a hold without extending across; the next panel is laid against it, so that the ends of the boards in the respective panels touch each other, being included between the battens of the two panels. The two battens are then tied together by a wedge pin and stayed by A-shaped braces, which are fastened over the fence by a ring.

Claim.—The arrangement with the battens *B B*, slotted and notched as shown, and the boards or rails *a a* of the fastening pin *E*, the bevelled braces *D D*, and ring *c*, when all the parts are constructed as herein shown and described.

No. 39,232.—C. W. HOWARD, of Hammononton, Atlantic county, N. J.—*Improvement in Breech-loading Fire-arm*.—Patent dated July 14, 1863.—The cylinder rotates on a vertical axis and has one charge chamber, which is countersunk for loading from either end. The cylinder is rotated in the act of cocking the gun by the connexion of the lower end of the hammer with a ratchet, which engages a pinion on the cylinder pintle.

Claim.—The construction of the cylinder *C* with countersunk recesses at each end of the charge chamber, as herein shown and described, so that said cylinder, although rotating in one direction, may be loaded with cartridges at either end of the chamber, all as set forth.

Also, the combination of the oscillating ratchet bar *k*, lever *i j*, and rod *h*, with the hammer *F* and the ratchet wheel *t*, in the manner herein shown and described.

No. 39,233.—JOHN HOWARTH, of Salem, Mass.—*Improved Machine for making Cement Pipes*.—Patent dated July 14, 1863.—The pipe is formed upon a mandrel by successive wrappings of bituminized paper or other material, rotated upon two polished rollers and an upper or pressure roller, and treated with successive coatings of cement until the required thickness is attained.

Claim.—Forming the exterior of the pipe, and holding and sustaining it while being so formed, upon its rod or shaft, by means of two lateral rollers, operating therewith substantially as described.

Also, in combination with the two lateral rollers operating upon the pipe as described, the top or third roller *i i*, for the purpose specified.

No. 39,234.—**JOSIAH JUDEVINE and ZEBULON SHAW**, of Roxbury, Dane county, Wis.—*Improvement in Grain Binders*.—Patent dated July 14, 1863.—This binder is operated by two men, one of whom takes the grain from the platform to the gatherer of the grain binder, and the other one operates the binder. The wire lies upon the gatherer on which the grain is thrown, the revolution of the pinion by the crank and segmental cog-wheel then operates the gatherer which vibrates over, clasping the gavel; the twine is secured by the spring clamp, which is revolved by means of the crank twisting the wire, and then cut by the shears, and the sheaf removed.

Claim.—The arrangement of the gatherer B with spring jaws *d*, pinion *a*, segmental cog-wheel *b*, and crank *c*, in combination with the spool C, scissors D, and twisting mechanism E, all constructed and operating in the manner and for the purpose substantially as herein shown and described.

No. 39,235.—**RODOLPHE LESCHOT**, of Paris, France.—*Tool for Boring Rock*.—Patent dated July 14, 1863.—This invention consists of a tubular drill whose lower edge is armed with diamonds, so as by its forward and rotary motion to make an annular orifice, the central being removed by other subsequent means.

Claim.—The tool for boring or cutting rock or other hard substances, composed of an annular or tubular stock or crown, armed with a series of diamonds, and operating substantially as herein specified.

No. 39,236.—**WILLIAM F. LEWIS**, of Watertown, Conn., and **JOSEPH H. BAIRD**, of Waterbury, Conn.—*Improvement in Device for Preventing Retrograde Motion in Sewing Machines*.—Patent dated July 14, 1863.—This consists of a ratchet-wheel and pawl in connexion with the rotating hook for preventing the latter being turned in the wrong direction; pressure upon the flat part of the lever will raise the pawl when required to turn the reverse way.

Claim.—The combination with a rotating hooked mandrel C, for carrying the thread around a bobbin, of a ratchet wheel E and friction lever F, provided with a pawl *d*, constructed, arranged, and operating substantially as described, and for the purposes set forth.

No. 39,237.—**THOMAS J. MAYALL**, of Roxbury, Mass.—*Improved Hose or Tubing*.—Patent dated July 14, 1863.—The tube is woven from threads or strands which have been previously saturated with gutta-percha or India-rubber.

Claim.—Forming a hose or tubing, by first saturating or incorporating threads or strands of fibrous materials, rubber or gutta-percha, or compounds of either or both, and then weaving or braiding the same, substantially as set forth.

No. 39,238.—**THOMAS J. MAYALL**, of Roxbury, Mass.—*Improvement in the Manufacture of Elastic Hose or Tubing*.—Patent dated July 14, 1863.—The improvement consists in weaving or braiding around a rubber tube or water-proof lining layers of twine or cord saturated with a water-proof composition.

Claim.—A hose or tubing in which the periphery of one or more of its layers is formed by weaving or braiding upon an inner tube or lining an outer tube made of twine, wire, or other strands or threads, substantially as set forth.

No. 39,239.—**JAMES PACKER**, of New York, N. Y.—*Improved Chain Link*.—Patent dated July 14, 1863.—The link is made of two bent rods with a swivel and head, and a screw on their respective ends, so as to unite the ends of a chain, or attach one to an eye-bolt, &c.

Claim.—A chain link A made of two parts B C, united by two swivels D, in the manner and for the purpose substantially as shown and described.

No. 39,240.—**AUGUST F. W. PARTZ**, of Wurtsboro', Sullivan county, N. Y.—*Improvement in Amalgamators*.—Patent dated July 14, 1863.—The claims are explanatory.

Claim.—First, a current of mercury moving over a horizontal or inclined surface, upon which auriferous or argentiferous ores or substances in a dry pulverulent state are distributed, to effect their amalgamation, as specified.

Second, amalgamating gold and silver with mercury, by causing the former to come in contact with the latter, while passing in a thin strata over an inclined metallic plate or trough, the surface of which is amalgamated with mercury, the down-flowing mercury being drawn away from below the surface at the delivery end of the said plate or trough, and re-elevated to the higher end thereof, substantially as set forth.

Third, a current of water or air in combination with a flowing sheet of mercury for removing the tailings, the pulverized ore being distributed on such sheet in a dry state, substantially as specified.

Fourth, agitating the tailings by means of rotating or oscillating stirrers or bauches, in combination with amalgamating machines in which the mercury flows in a thin strata over an inclined plate, in order that the said tailings may be easily removed, and the mercury be allowed to freely return to the point of beginning, substantially as set forth.

Fifth, distributing auriferous or argentiferous ores or substances in a dry state upon a moving sheet of mercury, (for the purpose of effecting their amalgamation,) by means of vibrating sieves or screens, substantially as specified.

No. 39,241.—**JOHN G. PERRY**, of South Kingston, Washington county, R. I.—*Improvement in Straw Cutters*.—Patent dated July 14, 1863.—The revolving cutters with spiral knives are geared together by wheels of equal speed, and are constructed with alternate blades and projections, so that the blade of one cuts shearwise on the projection of the other, each alternately making a cut upon its fellow. The frame in which these working parts are journaled has a dovetail which fits a corresponding recess in a plate attached to the face of the frame.

Claim.—First, the cylinders provided with alternating knives and projections 3, when constructed as described and for the purpose set forth.

Second, a straw cutter having two or more of said cylinders, constructed as described, and working in combination in the manner and for the purpose set forth.

Third, attaching the rolls to the frames of straw cutters by means of dovetail *c* and recess *a*, in the manner and for the purpose set forth.

No. 39,242.—**JOHN G. PERRY**, of South Kingston, Washington county, R. I.—*Improvement in Hay Cutters*.—Patent issued July 14, 1863; antedated May 13, 1863.—The spiral flanged cylinder, the shearwise passage of whose edges in passing each other cuts the hay, are geared so that the upper or two-knived cylinder runs twice as fast as the lower to enable it to cut against each of the four flanges of the lower one. The lower wheel is turned on its shaft so as to adjust the flanges on its cylinder relatively closer or otherwise to the blades on the upper cylinder, and the spiral twist of the lower flanges is less than that of the upper for obvious reasons. The lock on the frame which temporarily engages the driving wheel is to prevent its revolution by children when not in service.

Claim.—First, the combination of the adjusting screw S, gears D C, and hub *o*, with the cylinders, for the purpose herein set forth.

Second, the combination of the lock with the hay cutter, substantially as herein described and for the purpose set forth.

No. 39,243.—**JOHN G. PERRY**, of South Kingston, Washington county, R. I.—*Improved Meat Cutter*.—Patent dated July 14, 1863.—The improvement consists in the manner of fixing the knives in the machine, their backs entering grooves in the casing while their sides are supported by a slotted plate which is attached by a screw to the case.

Claim.—The combination of the slotted plate S with the knives *x x*, substantially as herein described and for the purposes set forth.

No. 39,244.—**JOHN G. PERRY**, of South Kingston, Washington county, R. I.—*Improved Sausage Stuffer*.—Patent dated July 14, 1863.—A cam upon the horizontal shaft is made to sweep the sides of the chamber, carrying down the meat and expressing it through the nozzle, the gate which guides the meat toward the exit being opened and closed by means of projections which engage a groove on the cam.

Claim.—The combination of the cam D and plate L, substantially as herein described and for the purposes set forth.

No. 39,245.—**STEPHEN PUFFER and ANDREW J. SANDS**, of Oxford, Chenango county, N. Y.—*Improvement in Water Elevators*.—Patent dated July 14, 1863.—The improvements consist in the slotted crank, which has a pin engaging or detachable from the toothed coupling wheel, and the brake lever with the pawl pivoted thereto, so that by the endwise motion of the crank-arm the pin may be withdrawn from the tooth of the wheel, releasing the roller shaft, while the depression of the brake lever brings the latter into operation and elevates the pawl from contact with the ratchet-wheel, in which condition the bucket is free to descend under the brake pressure upon the roller.

Claim.—The longitudinally sliding self-detachable crank H, when arranged and combined with the toothed coupling wheel G of the windlass shaft C, substantially in the manner and for the purpose herein set forth.

Also, the self-detachable sliding crank H, the toothed coupling wheel G, the windlass shaft C, the rigidly united brake, lever, and pawl L and M, the automatic self-discharging bucket N, and the windlass drum E, of our improved water-drawing apparatus, when said parts are arranged and combined with each other substantially in the manner and for the purpose herein set forth.

No. 39,246.—**WESTLEY RICHARDS**, of Birmingham, England.—*Improvement in Breech-loading Fire-arms*.—Patent dated July 14, 1863.—This consists of a breech plug attached to a lever which moves vertically to expose the rear of the barrel. The front of the plug consists of a jointed and pivoted piece, and the whole plug is contained within a chamber whose rear constitutes the abutment.

Claim.—The combination of the hinged cover and lever *c*, carrying the sliding block *d*, and its projection *d2*, and pivoted or yielding plug *e*, with the chamber *b*, and its aperture *b'*, in the manner and for the purpose herein described and represented.

No. 39,247.—JACOB FREDERICK SCHNEIDER, of Brooklyn, N. Y.—*Improvement in Skates*.—Patent dated July 14, 1863.—The runner is forked from the middle toward the rear with a wheel in the bifurcation. The leathers are clamped underneath the foot-piece by means of wires which enter the jogged or notched recesses.

Claim.—First, the forked runner, substantially as described.

Second, the wheel in combination with the forks of the forked runner, substantially as described.

Third, securing the leathers within the two-part stock by means of the wires *f*, and jogs in the recesses *g*, in the manner specified.

No. 39,248.—FRANCIS B. SCOTT, of Buffalo, N. Y.—*Improved Paddle-Wheel*.—Patent dated July 14, 1863.—Each bucket is attached to the end of a vibrating arm pivoted near the periphery of the wheel and advanced or retracted in a track on the face of the wheel, being projected or retracted by an eccentric so as to expose the paddle to the water in its effective position, and withdraw it within the periphery of the wheel at other points of its revolution.

Claim.—First, the bucket *C* attached to the arm *C'* at any given angle thereto, the arms being hinged to the wheel near the pumping thereof, and geared by an eccentric which is supported by the boat, for the purpose and substantially as described.

Second, making the wheel with compartments *a1*, leaving an open space *a2* between each, through which space the bucket advances and recedes, for the purposes set forth and shown in the drawings.

No. 39,249.—BENJAMIN SMITH, of Batavia, Ill.—*Improvement in Raking Attachments to Harvesters*.—Patent dated July 14, 1863.—On the driving-wheel shaft is a crank with a crooked neck, connected by a ball joint to a pitman which is socketed to the rake holder. The rake-head is made to roll up as the grain is discharged from the platform by means of a finger on one side of the rake, which comes in contact with a projection on the stand, it being held suspended by a catch that drops into a notch until it returns for another bundle, when, as the lower end of the catch presses the rim of the notch, it raises the catch and the rake descends.

Claim.—In combination with a rake that is operated by a crooked-necked crank and a flexible or ball and socket connexion, and rolled up upon a guide-piece *F*, a self-connecting and disconnecting catch *I* that holds the rake up at certain intervals, and allows it to drop upon the platform when about to clear it of the cut grain, substantially as described and represented.

No. 39,250.—NATHANIEL WATERMAN, of Boston, Mass.—*Improved Sadiron*.—Patent dated July 14, 1863.—This improvement consists in the shape of the iron, and is sufficiently described in the claim and illustration.

Claim.—An improved smoothing or sadiron, as made not only with a round heel and a plane surface bottom and a pointed or angular toe, but with the slides making an angle with the bottom, and with the top or upper surface rounded at and above the toe and the heel, and both longitudinally and laterally in the manner as shown in the accompanying drawings, and substantially as described.

No. 39,251.—ZENAS WHEELER, of San Francisco, Cal.—*Improved Machine for Collecting Amalgam and Mercury from Ore Pulp*.—Patent dated July 14, 1863.—This machine is constructed for saving the mercury from the pulp or waste matter which escapes from the ordinary amalgamators, and consists of a tub with concave bottom and a central depression, in which is a vertical tubular rotary shaft having arms on which pads are placed, which rub on the bottom and collect the particles of mercury which run down into the central chamber; water is supplied through the hollow shaft which may be decanted off by a siphon or cocks, and the quicksilver drawn off by the lower tube connected with the gathering chamber.

Claim.—The tub *A*, provided with the concave bottom *a* and chamber *b*, in combination with the rotating pads *L*, as and for the purpose specified.

Also, in combination with the pads *L*, concave bottoms *a* and chamber *b*, or the tub *A*, the tubular shaft *H* and arms *k*, all arranged for joint operation as and for the purpose specified.

No. 39,252.—HENRY WINTER, of Honesdale, Wayne county, Pa.—*Machine for Turning Umbrella Hooks or Handles*.—Patent dated July 14, 1863.—This machine is used for dressing the curves and hooks of the handles of umbrellas or walking sticks, and consists of a cutter-head with a gouge-shaped cutter acting on the stick which is passed into the central opening of the cutter-head, which is run by a belt on its periphery, and is mounted on a stock and secured by a cap.

Claim.—First, the revolving cutter-head with a gouge-shaped cutter, and with a centre opening that is flaring or trumpet-mouthed on each side, for dressing curves or hooks on umbrella sticks and other articles, substantially as specified.

Second, the mode of constructing the stock *a* and cap *c*, for receiving and sustaining the rotating cutter-head, as set forth.

Third, the adjustable fence *k*, in combination with the revolving cutter-head *a*, for the purpose and as specified.

No. 39,253.—GEORGE F. J. COLBURN, of Newark, N. J., assignor to LEMUEL BEERS, of Newton, Conn.—*Improved Hinged Collars for Lamps*.—Patent dated July 14, 1863.—The invention consists of a hinged collar operating vertically and located between the lamp top and the neck, by which the burner may be raised for the purpose of filling the reservoir; a clutch pin or button attached to the handle *i*, passing through a slot in the base and being rotated, fastens the burner in its closed position.

Claim.—First, a hinged collar *a f*, adapted for application between the lamp top *t* and neck *n*, opening to a limited extent to afford direct access to the reservoir below the burner, and held in its open position by the weight of the chimney, all as herein shown and explained.

Second, the combination of the fastening *e* and handle *i*, all arranged and operating as specified.

No. 39,254.—THOMAS HARDING, of Springfield, Ohio, assignor to THOMPSON D. HART, of Philadelphia, Pa.—*Improvement in Explosive Shells for Ordnance*.—Patent dated July 14, 1863.—This shell is made in sections which are retained together by means of heads whose grooves enclose flanges upon the segmental portions which fill the middle zones of the ball; the heads are connected by a screw stem and neck which enclose a powder chamber with a priming aperture.

Claim.—The combination of the grooved heads *A* and *B*, tail-piece *C*, stem *D*, chamber *E*, and flanged segment *F*, when the whole are constructed and arranged as herein described, for the purpose set forth.

No. 39,255.—LUCIUS D. HAWKINS, of San Francisco, Cal., assignor to ALFRED PEABODY, of Salem, Mass.—*Improvement in Rice-Cleaners*.—Patent dated July 14, 1863.—The inner cylinder is covered with sheet pelt and runs in close proximity to the alternating stone segments and wire screens which form the casing; these are adjustable toward the rotating cylinder, and the cloth screens are arranged in two parts so as to slip on each other as the diameter of the cylindrical casing is lessened by adjustment.

Claim.—The construction of the wire cloth covered frames *E* in two or more parts, and made adjustable substantially as set forth, for the purpose specified.

No. 39,256.—LEANDER W. LANGDON, of Northampton, Mass., assignor to Himself and DANIEL G. LITTLEFIELD, of same place.—*Improvement in Sewing Machine*.—Patent dated July 14, 1863.—These improvements are in the feeding apparatus, and consist of a reversing lever by which the motion of the feed plate is changed so as to sew back on the track it came, for the purpose of securing an end or doubling the strength of the seam; secondly, of a catch lever which may be brought into action when desired, and by which the motion of the feeder is arrested at each alternate stitch, so as to cause the needle to be inserted twice in the same place for the purpose of duplicating the interlocking of the threads; and thirdly, in imparting the vertical engaging and disengaging motion to the feeder from the hook which co-operates with the shuttle.

Claim.—First, combining with the mechanism which gives the feeding motion to the feeder *I* a reversing lever *j*, or its equivalent, by means of which the direction of the feeding motion of the feeder may be reversed, or the length of the stitches adjusted, substantially as described.

Second, combining with the mechanism which gives the feeding motion to the feeder the catch lever *e*, or its equivalent, operating substantially as described, by which the feeding motion is arrested at each alternate operation of the needle.

Third, imparting the vertical or engaging and disengaging motion to the feeder by means of the hook *T*, substantially as described.

No. 39,257.—JOHN L. CONSTABLE, of New York, N. Y.—*Improvement in Refining Ores*.—Patent dated July 14, 1863.—The object of this improvement is to de-sulphurize ore containing auriferous matter by subjecting the finely comminuted pyrites to the action of a blast of steam, at a sufficient temperature to volatilize the sulphur, say about 800° Fahr. A steam pipe from a boiler is conducted through a furnace, where it is super-heated, and issuing, impinges on a finely comminuted shower of ore which falls out of a hopper across the path of the steam. A wheel, rotating partially in water and covered with wire gauze, is placed before the steam blast so as to catch the lighter particles that might be blown up the chimney.

Claim.—Refining ores by the use of super-heated steam in a furnace, substantially in the manner described.

Also, the gauze covered wheel, revolving partially in water, in the manner and for the purpose specified.

No. 39,258.—LEVI DEDERICK, of Albany, N. Y.—*Improvement in Hay Presses*.—Patent dated July 14, 1863.—The ends of the follower project through the sides of the press, and are there suspended by hangers to the upper ends of toggle levers, whose fulcrum links are stepped into the frame of the machine. The two levers are simultaneously approached by means of ropes which elevate the follower in the press.

Claim.—The arrangement and combination of the follower, with its beams projecting through the sides of the press, and the toggle levers located and operating at the sides of the press, substantially as and for the purposes herein specified.

No. 39,259.—BIRDSILL HOLLY, of Lockport, Niagara county, N. Y.—*Improvement in Pumps*.—Patent dated July 14, 1863.—These improvements are designed to enable the lower valve and seat to be removed when required, to afford a permanent seat for the movable valve when it is in position, and to provide a means for tripping both valves to empty the pump in freezing weather.

The lower valve attachment consists of a heavy annular piece, to which the valve is hinged, and which sets around an upward projecting flange which forms the seat; the shape of the valve being such as to be raised by the lower side of the piston when that is down, while a rod projecting down from the upper valves impinges upon the lower one and opens the former.

Claim.—First, the valve ring or support B, provided with the ribs *e e*, or equivalent, and with one side *f* made lighter than the other, for the purpose of retaining said support in place in the cylinder, substantially as herein set forth.

Second, in combination with the support B and its valve C, the thin raised valve seat *d*, arranged substantially as described.

Third, the inclined, inductive valve C, so formed that when tipped for the admission of the water, its upper surface will assume a horizontal position, or approximately so, substantially as herein set forth.

Fourth, in combination with the induction valve C, the eduction valve E, provided with a stem *r*, and the piston D, arranged and operating substantially as specified.

Fifth, the arrangement and combination of the piston D, composed principally of the parts *i k*, the valve E, the piston rod G, and nut P, substantially as and for the purpose herein set forth.

No. 39,260.—JAMES MCNAMEE, of Easton, Northampton county, Pa.—*Improvement in Hold-backs for Wagons*.—Patent dated July 14, 1863.—This is an improvement in breast-chains, which pass from the collar to the neck yoke; or in tongue-chains, which pass from the breast strap or collar to the end of the tongue, as the case may be.

It consists in the interposition of a spring, working in a guide clevis, the ends of the chain being attached to the follower and the clevis respectively, so as to ease the necks of the horses from the sudden jerks resulting from the motions of the tongue.

Claim.—The combination of the rod C, spring D, cross-bars *e g*, U-shaped link B, chain A, and ring *f*, when the said parts are constructed and arranged as herein specified, and the whole employed as described, to arrest sudden lateral motions of the forward end of the tongue.

No. 39,261.—GEORGE H. STRONG, of Buffalo, N. Y.—*Improvement in Marking Brands*.—Patent dated July 14, 1863.—The invention consists in the arrangement of the parts, the type being slipped into the lower piece, and that again secured by dovetail projections on the stock, while the handle is screwed down through the stock, making it secure.

Claim.—Making the brand in two pieces, when one of the pieces is provided with flanges or projections, between which the other piece may be slid and then held fast by screwing in the handle, as herein substantially set forth and described.

No. 39,262.—HENRY B. THOMAS, of Cascade, Dubuque county, Iowa.—*Improvement in Grain Separators*.—Patent dated July 14, 1863.—The separator consists of an inner chamber with four perforated sides, a secondary one partially enclosing the former, and a third outer one with wire gauze for a cheat and cockle screen. The shaft of the machine is inclined, and the grain fed in at a hole around the axis; the wheat and larger grain passing to the end of the machine, where they are discharged into separate receptacles, while the screenings fall upon the floor.

Claim.—Two or more concentric cubical vessels or boxes, the inner one perforate, and the outer covered with wire-gauze, or its equivalent, for separating different grains, substantially in the manner and for the purpose herein set forth.

No. 39,263.—FRANKLIN COLE, of Livingston county, N. Y., assignor to WILLIAM P. HENDERSHOT, of Groveland, N. Y.—*Improvement in Dog Power*.—Patent dated July 14, 1863.—Upon a central shaft are radial arms, the shaft inclined so as to bring the platform thereon to an angle of 20° with the horizontal. Underneath the platform are a series of ways or curvilinear cams, which undulations form a bearing surface for two friction wheels on a vibrating lever; the passage of the cams over the friction wheels gives the lever a rocking movement, which may be utilized in any suitable way.

Claim.—The combination of an inclined revolving platform A with an oscillating lever O, by means of a regular series of projections M M upon said platform, and one or more friction wheels N N', upon said lever O, or their equivalents, substantially in the manner and for the purpose herein set forth.

Also, the peculiar arrangement of the friction wheels N N', in combination with an oscillating lever O and a regular series of projections M M upon an inclined revolving platform A, substantially in the manner and for the purpose herein set forth.

No. 39,264.—CYRUS B. GARLINOHOUSE and JOHN DICKSON, of Allensville, Switzerland county, Ind.—*Improvement in Hay-Loaders*.—Patent dated July 14, 1863.—The machine is mounted upon wheels, and the carrier supported behind upon vibrating arms journaled in line with the axis of the lower stretcher, and supported at the forward end by a segment rack and pinion.

The rakes trail behind from a head in the standards, and the hay is gathered from them as it accumulates by reciprocating clearing rakes, and placed within range of the endless apron and rake, which elevate it as required.

Claim.—First, the floating hay-carrier I J, constructed, supported, and operating in the manner and for the purposes specified.

Second, connecting the floating or self-adjusting carrier of a hay-loading machine with the main frame, by means of vibrating arms N N' journaled in line with the axes of the lower stretcher and the ground wheels, by which the lower end of the carrier is permitted to adapt itself to inequalities of the ground without affecting its connexions with the driver, substantially as specified.

Third, a combination with the self-adjusting or floating hay-carrier of fingers F, variable in their pressure upon the ground, substantially as described.

Fourth, in the described combination with carrier I J and fingers F, or their equivalents, the provision of reciprocating rakes W W', adapted and operating substantially as set forth.

No. 39,265.—CHRISTOPH SUSSEGER, of New York, N. Y., assignor to Himself and MORRITZ PINNER, of same place.—*Improved Transparent and Flexible Material designed as a Partial Substitute for Glass*.—Patent dated July 14, 1863.—This consists of a wire webbing covered with a transparent material formed of isinglass, gum-arabic, oxalic acid, and alcohol. After drying it is varnished.

Claim.—The manufacture and use of a transparent or translucent flexible fabric or material composed of wire webbing, or its equivalent, and a transparent coating or coatings, all substantially as herein set forth and described.

No. 39,266.—DAVID ALCORN, of New York, N. Y.—*Improvement in Dry Gas Meters*.—Patent dated July 21, 1863.—Instead of the usual circular form of the ports of the valve seats, the inventor makes them of a curved form, thereby, without increasing the area of the seat, diminishing the area of the rubbing surfaces, which surround the same. He also casts the seat and its hollow elongation in one solid piece, thereby facilitating the appliance of the obliquely placed channel F, affording an easier passage-way for the gas from the lower part of the inlet tube to the lower part of the central port of the valve, producing at the same time an angular reservoir with an outlet *e'*, from which the accumulating deposits from the gas may be removed.

Claim.—First, making the port openings of the valve seat C substantially in the enlarged and curved form set forth and described, for the purposes specified.

Second, casting or constructing the valve seat C and its hollow projection or elongation *e'* together in one solid piece, substantially as described and set forth, for the purposes specified.

Third, arranging the channel F in an oblique position in relation to the valve and to the inlet tube E, as described and set forth, for the purposes specified.

No. 39,267.—FRANCIS ALGER, of Boston, Mass.—*Improvement in Removable Chamber for Explosive Shells*.—Patent dated July 21, 1863.—The inventor attaches a water-proof pouch or tube, containing the bursting charge, to the fuze, so that the whole may be removed from the projectile or replaced therein at any time.

Claim.—The use of a tube or pouch, of India-rubber cloth or of other flexible material, containing gunpowder and attached to a fuze, so as to form, together with the fuze, one apparatus, which may be inserted into or removed from a projectile at a single operation.

No. 39,268.—EDMUND GREENLEE, of Summerhill, Crawford county, Pa.—*Improvement in Machinery for Dressing Heading for Cooper Ware*.—Patent dated July 21, 1863.—The heading stave is placed between the clamp and the face plate, which carries the jointers, and is there fastened by a dog. The heading is gradually fed up to the face plate, taken out, and reversed, and fed up again till the desired thickness is attained. The edges are jointed by exposing them also to the revolving cutters on the face plate.

Claim.—The device for clamping and holding the heading while being dressed, when used in connexion with the face plate or wheel, as above specified.

No. 39,269.—NATHAN AMES, of Saugus Centre, Mass.—*Improvement in Railroad Switches*.—Patent dated July 21, 1863.—A depressible shaft connected with a spiral spring passes through the front centre of the platform of a car; at its lower end is attached a movable wheel, the periphery of which is bevelled; between the tracks at a turn-out is placed a director, one side and end of which are also bevelled to correspond with the wheel. The conductor or engineer depresses the shaft, and the wheel thereof bearing against the director, carries the car in the direction of the turn out.

Claim.—First, the director E, constructed substantially as set forth and for the purpose described.

Second, the bevelled friction roller G, or its equivalent, in combination with the spring I and bevelled director E, substantially as set forth and for the purpose described.

No. 39,270.—GEORGE R. BACON, of Providence, Rhode Island.—*Improvement in Breech-loading Fire-arms.*—Patent dated July 21, 1863.—This is an improvement on the Burnside fire-arm, and consists in a compound curved groove in the side of the cartridge block, into which the point of a stationary pin projects, and in which it traverses by the motion of the cartridge block, thus steadying the said block, which had heretofore been attached by a link and necessitated two motions, viz: one of the block and link together, on the pin which connects the link with the frame, and a movement of the block alone, on the pin which connects it with the link.

Claim.—The combination with the cartridge-block D, and its link connexion E, of the compound groove *c d* or *c d'*, in the said block, and the stationary pin *e* in the frame, substantially as and for the purpose herein specified.

No. 39,271.—JOHN S. BROOKS, of Rochester, N. Y.—*Improvement in Filters and Coolers.*—Patent dated July 21, 1863.—This invention consists in a cylindrical chamber with a second outer cylinder, the space between filled with non-conducting material. Part way down the inner cylinder is a floor dividing the inner space into two chambers which are connected by a pipe projecting upwards from the floor between and running up nearly to the top of the upper chamber. The water is pressed into the annular filtering chamber, and passes through holes into the lower parts of the water chamber, which, when it is filled, runs over the top of the pipe spoken of, and fills the upper chamber where the ice is kept. Water may be drawn from either chamber by a faucet.

Claim.—A combined filter and cooler, having two separate reservoirs for the filtered water, substantially as shown and for the purposes specified.

Also, in combination with the two reservoirs, the pipe D, serving as a supply to the upper reservoir, and as a passage for air to and from the lower reservoir, as and for the purposes shown and specified.

No. 39,272.—A. H. CLARK, of Fond du Lac, Wis.—*Improved Shingle Machine.*—Patent dated July 21, 1863.—This machine consists of a revolving face plate with a number of shingle blocks properly dogged upon its surface and alternately exposed to a circular saw and a rotary planer, by which they are shaped and severed from the block. One feature of the invention consists of the peculiar construction of the dog; another, of the method of operating it, by such a change in its plane as will adapt it to receive the required form, and another feature, of the adaptation of the planing appliances to the bed.

Claim.—First, the dog G, attached to or formed with the slide bar F, in combination with the spring H, screw *c*, and frame D, all being arranged and applied to the rotating plate B, to operate as and for the purpose herein set forth.

Second, operating the dog G, through the medium of the stationary curved bar N, pendent pin *e*, of frame D, and the spring O, all arranged substantially as herein described.

Third, the rotary planers Q, when used in combination with the bed L, for the purpose herein set forth.

No. 39,273.—JOHN CLARK, of Sharon, Mercer county, Pa.—*Improved Washing Machine.*—Patent dated July 21, 1863.—Suspended from standards on the sides of a box is a pendulous rubber or sweep, with a curved face armed with pressure blocks, and vibrating against the clothes, which are supported upon an endless apron, traversing upon three rollers, and having transverse slats attached to it.

Claim.—The sweep, the face of which is composed of a number of yielding blocks so arranged as to adjust themselves to every part of the clothes to be washed; and also the double apron and slats as hereinbefore described.

No. 39,274.—JOHN CONOLLY, of Boston, Mass.—*Improved Casks.*—Patent dated July 21, 1863.—The improvement refers to the construction of the heads of casks, and consists of a dish-shaped head, the rim or flange, which forms the chine, being curved over on the outside, and being provided inside with a screw thread which is firmly screwed on to the end of the cask.

Claim.—A metallic head for casks, barrels, kegs, &c., formed with an elevated rim or cap *a*, and a flange *d*, provided with a screw *e*, on its inner surface, and all constructed and arranged as shown, so as to be capable of being applied in the manner substantially as set forth.

No. 39,275.—GEORGE COOK, of New Haven, Conn.—*Machine for Compressing Carriage Wheels.*—Patent dated July 21, 1863.—This machine is intended to clamp the felloes firmly and evenly to the spokes, and consists of a ring of metal of larger diameter than the wheel, with interior brackets to sustain the spokes and rim, and screws (one for each spoke) set radially through the ring, and bearing upon the felloes to compress them on to the spokes.

Claim.—The arrangement described, of the ring F, screws H, and bracket I, when the same are combined in the manner and for the purpose as herein substantially set forth.

No. 39,276.—TULLY R. CORMICK, of Cap-Au-Gris, Lincoln county, Mo.—*Improved Cultivator.*—Patent dated July 21, 1863.—This cultivator consists of a frame on wheels to which four cultivator standards or shanks are attached; the two inner ones being provided with handles and attached by eyelet and staple to the axle, the outer and rear working shovels being bolted to the hind part of the frame, and all being provided with draught chains from the frame of the machine by which they are drawn and regulated as to depth.

Claim.—First, the combination of the plough shanks and handles G G, draught chains L L, universal joints M, connecting rod H, and adjusting nuts *k*, constructed, arranged, and operating substantially as and for the purposes set forth.

Second, the combination of the elevating levers I I, draught chains J J, and hinged plough-shanks F F, constructed, arranged, and operating substantially as and for the purposes specified.

No. 39,277.—D. CUMMING, Jr., of New York, N. Y.—*Improved Looking-Glass and Match-Holder.*—Patent dated July 21, 1863.—Below the looking-glass are a pair of match pockets, and on each side of the glass a friction surface for the purpose of igniting the matches.

Claim.—A new article of manufacture, consisting of the combination of a looking-glass with a match-holder and friction surface, constructed substantially as herein set forth.

No. 39,278.—EDWARD N. DICKERSON, of New York, N. Y.—*Improvement in Valve Gear for Steam Engines.*—Patent dated July 21, 1863.—The vibration of the rock shaft of the larger engine is accomplished by an auxiliary engine connected thereto.

Claim.—The combination of an auxiliary steam cylinder and piston with the vibrating rock shaft of a large steam engine, so arranged that the piston of the auxiliary engine will, at the pleasure of the engine driver, vibrate the rock shaft of the large engine, and thus open and close the main valves which it works, substantially as described.

No. 39,279.—WILLIAM M. DOTY, of New York, N. Y.—*Improved Washing Machine.*—Patent dated July 21, 1863.—This consists of a triangular derrick or frame, one end of which sets upon the floor, and the other with a face-board into the wash-tub. A pendulous frame, armed with beaters, is oscillated by a lever, so as to press the clothes between the beater and the said face-board.

Claim.—The derrick A, with the board *b*, in combination with the oscillating presser B and adjustable hand lever C, constructed and operating in the manner and for the purpose substantially as shown and described.

Also, the arrangement of the adjustable hand lever C with friction rollers *g*, in combination with the oscillating presser B and slots *k*, constructed and operating as and for the purpose set forth.

No. 39,280.—HENRY H. ELWELL, of South Norwalk, Fairfield county, Conn.—*Improvement in Locks.*—Patent dated July 21, 1863.—This improvement is designed to adapt the lock for a right or a left hand door, and consists in connecting the inner end of the latch-bolt to the lever, which is actuated by the hub on the knob spindle by a pin, on which the inner end of the latch-bolt is loosely fitted, and using in connexion with the latch-bolt a sliding or adjustable bearing, so that the latch-bolt may be detached from its actuating lever by moving the bearing, be removed from the lock case, be reversed, and again inserted in the other position.

Claim.—The connecting of the inner end of the latch-bolt C to the lever E by means of pin *f*, in combination with the sliding or adjustable bearing F, arranged as shown, or in an equivalent way, to operate as and for the purpose herein set forth.

No. 39,281.—CHARLES A. FAIRFIELD, of Springfield, Mass.—*Improvement in Calipers.*—Patent dated July 21, 1863.—The jaws of the calipers are advanced and retracted by a right and left hand screw, which works in two nuts on the short ends of the two jaws respectively. These nuts are made open and jammed close, so as to clamp the adjusting screw by a taper set screw, which expands their rear ends so as to close their jaws.

Claim.—The combination of the half nuts 1 1 with the taper screw 3, when constructed, operating, and applied substantially in the manner and for the purpose herein fully set forth.

No. 39,282.—GEORGE P. GANSTER, of New York, N. Y.—*Improvement in Chain Shot.*—Patent dated July 21, 1863.—The shot is made hollow, with a square plug on the base to hold a sabot, and a hollow interior; two sub-balls occupy orifices in the sides, and are attached by chains coiled up in the central chamber, so that by the revolution of the rifled shot the sub-balls may fly out, but remain attached to the projectile.

Claim.—First, the shell cast with a cavity in the centre, apertures in the sides, and a square pivot on the but end of the shot, substantially as described and for the purposes set forth.

Second, the combination of the chain and sub-balls, constructed and arranged as above described.

No. 39,283.—ZEBULON G. GARLICK, of Otsego, N. Y.—*Improvement in Floors for Stalls*.—Patent dated July 21, 1863.—The grated portion of the upper floor is made to rise and fold back on hinges, to allow the removal of manure which may have fallen between the slats.

Claim.—Providing animal stalls with a secondary floor, formed in part of a movable grate, which is constructed of longitudinal bars secured together at each end, with interstices between them, and attached to the other part of the floor by hinges, so as to operate in the manner and for the purposes specified.

No. 39,284.—RANSOM GAYLORD, of Seymour, Conn.—*Improvement in Hollow Augers*.—Patent issued July 21, 1863; antedated April 26, 1863.—The object of the improvement is to make a tool adjustable for boring holes of different sizes, and it consists of a rotary disk with eccentric slots acting upon pins inserted into the backs of sliding cutter-heads, so that they are driven out or drawn in simultaneously and fastened by a jam nut, which holds them in the position to which they are adjusted.

Claim.—As an improved article of manufacture, a hollow auger, composed of a hollow shank A, grooved guide plate B, cutter-heads C, with dovetailed plates *c*, pins *b*, eccentric slotted disk D, and nut E, as herein shown and described.

No. 39,285.—JOSEPH GOSKER and A. DEGENHART, of Cincinnati, Ohio.—*Improvement in Pack-Saddles*.—Patent dated July 21, 1863.—The improvement consists in the form of the bows, which, supported by the pads, project beyond the sides of the animal; also, in the arrangement of the breast strap and stay, the breeching, back, and butt strap with the angle piece, as may be best understood from the illustration.

Claim.—First, supporting the packs or burdens of a pack-saddle off from the sides of the animal by means of the bows *a*, constructed and arranged substantially in the manner herein specified and shown.

Second, in combination with the pack-saddle A, the arrangement of the breeching strap *k*, diagonal straps *l*, and auxiliary strap *m*, substantially as and for the purpose described.

Third, the arrangement of the breast strap *g* and the straps or stays *h*, in combination with the pack-saddle A, substantially as shown and described.

No. 39,286.—JOHN P. GREELEY and LEVI W. BUXTON, of Nashua, N. H.—*Improvement in Mowing Machines*.—Patent dated July 21, 1863.—The object of this improvement is to obtain a more complete control of the cutter as to its vertical adjustment when in motion. The cutter-bar is attached by a vibrating frame to the axle, and the vertical movement of the forward end of the frame is accomplished by a wheel, chain, and pulley, which are actuated by a lever at the seat of the driver.

Claim.—The said improved mowing machine, so constructed as not only to have its axle A and its cutter-bar F connected by means of a vibratory frame D, arranged with respect to and applied to them, and serving to support the cutter-operating mechanism, substantially as described, but also to have combined with the cutter-bar, frame, and axle a lever H, a chain I, a pulley *g*, and a windlass or wheel *k*, and mechanism for operating or rotating such wheel and retaining it in position, the whole being substantially as hereinbefore specified.

No. 39,287.—WILLIAM C. GRIMES, of Philadelphia, Pa.—*Improvement in Machines for Making Nails for Horseshoes*.—Patent dated July 21, 1863.—The nails are formed by means of the combined action of a pair of rolls, an anvil, and a die, or hammer, operating alternately upon the material of which the nail is formed. The action of the rolls is to elongate that part of the rod on which they operate, and impart the desired form and thickness. The action of the hammer is to reduce the lateral spreading of the material under the action of the rolls, and to give the proper form and width to the nail. The alternate action of the rolls and hammer is repeated as the nature of the article may require, and the rod is constantly heated as it is fed to the rolls, and has a longitudinal reciprocating movement corresponding in time and speed with that of the periphery of the rolls. When formed the nail is severed by mechanism, and the nail rod automatically fed to the rolls.

Claim.—First, the forging or forming of nails or other metallic articles by the compound and combined action of a pair of rolls and a swage or hammer and an anvil, or their equivalents, operating alternately upon the material to form the nail or other article, as hereinbefore described.

Second, in combination, a pair of rolls, having a contour suited to give the required form to the opposite sides of the article, with a hammer and an anvil, the faces of which are the counterpart of the required form of the other opposite sides or edges of the nail or other article, as before specified.

Third, the mode of effecting the periodic suspension of the action of the hammer by means of the lever J, the bar Q, arm R, cam S, and spring *r*, or their equivalents, constructed substantially as herein described, and operating as and for the purpose set forth.

Fourth, the feeding rolls U V, having a rotary and a reciprocating movement, in combination with the operative rolls E and F, as hereinbefore described and for the purpose set forth.

Fifth, the clutch, substantially as described, in combination with the adjustable stop X', bent lever P', and cam T', or their equivalents, as described and for the purpose set forth.

Sixth, the shear-bars K and L, or their equivalents, when operated by cams, as M, N, and P, on separate shafts that revolve with unequal speed, as hereinbefore described and for the purpose set forth.

No. 39,288.—CHARLES W. HARRIS, of Pittsburg, Pa.—*Improved Bung Cutter*.—Patent dated July 21, 1863.—The tool consists of an axial centre pin, projected by a strong spiral spring, and a cutter-head, with cutters working in slots, which flare at an angle with the axis, so as to cut a taper bung from the wood upon which they operate.

Claim.—First, placing the knives or cutters in grooves in the body of the tool at the angle required to be given to the sides of the bungs, substantially as described.

Second, attaching the knives or cutters to the sleeve, either by a toggle joint or link, or by a pivot, working in a slotted pivot-hole, so as to allow the cutters to spread in their descent through the wood, without varying the angle of deflection from the axis of the tool.

Third, the use of a loose centre pin in the axis or centre of the tool, pressed downwards by a strong spiral spring, for the purpose of centring the tool, holding the bung while it is being cut, and delivering the tool from the wood after the operation is finished, substantially as described.

No. 39,289.—R. S. HARRIS, of Galena, Jo Daviess county, Ill.—*Improvement in Steam Boilers*.—Patent dated July 21, 1863.—The tubular cylindrical boiler is surmounted by an annular flue and that by a water-jacket. Segmental reservoirs against the sides of the boilers hold a portion of water in an elevated position and in combination with a brick-work above the steam space of the boiler and a cast-iron plate under the steam space of the water-jacket to prevent the direct action of the heat upon the steam spaces of the boiler.

Claim.—First, the annular flue D and water-jacket E in combination with a tubular or flue boiler A, constructed and operating as and for the purpose herein shown and described.

Second, the segmental reservoirs C, cast-iron plate F, and brick-work G, in combination with the annular flue D, boiler A, and water-jacket E, all constructed and operating in the manner and for the purpose substantially as specified.

No. 39,290.—ELANDER HEATH, of San Francisco, Cal.—*Improvement in Dovetailing Machine*.—Patent dated July 21, 1863.—The invention consists in the arrangement of the benches, carriages, and gauges of the circular saws, whereby the sides of the dovetail tenons and mortises are made by the saws to the proper depth, width, and angle, leaving the body of the mortise to be removed by the common mortising machine. The two saws are upon one mandrel, each having its own bench, one being inclined and the other horizontal; the former for working on the end pieces and the latter on the side pieces of the box. Each has a sliding frame or carriage guided to move at right angles to the mandrel, and the inclination of the bench is the same as the inclination of the sides of the mortises to the edges of the board. Gauges are applied to limit the depth of cut.

Claim.—First, the arrangement of the adjustable inclined bench with its sliding carriage, spring gauges, and gauge strips.

Second, the use of the swinging face-end with its adjustable screws.

Third, the arrangement of the swinging face-end in combination with the spring gauges and gauge strips, all attached to the sliding carriage.

No. 39,291.—Dr. THOMAS HOLMES, of Washington, D. C.—*Improvement in Receptacles for Dead Bodies*.—Patent issued July 21, 1863; antedated July 4, 1863.—The invention consists of an oval-shaped elastic receptacle, having a funnel-shaped top, handles at the sides, a grooved block to prevent pressure on and disfigurement of the face, and a tube for the insertion of deodorizing material.

It is intended for removing dead bodies off the field and applying temporary preservative preparations till more effectual appliances can be reached.

Claim.—The elastic receptacle, with funnel-shaped top, handles at the sides, deodorizing tube, and grooved block, as herein described, for the purpose of preserving and more easily transporting dead bodies.

No. 39,292.—TRUCKSON S. LA FRANCE, of Elmira, N. Y.—*Improvement in Governor Valves*.—Patent dated July 21, 1863.—The valve-rod or shaft is operated by means of a slotted crank from the governor rod, and the inner end of the valve-rod is supported in a screw-nut in the opposite head of the valve-chamber; the latter is a frustum of a cone with a diaphragm disk in its inner middle length and having eight parts, four of them larger than the others, and working in a valve seat corresponding in size and in the character of its openings, for the purpose of attaining a greater range of variation. The holes in the disk partition in the valve are to allow the flow of steam from one end of the interior of the valve to the other.

Claim.—First, making the ports in the valve seats of different sizes, when the same are arranged in the manner and for the purpose set forth.

Second, the adjustable screw centre piece M, constructed, arranged, and operating substantially as described.

Third, perforating the diaphragm plate r, for the purpose stated.

No. 39,293.—L. N. LELAND, of Grafton, Mass.—*Improvement in Boot Forms.*—Patent dated July 21, 1863.—The object of this improvement is to render the clamp capable of being adjusted so as to act upon the leather at different angles, as may be required; and the invention consists of a plate set on to the angle of the boot-form with a socket in which the end of the clamp-screw rests, having a rocking motion, so as to vary the pull or stretch of the leather to make it fit over the inner angle of the form with more evenness than can be accomplished by the direct pull of the rigid clamp.

Claim.—The plate C, provided with the tubular projection d and screws g g, in connexion with the plate B, provided with the projections f f, when the above parts are used in combination with a boot-clamp formed of a screw D and jaws E E', all arranged to operate in connexion with a boot-form, as and for the purpose herein set forth.

No. 39,294.—L. N. LELAND, of Grafton, Worcester county, Mass.—*Improved Device for Cutting Welts.*—Patent dated July 21, 1863.—The improvement consists of a cylinder armed with circular knives, and another above it with V-shaped grooves in line with the knives. The leather is passed between them, and cut into strips by the knives, which make a clean cut through the leather, and are not blunted by the contact of their edges with anything beyond the leather on which they operate.

Claim.—The cylinder A, provided with a series of circular cutters C, in combination with a cylinder D, having a series of V-shaped grooves a, made circumferentially in it to receive the edges of the cutters, substantially as and for the purpose set forth.

No. 39,295.—D. W. LEWIS, of Janesville, Rock county, Wis.—*Improved Snap-hook.*—Patent dated July 21, 1863.—The shank is divided, and the locking-piece which fastens into the hook has a spring which retains it in its locked position, and is opened by depression which unlocks, and lateral rotation which admits of the insertion of the ring of the bit.

Claim.—A harness snap-hook, constructed with a longitudinally divided shank, or neck, which is compressible, to unlock the pivoted section, and also capable of being opened by a circular slide motion.

No. 39,296.—BENJAMIN LIVERMORE, of Hartland, Windsor county, Vt.—*Device for Hand-Printing.*—Patent dated July 21, 1863.—The letters are all formed by a single mark, or by a combination of specific marks, which are under the control of keys, and can be used singly or in any required combination; the type being caused to move so as to leave spaces between them, the type adjusting itself at the end of each line, and the paper shifting for the commencement of a new one.

Claim.—First, the combination type I, formed of a series of parts 1 1' 2 2' 3 3', arranged substantially as shown, so as to be capable of being operated singly, or any two or more of them simultaneously, for the purpose specified.

Second, the arrangement of the levers H, arms K, levers t, and keys or finger-pieces L, substantially as shown, for operating the parts of the type.

Third, the plate B, rack bar C, and lever D, the latter being provided with the pawls E F, provided respectively with prongs or arms A' i', for the purpose of feeding or moving the type across the paper, as set forth.

Fourth, connecting the arms K with the lever D of plate B, through the medium of the bar or arm J, for the purpose of moving the type across the paper simultaneously with the giving of the impression, or just before the impression is given, as set forth.

Fifth, the two pawls P Q, arranged as shown in connexion with the ratchet b' and the lever D of the plate B, for moving the paper c, as set forth.

No. 39,297.—G. S. MANNING, of Springfield, Ill.—*Improvement in Wheel Vehicles.*—Patent dated July 21, 1863.—One part of the spring passes around and underneath the axle, and is connected by a link to the other part, and then being joined are deflected forward to the till or bed bar, and to the rear of those positions to parts of the bed; as may be best understood by reference to the illustration.

Claim.—The springs C, composed of two principal parts a c, connected together by a link b, and secured to the axles B, and to the vehicle, in the manner substantially as herein set forth.

No. 39,298.—RINEHART P. MARCH, of Norristown, Montgomery county, Pa.—*Improved Bread-cutting Machine.*—Patent dated July 21, 1863.—The loaf is cut by a guillotine-knife set in a gate which moves vertically between standards. The thickness of the slices is determined by an adjustable gauge, and the loaf fed toward the knife by a follower, under the pressure of a weighted cord.

Claim.—First, the combination of the gate G with knife H and adjustable gauge I, the adjustable elastic box C, and the follower K, all constructed, arranged, and operated as set forth.

Second, the combination of the brake N and rod R with the lever J and follower K K, or their equivalents, for the purpose specified.

No. 39,299.—JACOB H. MASKER, of Newark, N. J.—*Improvement in Hat Blocks.*—Patent dated July 21, 1863.—The block is made in two sections, which are united by a tongue attached to one portion and fitting a recess in the other, so as to keep the parts of the block from shifting under the ironing process.

Claim.—A hat block made in sections, said sections being united to each other by a wedge or dovetail-formed tongue and groove, the tongue being in line with the base of the block, the tongue and groove terminating before reaching the crown, substantially as shown and described.

No. 39,300.—JOHN D. METS, of Dubuque, Iowa.—*Improvement in Photographic Albums.*—Patent dated July 21, 1863.—Each leaf is attached to a plate, which is doubled over a rod, and the tubular part being divided at suitable points, the sections are bent alternately right and left, so that the adjacent leaf plate may by its corresponding sections be hinged by the insertion of the pintle rod; and so on across the back, making a succession of leaves, each hinged to its neighbor, and constituting a hinged back to be attached to the cover.

Claim.—First, as an improved mode of binding photograph albums, uniting the leaves thereof to perforated plates, which are hinged or jointed together substantially as described.

Second, a photograph album constructed with a hinged back made up of a succession of plates hinged together, substantially as described.

Third, uniting the book of leaves to the cover thereof, by means substantially as described.

Fourth, a combination of hinged plates united together and adapted to receive and hold the thick leaves A A' and to form a hinge binding, substantially as described.

No. 39,301.—HENRY W. MILLAR, of Utica, N. Y.—*Improvement in Chimneys for Lamps.*—Patent dated July 21, 1863.—The lower part of the chimney is of glass, and the upper part of mica, detachable from the lower.

Claim.—As an improved article of manufacture, a lamp chimney constructed of glass and mica, in the manner substantially as herein shown and described.

No. 39,302.—JOSEPH J. MINER, of Buffalo, N. Y.—*Improvement in Signal Lanterns.*—Patent dated July 21, 1863.—This lantern is constructed with an opaque shutter and colored shades, so as by the manipulations to convey signals founded upon the changes from light to dark, and various colors, according to an agreed combination.

Claim.—The opaque shade D, made movable, so that it may be raised or lowered as desired, (with or without the reflector E,) in combination with transparent colored shades, for the purposes and substantially as set forth.

No. 39,303.—R. B. MORE, of Cincinnati, Ohio.—*Improvement in Car-seat Locks.*—Patent dated July 21, 1863.—The arm is provided with a spring-bolt, which strikes against the nosing on the bracket, and then engages in a notch in the same.

Claim.—The spring-latch D applied to the arm B of the car-seat back, in combination with the nosing F on the bracket E, the former being provided with a recess d and strike or bevelled surface e, and all arranged substantially as and for the purpose specified.

No. 39,304.—JOHN MOYE, of Medina, Orleans county, N. Y.—*Improvement in Hair Restoratives.*—Patent issued July 21, 1863; antedated November 1, 1862.—The composition is as follows: Castor oil, one pint; alcohol, five pints; tincture of lobelia, one pint; tincture of bloodroot, one pint; laudanum, two ounces; citronella, half ounce; bergamot, one-quarter ounce; oil of cloves, fifteen drops; oil of cinnamon, fifteen drops.

Claim.—The above-described compound or composition made of castor oil, alcohol, tincture of lobelia, tincture of bloodroot, laudanum, citronella, bergamot, oil of cloves and cinnamon, in the proportions herein set forth.

No. 39,305.—E. D. MURPHY, of Claremont, Sullivan county, N. H.—*Improved Mop-head.*—Patent dated July 21, 1863.—This consists of a frame to retain the cloth; the follower is clamped against the bar of the frame by a screw which enters the socket to which the handle is attached.

Claim.—A mop-head having in combination a frame A, with socket a, screw C, with semicircular foot g fitting in a semi-spherical step h in follower B, which is provided with points s and cross-bar b with points c, all as shown and described.

No. 39,306.—DAVID MYERS, of South Bend, St. Joseph county, Ind.—*Improvement in Railroad-car Brakes.*—Patent dated July 21, 1863.—By this improvement all the hand-brakes of a train of cars are to be operated at once from one point. A friction wheel is

employed to turn a shaft which winds up a continuous chain, the latter being connected with the brake rods so as to apply the brakes to the wheels, the usual hand-brakes being serviceable when required. The friction wheel is operated by impingement on the flange of one of the car wheels.

Claim.—First, the friction wheel, constructed of a ring *m*, and a plurality of disks *l* fitted on a shaft *G*, substantially as shown, in connexion with the levers *s*, *r*, pulleys *t*, *q*, and cord *L*, arranged to operate substantially as and for the purpose herein set forth.

Second, the combination on the baggage or first car of the fixed pulley *t*, and the pulley *q* in the swing pendant *r*, the latter being connected to the lever *b* by a rod *s*, and all arranged to operate in connexion with the chain *L*, as and for the purpose set forth.

Third, the triangular lever *M* applied to the rear cars, and provided with the pulleys *a'*, *b'*, *c'*, and arranged in connexion with the chain *L*, to operate as and for the purpose specified.

No. 39,307.—JOSEPH OASTER, of Amboy, Lee county, Ill.—*Improved Washing Machine.*—Patent dated July 21, 1863.—The semi-cylindrical oscillating rubber is journaled in bearing, which may be depressed by the treadle so as to cause the rubber to press with more force upon the clothes. The slats forming the concave are arranged in a semi-cylindrical groove in each side of the box, and are adjustable therein as to relative distance, as well as removable therefrom.

Claim.—The combination with the self-adjusting cylindrical rubber *C*, herein described, the removable and adjustable slats *B*, of the concave, substantially in the manner and for the purpose set forth.

No. 39,308.—WILLIAM T. ROOT, of Geneva, Ontario county, N. Y.—*Improved Door Spring.*—Patent issued July 21, 1863; antedated March 7, 1863.—The drum is attached to the casing of the door, and has a band wound upon its periphery and attached to the door; the drum has a coiled spring within, which winds up on the opening of the door, and retracts or recoils as the door is closed. The inner end of the spring is wound around and secured to the central pin attached to the base plate, and the outer end is attached to the revolving cylinder which carries the band. Other details are expressed in the claim with sufficient clearness.

Claim.—The combination with the parts *A*, *B* of the case provided with the notches and teeth *i*, *k* of the coiled spring *l*, or equivalent, and adjusting screw *n*, for the purpose of adjusting the main spring to greater or less degrees of resistance, and for holding the said parts of the case together, arranged and operating substantially as herein described.

Also, the double stops *s*, *s*, situated respectively on opposite sides of the drum, and forming a part of the support or bearing of the same, in combination with the spur *r*, for the purpose of preventing the band from being drawn through, and for adapting the device to both right and left hand doors, as herein specified.

Also, the special construction, arrangement, and combination of the whole device, consisting essentially of the case *A*, *B*, mainspring *l*, band *E*, spur and tops *r*, *s*, side spring *l*, and adjusting screw *n*, substantially as herein set forth.

No. 39,309.—CHARLES E. ROWAN, of Brooklyn, N. Y.—*Improvement in Rice-Cleaners.*—Patent dated July 21, 1863.—The vertical shaft has arranged upon it an upper and lower cylinder, and a fan beneath the latter. The upper cylinder is armed with teeth, and rotates in a cylindrical casing similarly provided, and the lower part of this casing is lined with wire gauze. The rice, falling to the space below, is acted upon by wings on the lower cylinder, which polish it against the stones and wire gauze which line the casing.

Claim.—First, the screen *h*, applied around the base of the cylinder *d* and below the case *f*, for the purpose set forth, in combination with the pins projecting from the cylinder *d*, that agitate the rice while in contact with said screen, as specified.

Second, the polisher *m*, upon the same shaft *a* as the cleaner cylinder *d*, and acting to clean and polish the rice by contact with the wire gauze and stones *p*, *p*, as and for the purposes specified.

Third, the arrangement of the winnowing blower *s* on the shaft *b*, as shown, in combination with the polisher *m* and cleaning cylinder *d*, as specified.

No. 39,310.—CLEMENT RUSSELL, of Massillon, Ohio.—*Improvement in Railroad-Car Springs.*—Patent dated July 21, 1863.—The elliptical springs radiate from upper and lower central disks, and between the disks is an interposed cylinder of India-rubber.

Claim.—The rubber cylinder *E*, in combination with the disks *A*, *A'* and *B*, *B'*, and radial elliptical springs *C*, when these several parts are constructed and arranged substantially as and for the purpose specified.

No. 39,311.—SOCRATES SCHOLFIELD, of Norwich, Conn.—*Improvement in Teaching the Art of Swimming.*—Patent dated July 21, 1863.—The float by which the learner is supported on the water is made by the admission of water into its interior to become less buoyant, so as gradually to abandon the person to his own resources while practicing the motions.

Claim.—The use of floats for the purpose specified, so constructed and arranged as to gradually exert less and less sustaining force upon the wearer, and become detached automatically while he is making the proper motions in the act of swimming.

Also, the use of a float, the buoyancy of which is gradually destroyed by the ingress of water, substantially as described.

No. 39,312.—WILLIAM SELLERS, of Philadelphia, Pa.—*Improvement in the Giffard Injector.*—Patent dated July 21, 1863.—In this improvement the receiving and delivery pipes are arranged separately from and so attached to the main cylinder or shell of the instrument that, in case of injury, they may be removed and replaced; and further, for operating the injector in a pit and raising a column of water to the requisite height. It consists in attaching at the lower end of the water supply-pipe a check valve to maintain a column of water up to the level of the water chamber in the ejector, and, in addition thereto, providing a means of priming or raising this column of water above the level of the water chamber at the time of starting the instrument, after which the priming arrangement may be shut off and the instrument receive its water by way of the check valve only.

Claim.—First, the outer framing or case of the injector when it is constructed substantially as described, so as to maintain all the working parts of the instrument in their relative positions to each other, and to admit of changing any of these parts without affecting the remainder.

Second, providing the water-supplying pipe of the instrument with a check valve, and the described priming arrangement, or its equivalent, the whole operating substantially in the manner and for the purpose specified.

No. 39,313.—WILLIAM SELLERS, of Philadelphia, Pa.—*Improvement in the Giffard Injector.*—Patent dated July 21, 1863.—This is an improvement in the packing between the steam and water chamber, and in the construction whereby the length and weight of the instrument are reduced. It consists in the use of compressible stationary packing, through which the piston moves between the steam and water chambers, and the employment of a perforated nut for regulating the longitudinal motion of the piston to control the water supply, whereby increased wearing surface and durability of the packing are obtained, and the weight and length of the instrument reduced, the perforated nut serving the double purpose of adjusting the water supply and admitting the steam to the interior of the hollow piston.

Claim.—First, the use of the compressible stationary packing between the steam and water chamber, when arranged substantially in the manner and for the purpose set forth.

Second, the use of the adjusting nut when so constructed as to permit the steam, which operates the injector, to pass through it.

Third, the employment of compressible metallic packing below the steam chamber, in combination with packing of elastic material above the steam chamber, with the perforated nut intervening, substantially in the manner and for the purpose described.

No. 39,314.—RICHARD VOSE, of New York, N. Y.—*Improvement in Railroad Car Springs.*—Patent dated July 21, 1863.—The bearing plate under the car rests upon overarched bearers which are hooked upon the upper ends of C-shaped springs, the lower ends of which are fastened to the truck. Directly underneath the pedestal or bearing plate there is an auxiliary spring of rubber.

Claim.—Securing one end of a curved spring, composed of one or more C-shaped plates to a bed plate, whilst the opposite end of the same is received into a pocket in a curved, overarched bearer *E* or lever *G*, which is connected with a bearing block *F*, or an arm *K*, substantially in the manner herein set forth.

When a C-shaped metallic spring, composed of one or more plates, is arranged and combined with a bearing block *F*, or arm *K*, and a curved, overarched bearer, or lever, as described.

Also, combining an auxiliary spring therewith, substantially as herein set forth.

No. 39,315.—WARREN WADLEIGH, of Sanbornton Bridge, Belknap county, N. H.—*Machine for Polishing Turned Articles.*—Patent dated July 21, 1863.—The invention consists of an endless belt charged with emery, which operates upon the turned articles or stuff, in connexion with feed rollers and guides.

Claim.—The endless polishing belt *E*, in connexion with the rollers *N*, *O*, *N*, *O'*, arranged to operate substantially as and for the purpose herein set forth.

Also, the guides *Q*, *Q*, *Q'*, in combination with the polishing belt *E* and rollers *N*, *O*, *N*, *O'*, for the purpose specified.

No. 39,316.—JANE BROOKE, of Jersey City, N. J., administratrix of WILLIAM BROOKE, deceased, of New York, N. Y.—*Improvement in Moulds for Casting Tires.*—Patent dated July 21, 1863.—The object of this invention is to form a metal core for casting tire so that it may contract as the metal cools, and also that it may contract in the act of lifting to draw it from the casting, also to form the gates so that the metal left in them shall not interfere with the contraction of the casting, nor cut into the core, nor hinder the withdrawal of the cope. Around the central metallic core, which is formed of segments and interposed wedges, are

latitudinal grooves of a shape to form the inside circle of the tire; a central axis passes by directly through the core and has attached to it two cross-heads connected with the wedges links acting like toggles to force the wedges in or out as the shaft is raised or lowered; the outward movement of the wedges forces apart the segment and expands the core, and, conversely, its upward motion contracts the core, or altogether withdraws it. The side of the core forming a part of the pouring gate allows of the even contraction of the tire, and the overflow opening being lower than the mouth of the air-gate, prevents the metal from cutting in the core.

Claim.—First, fitting a mould for casting tires, rings, or bands of steel or iron, or other metal, with a metal core, which is so constructed as to be capable of contracting, automatically, as required, to permit the natural contraction of the casting in cooling, substantially as herein specified.

Second, so constructing the metallic core that it may be loosened in the casting by the force applied to lift and withdraw it from the casting, substantially as herein described.

Third, the arrangement of the pouring gates and air gates of the mould between the core and the body of the mould, so that one side of each gate is formed by the surface of the core, substantially as and for the purpose herein specified.

Fourth, providing an overflow from the pouring gates at a level lower than the mouths of the air gates, substantially as and for the purpose herein specified.

No. 39,317.—JAMES DODGE, of Waterford, Saratoga county, N. Y., assignor to DODGE & BLAKE, of Cohoes, N. Y.—*Improvement in Machines for Grinding and Polishing Cutlery.*—Patent dated July 21, 1863.—The articles to be ground are placed in clamps and so applied to the grinding wheel with a yielding material underneath as to imbed any irregularities of surface on the back of the article in the elastic bed.

Other adaptations are expressed in the claim.

Claim.—The employment, in grinding or polishing machinery of whatsoever construction, and in combination with the bed-plate thereof, whether the same be stationary, revolving, or vibratory, of an elastic or yielding substance, so applied between the matrix, bed, or support, and the articles to be ground or polished, that when the latter are brought in contact with the stone or polishing wheel, they shall be pressed against it with a yielding pressure, substantially in the manner hereinbefore described.

Also, the combination with the matrix bed, or other equivalent device, for supporting the articles to be ground or polished, of a clamp to hold the said articles in place, as described, such clamp being actuated so as to expose the whole surface of the articles to the action of the grindstone or polishing wheel, substantially in the manner hereinbefore set forth.

Also, in combination with the clamp, operating substantially as hereinbefore described, the employment of a grooved grindstone or polishing wheel, or of two grindstones or polishing wheels, having an intermediate space, to allow that position of the clamp which projects from above the surface of the article to be ground or polished to sink below the surface of the grindstone or polishing wheels substantially as herein described.

No. 39,318.—WILLARD C. ELLIS and JOHN N. WHITE, of Springfield, Mass., assignors to HENRY REYNOLDS, of same place.—*Improvement in Revolving Fire-arm.*—Patent dated July 21, 1863.—The rear of the chambers is partially closed by an annular flange, and a cartridge, having a semi-spherical depression in its base, inserted so that the hammer strikes through the said opening upon the interior of the cartridge.

Claim.—The construction of the openings *b b* in the chambers of the cylinder, and arrangement of the hammer in combination with such openings, substantially as herein set forth, whereby the hammer is enabled to strike upon the interiors of the flanges of cartridges, of such character as herein specified.

No. 39,319.—ENOS T. HIGHAM, of Philadelphia, Pa., assignor to Himself and D. HIGHAM, of same place.—*Improved Window Shade Hangings.*—Patent dated July 21, 1863.—The upper roller is suspended by cords which pass over two pulleys respectively, and after passing down and over a pulley, are returned upward to a cord depending from said roller, so that the shade which is secured to the roller may be made to cover the lower portion of the window, and leave the other exposed, or may serve the purpose of an ordinary shade.

Claim.—The roller B, hung to a cord E, passing over a pulley F, and to a cord G, passing over a pulley F', the cord H, united to the said cords E and G, and connected to an eye K, or its equivalent, and the endless cord L passing through the said eye K and round a pulley M on the roller B, the whole being arranged for joint action, as and for the purpose herein set forth.

No. 39,320.—JOHN J. MARCY, of Meriden, Conn., assignor to EDWARD MILLER, of same place.—*Improvement in Lamp Burners.*—Patent dated July 21, 1863.—The chimney plate is hinged to the shell of the burner, and its vibration is limited by means of a rod, which, extending down through, has a bent end, which, impinging on the shell, limits the turning of the chimney.

Claim.—The combination with the hinge *Q* of the rigid curved rod F, fixed to the cone B, projecting downward through the shell A, between the hinge and the wick-tube, and provided with a bent end *b*, which, coming in contact with the under side of the said shell, operates by a tensional strain upon the rod F to limit the turning of the chimney, all as herein described.

No. 39,321.—HENRY MESSER, of Roxbury, Mass., assignor to Himself and CECIL J. DUNSCOMB, of Boston, Mass.—*Improvement in Hot-Air Engines.*—Patent dated July 21, 1863.—The improvement consists in the arrangement by which the top or packed portion of the piston is kept cool by the constant pressure of fresh compressed air, and by which the heat which tends to radiate from the top of the piston is utilized; and, secondly, in making the pipes through which the valve stems pass at least as large as the valves, so that they may be withdrawn without disconnecting the valve from its stem.

Claim.—The combination of a pump or pumps with a chamber in the piston of a hot-air engine, and with an outlet pipe from said chamber directly into the hot-air reservoir, when so arranged as to pass all of the compressed cool air into and through said chamber, for the specified purpose.

Also, constructing the pipes which connect the valve chambers with the exterior of the engine, and which incase the valve stems and prevent leakage into the valve chambers, of a diameter equal to or in excess of that of the valves, for the specified purpose.

No. 39,322.—THOMAS A. NELSON, of Birmingham, New Haven county, Conn., assignor to Himself and SHELTON AND OSBORN MANUFACTURING COMPANY, of same place.—*Improvement in Clamps for Corsets.*—Patent dated July 21, 1863.—A strip is attached to each edge of the corset, and they are fastened by a headed pin on one strip which passes through a perforated plate attached to the other, and then into a slot which retains the shank while preventing the passage of the head.

Claim.—The employment, in combination with two strips or edges, which can be sprung, as described, of perforated plates *c d*, attached to either of said strips and studs 1 2 3, operating in conjunction with said perforated plates, substantially as and for the purposes described.

No. 39,323.—OLIVER NEWTON, of Watertown, N. Y., assignor to WILLIAM NASH, of same place.—*Improved Saw-Set.*—Patent dated July 21, 1863.—The saw-set is composed of a stationary and a hinged jaw, the latter moved by a lever which brings the anvil faces together, the degree of set being determined by the set-screw which limits the depression of the lever and the set-screw upon which rests the blade of the saw.

Claim.—A saw-set composed of a frame A, having a straight portion *a*, an oblique portion *b*, a handle B at one end, and two projections *c c'*, and also composed of a handle C, lever D, gauge I, spring *g*, set-screws E F, and dies G H, all arranged substantially as set forth.

No. 39,324.—STUART PERRY, of Newport, Herkimer county, N. Y., assignor to C. H. A. CARTER, of New York, N. Y.—*Improvement in Horse Powers.*—Patent dated July 21, 1863.—The power of the team is communicated through an endless chain that moves around with the sweeps to a shaft and drive wheel, against whose surface it is bound by being deflected between rollers and over a spring pulley which takes up the slack of the chain.

The details are recited in the claim.

Claim.—First, the power-transmitting wheel H, having a changing or moving surface for the chain to work upon, substantially as and for the purpose described.

Also, making the forks *f* of a socket form for fitting on to and holding the spokes of the sprocket wheel, substantially as described.

Also, the chain or sprocket wheel, composed of the central flanged hubs, the notched spokes, and the sockets, for the purpose of readily taking down the horse power for transportation or for storage, and quickly setting it up again, substantially as described.

Also, in combination with the sprocket wheel and the chain pulley a case-hardened or cemented chain, for the purpose of preventing undue cutting or wearing of the chain sprocket wheel and pulley, substantially as described.

Also, the arrangement of the spring pulley G and hinged arm *g* for taking up the slack of the chain, substantially as described.

Also, the pulleys *i i* for preventing the twisting of the chain, substantially as described.

Also, in combination with the main chain pulley H, the guiding, directing, and holding pulleys Q Q, substantially as and for the purpose described.

No. 39,325.—STUART PERRY, of Newport, Herkimer county, N. Y., assignor to C. H. A. CARTER, of New York, N. Y.—*Improvement in Horse Powers.*—Patent dated July 21, 1863.—The endless chain from the sweeps is wound around two or more drums or wheels which transmit the power to the object, and these drums run upon interposed friction wheels. The forks on the ends of the sweep which hold the chain are provided with friction rollers against which the chain impinges.

Claim.—First, in combination with an endless chain horse-power, the encompassing or encircling of two or more wheels, shafts, or drums by said chain for the purpose of communicating the power of the animal or animals, through the chain, to said wheels, shafts, or drums, substantially as described.

Also, the arrangement by which one or more friction wheels, shafts, or drums are interposed between two or more wheels, shafts, or drums that are enwrapped or encircled by an endless chain, or its equivalent, for the purpose of lessening the friction of their axles, whether the force of the endless chain is transmitted by the friction of contact, or by toothed wheels, substantially as described.

Also, the fork with rollers inserted for the purpose of making a changing bearing for the chain therein, substantially as described.

No. 39,326.—S. W. PUTNAM and JOHN Q. WRIGHT, of Fitchburg, Worcester county, Mass., assignors to PUTNAM MACHINE COMPANY, of same place.—*Improvement in Lathes.*—Patent dated July 21, 1863.—This improvement consists of swivel or union jointed nuts in connexion with friction clutches which operate the gears attached to the side and cross feeds, to throw them in and out of action; and in the employment of a hollow shaft to transmit the power from the driving wheel to the wheel which operates the cross-feed.

Claim.—Operating the disk C, for throwing the side feed in or out of action, by means of the swivel or "union jointed" nut d, in the manner substantially as set forth.

Second, forcing the wheel M into or out of contact with the disk N for throwing the cross-feed in or out of action, by means of the hand wheel O, in the manner substantially as set forth.

Third, the hollow shaft a, for transmitting power from the driving wheel B to the wheel M for operating the cross-feed, arranged and operating substantially as specified.

No. 39,327.—P. W. REID, of Birmingham, Pa., assignor to JAMES S. and THOMAS B. ATTERBURY and J. REDDICK, of Pittsburg, Pa.—*Improved Preserve Jar.*—Patent dated July 21, 1863.—The improvements are in the neck of the jar and the stopper. The neck has a narrowed throat and above it an enlargement whose upper side is of a taper form; this is combined with two openings through which the protuberances on the conical stopper are inserted, which on being rotated are pressed down by impingement upon the bevelled surface mentioned. An annular depression in the conical surface of the stopper is filled with a rubber ring which packs against the narrowed portion of the neck.

Claim.—First, the cylindro-conical stopper, in combination with a depressed handle g and lugs i i, constructed in such a manner, with reference to the mouth of a jar, that I combine with a screw pressure and fastening a wedge bearing, substantially as described.

Second, constructing a cylindro-conical stopper with an annular recess formed in its conical or bevelled sides, in combination with a rubber packing ring r, substantially as herein described.

Third, constructing the mouth of a jar with tapering grooves a a, spaces b b, reduced neck B, and rounded or bevelled shoulder e, in combination with a cylindro-conical stopper and a rubber packing ring r, applied to the bevelled edge thereof, so as to bear upon the rounded shoulder e, and to form a tight joint, substantially as herein described.

Fourth, a cylindro-conical stopper with lugs i i and a depressed handle g, constructed substantially as and for the purposes herein described.

No. 39,328.—THOMAS ROBJOHN, of New York, N. Y., assignor to E. C. WOOSTER of same place.—*Improvement in Apparatus for Making Ruffling.*—Patent dated July 21, 1863.—This ruffling is composed of a single strip of fabric fluted to present ruffles on both edges with the flutes plaited or folded along the centre of the strip and secured by stitching. The machine consists of fluting rollers and a folding device, with a starching arrangement and a thread delivery attached by the starch to the plaits to hold them until starched, the fluting rollers being heated by a jet of gas.

Claim.—First, the combination of the two pairs of intermittently rotating fluting rollers D d and D' d', and a presser E, applied and operating substantially as herein described, in combination with said rollers, for the purpose herein set forth.

Second, the employment, in combination with the guide J, for conducting the strip of muslin or other fabric to the fluting roller, of a starching roller K and a presser roller L, applied and operating substantially as herein specified.

Third, the employment of a thread-conductor m, applied substantially as herein specified, in combination with the fluting rollers D d, D' d', and presser E, for the purpose herein set forth.

Fourth, the combination of the gas burner W, chimney U, and extremities C* c*, of fluting roller shafts C c, substantially as shown and described.

No. 39,329.—ISAAC S. and HENRY R. RUSSELL, of New Market, Frederick county, Md., and JOHN J. D. BRISTOL, of Detroit, Mich., assignors to the said ISAAC S. and HENRY R. RUSSELL.—*Improvement in Raking Attachments to Harvesters.*—Patent dated July 21, 1863.—This automatic rake delivers the grain from the platform by a sweep transversely across the

machine and deposits the gavel behind the team. Its upward and backward motion is in a curve and its forward off-ative motion is nearly parallel with the platform. This is effected by attaching the rake handle to two levers, the upper one of which has a vibrating motion, being pivoted to the frame on an oscillating disk, while the lower end of the other lever is attached by a link to an eccentric rotated by gearing from the driving wheel. The motion of the rake-head is so arranged that during its sweep it preserves an equal distance from one of the ribs of the reel, the spirality of the ribs of the reel being a matter of adjustment.

Claim.—First, giving to the rake a motion nearly parallel with the platform in its delivery passage over it, and also a motion in a curve, both upward and backward, in its return stroke, by means of the cranks and arms G d1 d2 g2, eccentric a, pitman m, connecting rods g', and G2, all of which are unslotted.

Second, the interposition of the thrusting eccentric a, or its equivalent, for giving to the rake an oscillating motion for the purpose described.

Third, the articulated rake-head, or hinged teeth, so applied to the rake handle and to the intermediate controlling bar k, or its equivalent, that the teeth will preserve a position nearly or quite perpendicular to the platform.

Fourth, the combination with a rake which sweeps the platform of the flexible reel ribs supported at or near both ends by flexible radial arms, one set of which are affixed to the reel shaft, and the other set affixed to a circularly adjustable hub, substantially as and for the purpose set forth.

Fifth, the serrated spirally ribbed reel in combination with a rake which sweeps the platform, substantially as described.

Sixth, making the axis of the oscillating frame F a medium through which motion is communicated from the driving wheel shaft to the rake disk B, being the bearing for said frame, substantially as described.

No. 39,330.—HENRY F. SHAW, of West Roxbury, Mass.—*Improvement in Wood-Saw Frames.*—Patent dated July 21, 1863.—The spreader or pressure bar, which stretches the saw blade, is fitted at each end into sockets, and at one end has a nut and a screw, which, by the revolution of the bar, is made to impinge upon a socket on the inner side of the saw frame.

Claim.—First, combining with the three parts, A B and C, of a common wood-saw frame, a revolving pressure bar D, provided with a nut i and screw h, or their equivalents, substantially as described and for the object specified.

Second, the thimble E provided with lateral flanges f f, tenon g, and mortise k, to operate in combination with the ends of the frame A and B, the bar D, and its appendage, substantially as and for the purposes described.

No. 39,331.—SAMUEL R. SYLVESTER, of Washington, D. C.—*Improved Soda-Water Fountain.*—Patent dated July 21, 1863.—This fountain is designed for bringing a solution of super-carbonate of soda in violent contact with an acidulated sirup to produce an effervescent drink, and it consists of a reservoir, pump, and discharging pipe. The spring above the piston, at the top of the pump cylinder, acts as an ordinary pump air-chamber to give a continuous pressure on the fluid as it is discharged, avoiding the intermittent effect of the pump alone.

Claim.—First, the direct discharge of the solution from a single reservoir by means of a spring-pump into the drinking glass.

Second, the pump arranged with a spring or air-chamber, or spring and air-chamber and valve, and for the purpose set forth.

Third, the combination of the single reservoir, pipes, spring, pump, and discharging pipe, substantially as set forth.

No. 39,332.—CLAUDE ARNOUX, of Paris, France.—*Improved Traction and Connecting Apparatus for Railroad Trains.*—Patent dated July 28, 1863.—This invention consists in appliances whereby the axles and wheels of each car will readily accommodate themselves to the most abrupt curves of the track. The draw through the medium of the hounds deflects the fore axle, and this being connected cross-wise with the hind axle causes it also to assume a position perpendicular to the curve that is being traversed by the car.

Claim.—The draw-bar F, when arranged to turn the front and rear axles of the car through the medium of the rods I and I', sleeves J and J', lever G, rods K and K', and rods H and H', or a system of rods and levers equivalent to the same, substantially as and for the purpose herein set forth.

No. 39,333.—PHILO BARBER, of Loutan, La Salle county, Ill.—*Improvement in Plant Fenders.*—Patent dated July 28, 1863.—The object of this improvement is to provide a fender-guard, rigged from a shovel plough-beam, and intended to keep clods from covering the corn or other growing crop. It consists of a guard made of wire or longitudinal rods and sliding transverse rods, put together in such a manner as to form a sieve, and capable of being extended or contracted.

Claim.—First, a fender-guard, consisting of longitudinal rods and sliding transverse rods, put together in such a manner as to form a sieve, the meshes of which are capable of being extended or contracted, substantially as and for the purposes herein described.

Second, in combination with a flexible fender constructed substantially as described, the extension rod *c*, or its equivalent, substantially as described.

Third, a fender or plant shield constructed of longitudinal and transverse wire rods looped together and twisted so as to constitute an open sieve-like frame, substantially as described, whether the meshes of the fender are variable or invariable in size.

No. 39,334.—J. W. BARTLETT, of Harmar, and A. MORRIS, of Marietta, Washington county, Ohio.—*Improved Tools for Finishing Buckets, Tubs, &c.*—Patent dated July 28, 1863.—This improvement consists in the arrangement of the finishing and croxing tools on a turning slide, for turning and finishing cooperage and securing economy, accuracy, and finish.

Claim.—The bit-stocks D B and the bits *c* C, or their equivalent, in combination with the croxing bits *f* f, in the manner and for the purpose herein set forth.

No. 39,335.—PHILIP BECKMAN, Napierville, Du Page county, Ill.—*Leather Rounding Machine.*—Patent dated July 28, 1863.—The invention consists in overlapping the adjoining faces of the jaws, so that no mark of a seam will appear upon the leather that has traversed the holes.

Claim.—As a new article of manufacture, a leather-worker's rounding machine, so constructed that the adjoining faces of the parts between which the leather is rounded shall overlap, in the manner and for the purpose substantially as set forth.

No. 39,336.—CHARLES P. BENEDICT, of New York, N. Y.—*Improvement in Cording Guide for Sewing Machines.*—Patent dated July 28, 1863.—The improvement consists in making the arm to be susceptible of being turned around on the machine, on an arc, of which the centre is the point of impact of the guide point, so as to be out of the way to suit the convenience of varying work.

Claim.—The construction of the cord guide, and its attachment to the machine, in such a manner that it can be turned around the point at which the cord is delivered as a centre to accommodate the work to be performed, substantially as and for the purpose set forth.

No. 39,337.—JOHN BURNS, of Franklin, Warren county, Ohio.—*Improvement in Cultivators.*—Patent dated July 28, 1863.—The handles of this cultivator are supported near their rear by rods passing downwards to the beams, and in front are attached to a prow-shaped clevis or continuation of the middle beam.

Claim.—The attachment of the handles G, at their forward end, to the upper end of the perforated prow-shaped clevis E, which is formed on and made a part of the central beam A, in the manner described, in combination with the stay rods H and beams A B B, when arranged in the manner and for the purpose specified.

No. 39,338.—HENRY CASLOW, of York, Pa.—*Improved Saw Mill.*—Patent dated July 28, 1863.—This invention consists in appliances for enabling a saw to cut both ways, or two saws in one sash to cut alternately, with each motion of the log, checking the log and reversing the motion of the carriage automatically, and this is effected by movable clamps upon the longitudinal bars of the log carriage, which actuate the stopping and reversing mechanism, by slipping the respective trundle-wheels in and out of gear with their pinions. The saw sash is constructed with a spring back for tension, and with slotted yokes or loops adapted for receiving two single saw-blades; the carriage is actuated immediately by the right and left ratchet wheel, pawls and vibrating arms arranged so as to operate alternately in advancing or receding the log.

Claim.—First, operating the log carriage by means of the cone pulleys, and the toothed wheels *e* t *q*, so as to enable the saw to cut the timber both ways, substantially as herein described.

Second, the combination of cone pulleys, main driving saw shaft, balance wheel and pitman, with the log carriage, substantially as and for the purpose described.

Third, the laterally sliding trundle wheels t *q*, levers, spring and catches, with the adjustable clamps on the longitudinal bars, operating substantially as and for the purposes described.

Fourth, the saw sash constructed with a spring-back for stretching and keeping the saw under constant tension, substantially as herein described.

Fifth, the slotted yokes or loops applied to the saw-sash and adapted for receiving two single saw-blades, in conjunction with a spring-backed saw-sash, substantially as described.

Sixth, the combination of vibrating arms, working in a slotted plate, on a pitman, rock-shaft, vibrating arms, pawls, and double right-and-left ratchet wheel J, with their spring supporting rods and latches, all arranged and operating substantially as herein described.

No. 39,339.—JES. CHRISTIANSEN, of Milwaukee, Wis.—*Improved Bung Cutter.*—Patent dated July 28, 1863.—The wood, from which the bung is to be formed, is placed between

the points of the head and the pointed mandril of the cutter-head, where it is clamped by pressure upon the treadle. The cutter-head being rotated, the slide D is advanced, driving the obliquely set cutter E through the cutter-head, forming the taper bung. The cutting-knife is formed with spurs to head down, and projecting edge to clear the chips.

Claim.—First, the arrangement of the parts, substantially as herein described, so as to constitute a machine for cutting tapering bungs.

Second, the movable apparatus I to hold the timber in place, substantially as described.

Third, the cutting-knife, figures 7 and 8, with spurs, to head down, and projecting edge to clear the chips, substantially as and for the purpose described.

No. 39,340.—JOHN DANNER, of Canton, Stark county, Ohio.—*Improved Clothes-frame.*—Patent dated July 28, 1863.—This invention consists of a stand and a disk to which the extensible arms are pivoted by a circular wire; the arm being vibrated upwards to a horizontal position, and the inner end pushed under an upper disk so as to retain it in an elevated position, the wire traversing a groove in the arm.

Claim.—The combination of the arms *a* having small inclined grooves *f*, with the revolving head *b* and circular wire *c*, constructed, arranged, and operated substantially in the manner and for the purposes described.

No. 39,341.—JOHN DANKER, of Canton, Stark county, Ohio.—*Improved Washing Machine.*—Patent dated July 28, 1863.—The slatted cylinder is internally provided with knobs and weighted balls, and revolves on a horizontal shaft in a suds-box.

Claim.—The combination with a stationary wash-box of a rotating rounded-slotted cylinder, provided with knobs G and weighted balls, the whole being constructed and operating substantially as set forth.

No. 39,342.—W. H. GWYNNE, of White Plains, West Chester county, N. Y.—*Improvement in Carburetting Gas from Steam and Hydro-carbons.*—Patent issued July 28, 1863; antedated January 19, 1863.—The gases resulting from the decomposition of water are passed through a reservoir containing a hydro-carbon for carbonizing the previously non-illuminating gas.

Claim.—Making illuminating gas from water and hydro-carbons by passing the water gas through any liquid hydro-carbon, contained in a reservoir, attached to a gas fixture.

No. 39,343.—ASHMAN HALL, of Dansville, Lexington county, N. Y.—*Improved Washing Machine.*—Patent dated July 28, 1863.—The washboard is arranged on the inclined end of the box and its surface is composed of zigzag corrugations. A vibrating frame suspends a rubber block whose rollers are similarly surfaced; a space beneath the washboard face and its back is provided for the retention of soap suds.

Claim.—First, the washboard composed of alternately right and left, or zigzag, open surfaces, substantially as described.

Second, a washboard constructed with a soap suds receptacle *m*, arranged beneath the open slatted surface *i*, substantially as and for the purposes described.

Third, combining with the zigzag ribbed and waved washboard the spirally ribbed rollers the ribs of which run in opposite directions on each roller, substantially as and for the purposes herein described.

No. 39,344.—JOSEPH F. HAMILTON, of Pittsburg, Penn.—*Improvement in Slide Valves for Steam Engines.*—Patent dated July 28, 1863.—This consists of a plate suspended over the slide valve to relieve it from the pressure of the steam, and render it capable of adjustment to and from the valves by means of a screw which slips it on the inclined planes on the side of the valve chest which traverse corresponding grooves in the side of the suspended plate.

Claim.—The use of the grooves *r* and inclined planes *e*, when used in combination with the plate *c*, screw *f*, and a metallic compound, as herein described and for the purpose set forth.

No. 39,345.—L. M. HAM and JOHN H. DODGE, of Boston, Mass.—*Improvement in Wagons.*—Patent dated July 28, 1863.—The coupling has, besides its attachment by the king bolt, a chain and staple attachment to the axletree. The hind end is suspended from springs supported by a pedestal from the axle.

Claim.—First, the means herein described for obviating the strain upon the centre-bolt or rod of the front axletree, the same consisting of the connecting chain *u* and fixed staple *v*, arranged with regard to the same, and operating substantially as specified.

Second, the arrangement of the pole with regard to the body, the spring and futcholls of the front axletree, substantially as herein described and for the purpose specified.

No. 39,346.—JOHN H. HILLMAN, of Boston, Mass.—*Improvement in Tunnel Measures.*—Patent issued July 28, 1863; antedated February 29, 1863.—The tunnel is graduated, and has a valve at the junction of the tunnel and the spout which is lifted by an elastic handle.

Claim.—In combination with the hinged valve *e*, at the bottom of the tunnel, the swinging elastic handle H, substantially as described and for the objects specified.

No. 39,347.—GEORGE JACKSON and GEORGE CAMPBELL, of Cohoes, N. Y.—*Improvement in Knitting-machine Burrs*.—Patent dated July 28, 1863.—The invention consists in making the blades for knitting burrs with a tapered shank on one end of the blade and with a projection on the inner edge of the end portion of the shank, so that a series of blades will be secured in the slots of a suitable hub, and thus form a knitting burr by means of a suitable ring pressed tightly around the shanks of the blades in the hub, the projections on the shanks being placed against the end of the hub.

Claim.—A knitting burr blade A, having a tapered shank b, provided with a projection c, so that a series of the blades can be secured in a slotted hub E, by means of a ring F, on one side only of the burr and surrounding the shanks, substantially as herein described.

Also, a knitting burr having a series of blades A, provided with tapered shanks b and projections c thereon, and fastened in a slotted hub E by a ring F on one side only of the burr, and surrounding the shanks and secured thereon by a tightening and holding device H I, substantially as herein set forth.

No. 39,348.—CLAUDE ANDRE JOZANSI, of St. Romain, France.—*Improvement in Apparatus for Injections*.—Patent dated July 28, 1863.—This consists of a plate which fits the external parts and a conoidal projection or canula and a pumping arrangement with valves to prevent the return of the enema or injection: it has also a discharge pipe by which the injection after having inflated the vagina or rectum, as the case may be, may be drawn off without returning through the aforementioned passages or wetting the external parts.

Claim.—First, the elliptical bent plate D E and pap or conoidal projection F G, forming part thereof, or their equivalents, constituting a mouth-piece which, when inserted into the organ, will form an air-tight joint, for the purposes set forth and substantially as described and represented on the annexed drawings.

Second, the mode of making said conoidal mouth-piece D E F G hollow and providing it with an outlet as at L and M, for the purpose of drawing off the spent liquid, substantially as described and shown on the drawings annexed.

Third, the arrangement of the pumping apparatus with the projection U on the pipe A B C, and with the pipe A' B' attached to the said pipe A B C in the form of a cross in combination with the bent plate D E and conoidal projection F G, substantially as and for the purpose described.

No. 39,349.—PHILIP W. MACKENSIE, of Jersey City, N. J.—*Improvement in Locomotive Horses for Vehicles, &c.*—Patent dated July 28, 1863.—The claims are sufficiently explanatory of this child's toy riding-horse.

Claim.—First, in combination with a horse or proper seat for the rider the employment of a cranked axle having three or more centres, substantially as described, whereby the weight of the rider being alternately shifted from the saddle or seat to the foot-rests, produces a rotary motion of the vehicle, substantially as described and set forth.

Second, in combination with a horse or other proper seat for an erect position of the rider the steering mechanism, consisting of the grooved segments I I and plates d d, or their equivalents, whereby the hind wheels can be readily turned and the direction of the vehicle perfectly governed at whatever pitch the body of the rider may be, substantially as described and specified.

Third, in combination with a steering mechanism, substantially such as described, the fork G and cross-head f, or their equivalents, and the bit or lever in the mouth of the horse, so that by drawing the bridle the vehicle can be perfectly directed by the rider while in the seat, substantially as described and specified.

Fourth, mounting a horse or proper seat for an erect position of the rider upon wheels so that it may be propelled by the weight of the rider and guided in any direction, substantially as specified and set forth.

Fifth, in combination with the steering and propelling mechanism making the body of the horse hollow, substantially as described, whereby I am enabled to obviate the danger of capsizing consequent upon a solid heavy horse, and for the purpose of readily adjusting and securing the steering mechanism therein, substantially as set forth and specified.

No. 39,350.—WILLIAM P. McCONNELL, of Washington, D. C.—*Improvement in the manufacture of Illuminating Gas*.—Patent dated July 28, 1863.—The petroleum is passed through a heating stove where it is exposed to a greater heat than that required for destructive distillation, whereby it is purified and the carbonaceous pellicles filled with hydrogen, and constituting smoke, are dissolved.

Claim.—The improvement, herein described, in making illuminating gas from petroleum or coal oil, viz: subjecting the products of destructive distillation therefrom to a high degree of heat, substantially in the manner and for the purposes herein set forth.

No. 39,351.—F. PALMER, of Janesville, Rock county, Wis.—*Improved Snap Hook*.—Patent dated July 28, 1863.—The locking device consists of a sliding spring tongue on a sleeve which slips back and forth on the shank of the hook, being definitely secured at the point of locking by the engagement of a catch-pin in a notch on the under side of the shank.

Claim.—First, combining with the notched shank a and hook b the sliding spring tongue e and locking bar f, operating substantially as and for the purposes herein described.

Second, enclosing a flat spring g' which throws the locking bar f in its place in the watch i within the sliding box d, substantially as and for the purposes herein described.

Third, in combination with a square notched shank a the rectangular sliding box d, tongue e, ears e' e', and locking bar f, substantially as herein described.

Fourth, a sliding spring tongue e which is capable of being depressed upon the shank a and also slid longitudinally to unlock and open the snap, substantially as herein described.

No. 39,352.—HARRISON PARKER and CHARLES W. HAWKES, of Boston, Mass.—*Improvement in Machine for Cutting Veneers*.—Patent dated July 28, 1863.—The bed-plate carrying the veneer block has an up-and-down motion, and a longitudinal motion is given by the connexions from the main shaft to the knife while performing the cut, thereby giving it a draw-cut.

Claim.—The arrangement of the knife c, bed-plate D, head-block G, feed-screws H H, lever g, and rocker-shaft d, all arranged and operated as set forth.

No. 39,353.—MOSES PERIN, of Lakeland, Washington county, Minn.—*Improved Washing Machine*.—Patent dated July 28, 1863.—The clothes are rubbed between a slatted drum or cylinder which is held down by the elastic pressure of springs and a rolling concave of rollers journaled in a frame which is supported at the ends of the suds box by springs.

Claim.—The combination and arrangement of the slatted drum B, which is held down by the yielding pressure of boxed springs c c, with a rolling concave bed, with slide supporting rockers h h, which are suspended beneath said drum by means of links i i and outside springs E E, substantially as described.

No. 39,354.—ABIEL PEVEY, of Lowell, Mass.—*Improvement in Manufacturing Bomb Shells*.—Patent dated July 28, 1863.—The invention consists in the arrangement and construction of the reamer, ball pattern, core, arbor, and core-box, having journals and shoulders in combination with a flask constructed with journal boxes.

Claim.—First, the journal boxes C of the flask A, as herein described.

Second, the reamer, as herein described.

Third, the ball pattern D, as herein described.

Fourth, the core box, as herein described, all corresponding so as to fit the journal boxes C of the flask, for the purpose set forth.

No. 39,355.—ROBERT PLEWS, of Smithfield, Providence county, R. I.—*Improvement in Carding Engines*.—Patent dated July 28, 1863.—The improvement consists in the application of adjustable blades extending across the face of the cylinder at the extremities of the screen, the purpose of which is to remove the loose fibres and refuse particles from the machine; this is accomplished by means of the draught created by the revolution, which being deflected by the blade is lifted out from the teeth of the card and cut off by the blade.

Claim.—First, the combination of a transverse adjustable blade G, or a pair of adjustable blades G G, with the cylinder of a machine for carding fibrous material, substantially as described, for the purposes specified.

Second, intercepting the current of air generated by the cylinder of a carding machine, when in operation, by means of a transverse adjustable cutting blade G, or its equivalent, substantially as described, for the purposes specified.

No. 39,356.—PHILIP POINTON, of Trenton, N. J.—*Stilts for Burning Earthenware*.—Patent dated July 28, 1863.—The improvement consists in the stilts or legs, which rest upon a base, or on each other, with projecting points to support the ware, and by means of which, in connexion with plates which form the tops and bases of a series of tripods, to admit of the ware being built up in successive layers in the kiln, the ware resting on the points to avoid defacement or the collection of globules of glazing.

Claim.—Making said stilts with a point or lower end to fit a hole or cavity in a base-plate, stand, or cagger, or the hole or cavity in the next stilt below, and with a hole or cavity in the upper end to receive the next stilt above, and with one or more spurs at the side to support the ware when burned.

No. 39,357.—SAMUEL G. REED, of Worcester, Mass.—*Improvement in Apparatus for Heating Wagon Tires*.—Patent dated July 28, 1863.—The invention consists in heating tire by gas, and, further, in the device by which it is accomplished, namely: a central circular tube with jointed branches carrying burners, which are adjustable in circles of varying diameters.

Claim.—The application of gas for heating tire.

Also, the apparatus for heating tire, when constructed in the manner, or its equivalent, substantially as and for the purpose set forth.

No. 39,358.—A. B. SMITH, of Clinton, Pa.—*Improvement in Reaping and Binding Apparatus for Reaping Machines*.—Patent issued July 28, 1863; antedated January 20, 1862.—This is an improvement on the patentee's former patent of June 19, 1860, in respect of the method of constructing the frame which contains the binding apparatus, the said frame consisting of two castings and a brace connected by a bolt to the reaper. The compressing and binding arms are operated by a rock-shaft, which has an intermitting reciprocating movement in one direction, by cam, shaft, and tappet, on the rock-shaft, and in the other direction by another cam on the shaft, whose pin strikes a stud on the sliding bar, a stud on which strikes a pin on another tappet on the rock-shaft, effecting its return. The other devices have reference to the binding hook and the reciprocating rake, which brings the gavel within the reach of the binding arms.

Claim.—The arrangement of the parts E E' E'', composing a separate and complete frame, and so as to be attached to the main frame A by a single bolt Z, substantially as and for the purpose described.

Also, the combination and arrangement of the cam T, sliding bar V, and tappet U, substantially as set forth, for the purpose of producing the return vibratory motion of the rock-shaft J, to open the compressing and binding arms by a positive movement.

Also, the combination and arrangement of the vibrating lever O, its notch s, and the pin r, for operating the band hook N, substantially as herein specified.

Also, the thin lip a projecting closely over the hook N, in the manner and for the purpose set forth.

Also, carrying the rake forward, beyond or within the ends of the arms L M, by means of the crank-shaped bend g, in the rake-head C, or any equivalent means, for the purpose specified.

Also, the guards e e, behind the rake-teeth f f, or their equivalents, operating substantially as set forth.

No. 39,359.—A. B. SMITH, of Clinton, Alleghany county, Pa.—*Improvement in Breech-loading Ordnance*.—Patent issued July 28, 1863; antedated July 10, 1863.—The improvement consists in providing a cap of copper, or other suitable metal, on the end of the screw mandrel, which passes through the swinging stirrup or cross-head so as to allow a side play, to enable the packing to adjust itself concentrically to the bore.

Claim.—The combination of the packing cap H with the loosely-fitting mandrel B, being attached thereto so as to have a side play in all directions, and thus adapt itself concentrically in the breech-chamber, substantially as and for the purposes herein specified.

No. 39,360.—HAMILTON E. SMITH, of Pittsburg, Pa.—*Improved Washing Machine*.—Patent dated July 28, 1863.—The improvement consists of a perforated chamber having a reciprocating rotary motion on a horizontal shaft in the suds box, the motion being produced by the continuous revolution of a crank, while the reversal is caused by a cam wheel, which shifts the strap on the fast and loose pulleys.

Claim.—First, the perforated vessel B hung within a trough A and actuated from any adjacent driving shaft through the medium of the devices herein described, or any equivalent to the same, for the purpose of reversing the motion of the vessel at intervals.

Second, operating the strap guides t and t' by means of a cam wheel T, or its equivalent, to which a continuous rotary motion is imparted by means of the loose pulley L' and strap M', and any desired system of intermediate gearing, substantially as described.

No. 39,361.—URIAH SMITH, of Battle Creek, Calhoun county, Mich.—*Improvement in Artificial Leg*.—Patent dated July 28, 1863.—This improvement is designed to follow as near as may be the form of the natural articulations in the knee and ankle joints, by the imposition of the condyles of the femur and tibia, respectively, upon their appropriate bearings, and hinging and strapping them so that they shall be maintained in their relative positions. It also consists of ligatures to attach, and, at the same time, permit, a rolling motion approximating to the natural, with stops for the limitation of vibration. The devices are recited in the claims.

Claim.—First, a knee-joint formed by the two parts A B, representing the femur and tibia, brought together in such a way as to take bearings, end to end, against each other, and held in their normal relations to each other by the straps g g h h, the side pieces C C, the bar D, and the pins P P, the ends of the said pieces A B being rounded so as to allow the knee to be flexed to the full extent of the natural limb.

Second, a knee-stop formed by the cross-bars E E F F, or their equivalents, acting upon the bar D, substantially as and for the purpose herein set forth.

Third, an ankle-joint formed by the projections a a upon the tibia resting upon the corresponding shoulders b b of the foot piece I, in connexion with the straps c d and the cord s, as herein set forth and described.

Fourth, the cord L, or its equivalent, attached to the instep of the foot, passing up under the patella and attaching at some point above the leg to the supporting strap S, to operate both the knee and ankle joints, substantially in the manner herein specified.

No. 39,362.—GEORGE SNYDER, of Philadelphia, Pa.—*Improved Combination of the Strop and Hone*.—Patent dated July 28, 1863.—The hone is attached to a block and covered by a lid, on which is a case containing the strop.

Claim.—As a new article of manufacture, the block A, hone B, lid C, and strop e, with a case D, the whole being constructed and arranged as and for the purpose described.

No. 39,363.—ALEXANDER C. TWINING, of New Haven, Conn.—*Improved Means of Checking and Resisting Missiles*.—Patent issued July 28, 1863; antedated April 11, 1863.—The improvement consists in receiving the impact of the moving body upon a succession of masses or plates which are free, except the terminal one, to receive the impact and receive motion by which the moving body is brought to by degrees, and in successive stages.

Claim.—First, the above construction or arrangement by successive plates or layers, with the successive separating spaces or intervals between, and with lugs or angle irons or projections when necessary, or any construction, substantially the same, all for the purpose above described.

Second, the mode of constructing the successive plates or layers and spaces between by bending forward and back a single plate (or plates placed side by side in layers) from outside to inside, or vice versa, substantially as and for the purpose specified.

No. 39,364.—EDWARD BROWN WILSON, of Westminster, Middlesex, England.—*Improvement in the Manufacture of Malleable Iron and Steel*.—Patent dated July 28, 1863.—The object of this invention is to prevent the destruction of the tuyeres or air pipes through which the air is introduced into the mass of molten metal, and which arises from their location at the bottom of the converting vessel in contact with the metal; and the improvement consists in placing the tuyeres above and out of contact with the metal, and blowing the air down and through the metal.

Claim.—The peculiar construction and arrangement of apparatus for manufacturing malleable iron and steel, as hereinbefore described and illustrated in the annexed drawings, so that the tuyere or tuyeres may be out of contact with the molten metal and blow the air or gases down upon and through the metal in place of blowing up through or around the same, as heretofore.

No. 39,365.—PLATT C. INGERSOLL, of Green Point, Kings county, N. Y., assignor to Himself and H. F. DOUGHERTY, of same place.—*Improvement in Hay and Cotton Presses*.—Patent dated July 28, 1863.—The improvement consists in the method of connecting the upper ends of the toggle levers to the follower, which is by link joints and friction rollers, which impinge upon guide bars.

Claim.—Connecting the levers D D to each end of the follower F by means of the two connecting rods and joints G G, and also controlling the movement of the said levers by the friction rollers H H and the outside rods B' B', as shown and for the purposes before specified.

No. 39,366.—JOSEPH B. JOHNSON, of Lynn, Mass., assignor to JOHN B. NICHOLS, of same place.—*Improved Channelling Tool*.—Patent dated July 28, 1863.—The two cutters of the required configuration are secured on the guide stock by a set screw and are capable of the required adjustment or removal for sharpening or replacement.

Claim.—An improved sole channelling apparatus as made of the separate tubular and angular cutters B C and a guide stock A, (made substantially as described,) fastened together by one or more screws or devices which will admit of such cutters being adjusted with reference to one another, as well as either one or both being removed from the stock for the purpose of being sharpened, or for any other purpose, as circumstances may require.

No. 39,367.—JOHN J. KERSEY, of Bearstown, Lancaster county, Pa., assignor to Himself and ROBERT L. MCCLELLAN, of Cochranville, Penn.—*Improvement in Windlasses*.—Patent dated July 28, 1863.—This consists in an arrangement for lifting the drum on which the rope is wound, so as to throw its pinion out of gear with the master wheel, and itself in contact with a stationary brake, by means of which arrangement the load is lowered without interference with the horse-power, and the horse permitted to rest.

Claim.—The arrangement of the movable drum H with its flange I, in combination with the stationary brake G, the pinion K on the shaft that revolves the drum, in connexion with the shifting lever E, holdfast or ratchet F, all operating substantially in the manner and for the purpose specified.

No. 39,368.—WILLIAM H. LAZELLE, of Brooklyn, N. Y., assignor to Himself and AUGUSTUS G. SEAMAN, of same place.—*Improvement in Teakettles*.—Patent dated July 28, 1863.—The invention consists in suspending by tubes from the body of the teakettle a boiler chamber, with a concave bottom and a convex top, to admit a flow of water through it, from and again into the kettle while the tubes and auxiliary bottom are exposed to the heat of the fire.

Claim.—The combination of the kettle e and connecting pipes D d, with the suspended dish-shaped boiler E, when the whole are constructed, arranged and operated as described, for the purpose specified.

No. 39,369.—CLIFFORD ARICK, of St. Clairsville, Belmont county, Ohio.—*Improvement in Compound Sub-Calibre Projectiles*.—Patent dated July 23, 1863.—The object of this invention is to so construct the projectile that the casing and bearings shall be completely released therefrom during its flight, without disturbing the direction or impeding the velocity; and, at the same time, insuring that they shall follow the preceding shot in the same line of flight as an effective following explosive shot.

Claim.—First, loading with incendiary, explosive or other destructive material the bearings or the casing and bearings used for projecting from a gun a "sub-calibre shot."

Second, so arranging the bearings used for projecting a sub-calibre shot or bolt from a gun that, on its flight, the shot and its bearings or its bearings and casing shall be separated by atmospheric and other causes in such manner that the sub-calibre shot shall act as a preceding penetrating tool, and its bearings and casing or either or all of them, as may be most desirable, shall act in conjunction with it as an effective following shot.

Third, a casing for a sub-calibre bolt or shot with its bearings arranged with suitable chambers for the reception of explosive incendiary or other destructive material, to be operated in any manner as and for a following shot.

Fourth, a corrugated and grooved casing, or with otherwise perforated bearings for a "sub-calibre shot" or a grooved shot, whereby the atmosphere is admitted from its front to its rear, in the manner and for the purpose described.

Fifth, a supplemental chamber made of glass or other suitable material, and adapted to the bearings and casing for a sub-calibre shot, and as an auxiliary chamber for the reception of destructive material, to increase the efficiency of a following shot, substantially as and for the purpose set forth.

Sixth, a sub-calibre shot, in combination with an incendiary shell, acting as its bearings, or its casing and bearings, and whether detachable or not, substantially as described.

Seventh, the introduction of air passages through the bearings or the bearings and casing of a sub-calibre shot, for regulating the flight of a following shot, substantially as described.

Eighth, a combined sub-calibre shot and following shot with their accompanying chambers for the reception of destructives, with its constructed and resulting openings for the admission of air from its front facings to its rear, constructed and operating substantially as and for the purposes set forth.

No. 39,370.—ELIAS ALEXANDER, of Providence, R. I.—*Improvement in the Manufacture of Boots and Shoes*.—Patent dated August 4, 1863.—Instead of constructing the boot of a front and a rear piece, the inventor, to save waste, makes it of a number of pieces of peculiar shape. To give ventilation to the foot he makes an opening or slit from the toe to the ankle of the boot, which he fastens by lacing and covers by flaps. He constructs the heel of a series of horse-shoe shaped pieces of leather which may be cut out from long narrow strips. The hollow place formed in the heel may, if necessary, be filled with a support consisting of metal plates united by bars. A top lift covers the hollow space.

Claim.—First, forming the front and back of boots and shoes each in a number of pieces, formed and arranged substantially as herein described to effect the purpose specified.

Second, the two side seams *ff*, in combination with a removable piece or pieces forming the vamp of a boot or shoe, substantially as described for the purpose specified.

Third, the two seams *d d*, in combination with a separate piece *C*, inserted in the back of a boot leg, substantially as described for the purpose specified.

Fourth, in combination with an opening in the front of a boot extending from the toe to the ankle, as set forth, two or more separate lacings *1 2 3*, the lapels *L L'*, and the strap and buckle *N N*, substantially as described for the purpose specified.

Fifth, the heel *R*, composed of a number of horse-shoe shaped lifts *V*, of leather, and a top either with or without an interior support, substantially as herein shown and described for the purpose specified.

Sixth, forming the outside counter *M* of boots in two or more pieces, substantially as described for the purpose specified.

No. 39,371.—STEPHEN M. ALLEN, of Woburn, Mass.—*Improved Leather Paper*.—Patent dated August 4, 1863.—Leather scraps of any kind are steeped in warm water of the temperature of 160°. The water being drawn off, the scraps are properly rinsed and then steeped in a weak solution of caustic soda which neutralizes the effect of the tannin and restores the animal fibre to some of its original softness. Flax or hemp broken and cleaned from straw, and torn into proper lengths, is then ground with the animal fibre. The pulp is then ready to be converted into paper in the ordinary way.

Claim.—As a new article of manufacture a factitious leather or a leather paper, which I denominate fibrilla leather, consisting of leather scraps and vegetable fibre combined, substantially in the manner hereinbefore set forth.

Also, combining leather scraps steeped in warm water previous to being immersed in alkaline solutions, with the unrotted and reduced fibre of flax, hemp, or other like vegetable fibre, substantially as hereinbefore described and for the purposes set forth.

No. 39,372.—ROBERT BARCKLEY, of Philadelphia, Pa.—*Improvement in Cupola Furnaces*.—Patent dated August 4, 1863.—This improvement consists in hinging doors to the base plate of a cupola furnace, the said doors being elevated or depressed by levers.

Claim.—The doors *D* and *D'*, hinged to the base plate *A* of a cupola, in combination with the levers herein described, or their equivalents, for elevating the said doors, and permitting the same to be depressed as herein set forth.

No. 39,373.—ELISHA T. BARLOW, of San Francisco, Cal.—*Improvement in Car Coupling*.—Patent dated August 4, 1863.—This improvement consists in the arrangement by which the protruding tongue or link is caused, in striking the detaining bolt, to lift it, allowing the tongue to pass, and then the bolt dropping into a slot in the tongue the connexion is secure.

Claim.—The tongues *B*, provided with mortises *F F'*, and fitted in the draw-heads *A A'*, in combination with the oscillating pins *D*, connected to springs *A''*, and the pin-elevating plates *E*, all arranged to operate as and for the purpose herein set forth.

No. 39,374.—CHARLES R. BARNES, of Muncy, Lycoming county, Pa.—*Improvement in Grain Separators*.—Patent dated August 4, 1863.—This invention consists in the introduction of a vertically adjustable slide in a chamber opening out of the floor of the trunk of a blast winnowing machine by which, in combination with certain other appliances, a most perfect result is attained, and the machine readily adjusted to variations in the quality or kind of grain.

Claim.—First, the adjustable slide or stop *f*, raised or lowered by the screw *h*, or equivalent, in combination with the main tube *A*, and receptacle *B*, in such a manner that the draught is divided, a portion passing above and a portion passing beneath said slide, whereby such dust as falls with the foul seed in the receptacle is drawn up on the opposite side, substantially as herein specified.

Second, in combination with the narrowing receptacle *B*, and the adjustable slide *f*, as before described, also the automatic weighted valve *E*, operating substantially as herein set forth.

Third, in combination with the adjusting slide *f*, also the register *r*, for regulating the draught and adapting the machines to cleaning of different kinds of grain, substantially as described.

Fourth, the arrangement of the main tube *A*, receptacle *B*, adjustable slide *f*, weighted valve *E*, deflector *c*, and register *r*, substantially as and for the purposes herein set forth.

No. 39,375.—J. BEACHLER, of Anderson, Madison county, Ind.—*Improved Stump Extractor*.—Issued August 4, 1863; antedated December 8, 1861.—This improvement consists in an arrangement by which the lifting frame is lowered to the ground, or raised upon wheels by an arrangement of rods and cranks connected with the forward truck.

Claim.—The sliding blocks *a a*, to which the wheels *C C* are attached, and the rods *d d*, crank *e e*, shaft *D*, arms *f f*, in combination with the rods *g g*, draught rod *D*, and holding pin *i*, all arranged and operating as and for the purposes herein set forth.

No. 39,376.—GEORGE W. BEARDSLEE, of College Point, Queens county, N. Y.—*Improvement in Magneto-electric Telegraph*.—Patent dated August 4, 1863.—The object of this improvement is to make the movement of the operator, in designating the sign, to develop the current by which it is transmitted. The invention consists in the employment of a magneto-electric engine, by the rotation of which impulses are induced alternately in opposite directions, connected with magnets, the polarity of which are alternately reversed by said impulses; and an interposed armature, which is caused to vibrate by the alternately reversed polarity of the electro-magnets, this being combined with a mechanism by which the indication of the character will operate the engine and develop the impulse by which it is transmitted.

Claim.—The magneto-electric engine connected with the electro-magnets operating a vibrating magnet or armature, substantially as herein described, in combination with a mechanism, substantially as described, which, as the operator indicates or designates a character or sign which he wishes to transmit, will operate the magneto-electric engine, and thereby develop the electric impulses which transmit such characters or signs, as set forth.

Also, in combination with the combination first herein claimed, the employment of the escapement, or the equivalent thereof, operated by the vibrating magnet or armature, substantially as herein described, to indicate or develop the character or sign transmitted, as set forth.

No. 39,377.—ROSANNA CARPENTER, of Roxbury, Mass.—*Improved Case for Packing Bottles*.—Patent dated August 4, 1863.—This invention consists in the use of divisional boards between the bottles, the feet of which boards project into mortises in the bottom of the box to guard against displacement. The whole being intended to prevent collision and the necessity for ordinary packing material.

Claim.—An improved packing case having mortises and divisional boards combined and arranged in it, substantially in the manner and for the purpose or purposes hereinbefore specified.

No. 39,373.—FRANKLIN D. BOYLE, of Evansville, Vanderburg county, Ind.—*Improvement in Self-acting Boiler Feeder*.—Patent dated August 4, 1863.—The invention consists in an arrangement of chambers and pipes for securing a uniform height of water in the boiler by a float attached to one of the valves.

Claim.—The combination of the chambers A B, valve C, float D, pipe or passage E, chambers F G H, valves I J, and pipe M, the whole arranged to operate substantially as and for the purpose herein specified.

No. 39,379.—V. FLORENTINE CLEUT, of Paris, France.—*Improvement in Self-acting Apparatus for Supplying Boilers with Water*.—Patent dated August 4, 1863.—This invention consists of a hollow vessel or float in an outer case, which float, in filling or emptying, becomes heavier or lighter comparatively to the surrounding water, and acquires an alternative vertical motion, whereby it is placed in successive communication with the boiler and feed supply to transfer from one to the other the necessary water. As the water in the boiler sinks below a certain level, the steam is admitted by a pipe to the float, which raises it so that the pipe at the upper end of the float comes in connexion with the water supply; when it is heavier than the water it displaces it sinks, and opens the lower connexion with the boiler into which it discharges, by its gravitation due its superior elevation, until the mouth of the tube communicating with the upper part of the float is closed by the rising of the water.

Claim.—The self-acting apparatus for supplying boilers with water, constructed and acting substantially in the manner hereinbefore described and illustrated in the accompanying drawings.

No. 39,380.—J. R. CLUXTON, of Russellville, Brown county, Ohio.—*Improvement in Machine for Planing Shingles*.—Patent dated August 4, 1863.—The wood to be operated upon is placed on a platform adjustable vertically and inclined to the degree of taper desired, so that the cutter-head may work horizontally. The latter is furnished with two bits set obliquely, so as to make a draw-cut with each motion, and side clamps hold the block under its operation. The cutter is reciprocated by a pitman and cam wheel.

Claim.—The platform K, the boards B and F, the adjustable clamps G, the regulating screws V V, in combination with the cam G, the whole arranged in the manner and for the purpose set forth.

No. 39,381.—JOSEPH DAVIS, of Wilton, Hillsboro', N. H.—*Improvement in Wool Carding Machines*.—Patent dated August 4, 1863.—The invention consists in constructing the waste-preventing rollers under the main card cylinder, so as to have an increased velocity in the series to prevent the fibre from gathering in a roll between any two of the rollers, and the last of the rollers act in a similar manner with the tumbler or "licker in."

Claim.—A carding engine so constructed that each of its waste-preventing rollers *a b c*, &c., which are arranged beneath the main card cylinder, shall have, while in operation, a speed or velocity of revolution greater than that of that roller of the series which may be immediately in advance of it, the same being for the purpose as hereinbefore specified.

Also, a carding engine as not only constructed so as to have waste-preventing rollers *a b c*, &c., arranged underneath, and so as to operate with the main card cylinder A, in manner and for the purposes above explained, but as having one or more other such rollers *t u*, arranged so as to operate in a similar manner with the "licker in" or "tumbler" B, the whole being substantially as specified.

No. 39,382.—CORNELIUS H. DELAMATER, of New York, N. Y.—*Improvement in Machine for Bending Metals*.—Patent dated August 4, 1863.—The invention consists of an upper and lower roller with an auxiliary roller on each side for holding and presenting the plate; the journal boxes of the latter rollers are adjusted by set screws below, and the lower roller is supported upon springs which rest upon wedges on a bar which is capable of longitudinal motion, so as to raise all the bearings of the lower roller simultaneously.

Claim.—First, in machines for bending metal, the arrangement of the rolls B C D and E, and of suitable means of adjusting the same, substantially as and for the purpose herein set forth.

Second, in machines for bending metal containing four rolls, arranged substantially as herein above described, the employment of the rod G, with its several wedge-formed portions *g g*, adapted to act uniformly on the several bearings of the lower bending roll C, by a single adjustment, in the manner and with the advantages herein set forth.

No. 39,383.—SAMUEL L. DENNEY, of Christiana, Lancaster county, Pa.—*Improvement in Horse Rakes*.—Patent issued August 4, 1863; antedated April 2, 1863.—The rake teeth are attached to the axle by guards; the rake head is socketed in the iron from which the wheel spindle projects, and an arm rises therefrom with a detent operated by a lever to bring it at will into one of the notches in an annular plate affixed to the wheel, by which engagement the rake head is rotated, the teeth elevated, and the hay deposited by the releasing swords.

Claim.—First, the cast hollow spindle A, with its arm D, and detent E, attached thereto, in combination with the connexion O, lever F, spring S, releasing sword I, and serrated rim G, when constructed and arranged in the manner and for the purpose set forth.

Second, the guards B, constructed in the manner and for the object set forth.

No. 39,384.—FREDERICK P. DIMPFEL, of Philadelphia, Pa.—*Improved Armor Plates for Land or Marine Batteries*.—Patent issued August 4, 1863; antedated October 16, 1862.—The plates are fastened to their backing by bolted clamps of a T-shape, whose projecting flanges interlock with corresponding depressions in the plates.

Claim.—The interlocking tongued and grooved T-iron plates, constructed and applied together substantially as described, as a defensive armor for casemates, and other similar war structures, and for the clothing or construction of vessels, as set forth.

No. 39,385.—THOMAS DOWLING, of Lynn, Mass.—*Improvement in Heaters*.—Patent dated August 4, 1863.—This apparatus consists of a central fire-pot from which the heated products flow into an annular drum, and descending pass out of it and to an exterior drum, whence, ascending, they reach the smoke chamber and pass to the eduction pipe. The air received from the chamber in the base courses, through pipes and concentric spaces between the drums, reaching a chamber from which it is distributed by pipes to the apartments. The radiation from the external drum heats the apartment in which the apparatus is situated.

Claim.—The combination of the series of pipes *e e*, (arranged within the external smoke chamber as specified,) the fire chamber A, the smoke chambers B C D, the air chambers G O, and the concentric air chambers or passages E and F, the whole being substantially as above described.

Also, my improved air and smoke damper, and its peculiar arrangement with respect to the pipe *d* and the air inlet *o* thereof, the said damper being made with a flexure, and with the two plates or covers *p q*, and arranged within both pipe and inlet, as shown in Fig. 1, and as hereinbefore described.

Also, the combination of the air inlet *n l* with the air space *m* and the damper *k*, made in manner and arranged within the pipe *d*, substantially as specified.

No. 39,386.—JAMES K. DUGDALE, of Richmond, Ind.—*Improvement in Seed Planters*.—Patent dated August 4, 1863; antedated December 27, 1862.—The invention consists of a sliding hopper or seed box made fast to a cross plate which serves as a cut-off, and working within a stationary box and upon a feed plate, being held down upon the latter by springs. By this arrangement plates of varying thickness, or with seed calls of different calibres, may be used.

Claim.—The arrangement and combination of the above-described apparatus, composed of the sliding hoppers B B, cut-off plate D, sliding on rods H H, springs E E, and set screws G G, as described and for the purposes set forth.

No. 39,387.—WILLIAM ELMER, of New York, N. Y.—*Improvement in Apparatus for Producing Olefiant Gas*.—Patent issued August 4, 1863; antedated May 13, 1863.—The invention consists in the construction of the apparatus for conducting the naphtha, or analogous substance, and water into a pre-heater, thence to a retort containing granulated zinc, causing the oxygen of the water to unite with the zinc, and free the hydrogen; also freeing the hydrogen of the naphtha, and bringing the carbon to the nascent state when the hydrogen and carbon unite in proportions to form olefiant gas.

Claim.—Constructing the apparatus for producing pure olefiant gas and oxide of zinc, by arranging contiguous and indirect connexion and communication with the retort A, for containing granulated zinc, and the pre-heater Z for converting naphtha or benzole and water into vapors, and arranging and combining therewith the several gas pipes D F K N M P Q, cocks I H P, cylinders G L, and reservoir O, for performing the respective functions before described, the several parts operating distinctively to produce the desired result, substantially in the manner herein set forth.

No. 39,388.—WILLIAM ELMER, of New York, N. Y.—*Improvement in Producing Illuminating Gas*.—Patent issued August 4, 1863; antedated May 13, 1863.—Explained by the claim.

Claim.—The production of pure olefiant gas from benzole or naphtha and water, in conjunction with zinc, by pre-heating the former substances so as to form vapors, and bringing said vapors into contact with a certain quantity of metallic zinc, heated to the requisite degree, as herein set forth.

Also, the continuous process in the manufacture of olefiant gas, in which the gas is not decomposed, and the production of oxide of zinc by the decomposition of the vapors of water, as herein described.

No. 39,389.—JOHN G. ERNST, of York, Pa.—*Improvement in Clod Crushers*.—Patent dated August 4, 1863.—This consists of a frame carrying two series of rotating toothed disks, the rear one following in the interstices of the other. They are preceded by a row of harrow teeth attached to the front bar of the frame.

Claim.—The combination and arrangement of the stationary teeth *B' B'* and *B B*, secured to frame-work *A A*, shafts *b* and *C*, wheels or cutters *E E E E*, and wheels or cutters *d d d d*, when constructed and operating as and for the purpose described.

No. 39,390.—FRANKLIN FIELD, of Troy, N. Y.—*Improvement in Collars for Ladies and Gentlemen.*—Patent dated August 4, 1863.—Explained in the claim.

Claim.—A collar having a stiffening strip or cord *A* secured in the edge of the collar by being first stitched to the cloth of the collar, and then having the layers of cloth turned over the cord or stiffening strip and fastened together, substantially as herein set forth.

No. 39,391.—JOHN GOLAND, of Batavia, Kane county, Ill.—*Improvement in Pumps.*—Patent dated August 4, 1863.—The improvement consists of a cylinder, with a valve at its lower end opening upward, and a similarly acting valve in a hollow piston, which discharges the water through the hollow piston rod, and communicates by holes on the upper side of the piston with the upper part of the cylinder, which forms an air chamber.

Claim.—The valve *B* in the bottom of the cylinder *A*, in combination with the hollow piston *C*, provided with the valve *D*, and perforated at its upper part, as shown at *f*, all arranged to operate as and for the purpose set forth.

No. 39,392.—EDWARD J. GORHAM, of Bangor, Maine.—*Improved Infants' Pede-motive.*—Patent dated August 4, 1863.—The invention consists of an adjustable and elastic saddle within a stand, supported on castor wheels. The body of the child is contained within the rings, and the seat is hung upon straps, which give it an elastic bearing, and admit of its vertical adjustment, so as to bring the infant's feet in the desired proximity to the floor.

Claim.—Improved infants' pede-motive, as constructed, with its saddle made and arranged within and applied to the stand, substantially in manner and so as to be adjustable as hereinbefore described.

No. 39,393.—W. H. GWYNNE, of White Plains, West Chester county, N. Y.—*Improved Method of Producing Water Gas.*—Patent dated August 4, 1863.—Fine jets of steam from a coil are decomposed by incandescent anthracite coal, and collected for illuminating purposes.

Claim.—Producing gases for heating and lighting and other purposes, by decomposing highly-heated and finely-divided jets of steam by means of anthracite coal, substantially as herein set forth and described.

No. 39,394.—FREDERICK W. HARRIS, of Montreal, Canada.—*Improved Apparatus for Marine Propulsion.*—Patent dated August 4, 1863.—The propellers work in a passage-way extending through the vessel, and expanding at both ends. Stationary wings are introduced in the passage between the screw propellers, to prevent the whirling motion of the water. The special proportions and construction of the passage-way are defined in the claim.

Claim.—First, the enlargement of the passage or tube, which contains the propeller or propellers, in a funnel form towards the ends of the vessel, in such a manner that its mouth at either end of the vessel presents an area of opening equal or approximating to the whole area of the greatest submerged section of the vessel, substantially as and for the purpose herein set forth.

Second, the funnel-mouthed passage or tube, in combination with the straight and parallel sides and straight bottom of the vessel, substantially as herein described, for the purpose set forth.

Third, making the mouths of the tube conform to the transverse profile of the sides and bottom of the vessel, so as to unite therewith in a sharp, or as nearly as practicable a sharp edge, substantially as herein set forth.

Fourth, the wings or feathers *E E*, arranged within the tube or passage, and in combination with the propeller or propellers, substantially as and for the purposes herein specified.

No. 39,395.—WILLIAM HART, of Mayville, Dodge county, Wis.—*Improvement in Clock Escapements.*—Patent dated August 4, 1863.—The pendulum is suspended from one centre, with the impulse pallet adjustable on its rod, and the detent is secured in one arm of a lever vibrating on a centre below the escape wheel, while the other end of the lever carries a bent rod which, by contact with the pendulum rod, releases the detent. The object is to apply the power from the wheel directly to the pendulum.

Claim.—First, the arrangement of the impulse pallet *b*, detent *f*, lever *e*, wire *d*, or its equivalent, and stop pin *c*, in combination with each other, and with the pendulum rod and escape wheel, to operate substantially as herein specified.

Second, the guard *g*, applied in combination with the detent lever *C*, to operate substantially as and for the purpose herein specified.

No. 39,396.—DAVID HAWKINS, of Birmingham, Conn.—*Improvement in Hoop Skirts.*—Patent dated August 4, 1863.—The upper sections may be unhooked, and open out sideways to admit the person.

Claim.—A hoop skirt so constructed as that the upper portion can be distended or opened out, substantially as hereinbefore described, for the purposes set forth.

No. 39,397.—BENJAMIN F. HEDDON, of Norwich, Conn.—*Improvement in Pistons for Steam Engines.*—Patent dated August 4, 1863.—The invention consists of a hollow screw containing a valve, and with an opening at each end applied to a hollow piston surrounded by an expansible packing ring, so that the steam pressing on the valve opens it and shuts it against the orifice toward the exhaust side, while the steam is admitted by ports in the side of the screw to the inside of the hollow piston to expand the packing.

Claim.—The sectional, removable hollow screw-rod *i*, provided with steam ports *k k' p p*, valve *D*, and valve seats, in combination with an expansible packing-ring piston, the whole being constructed and arranged substantially as herein described.

No. 39,398.—JOHN S. HULL, of Cincinnati, Ohio.—*Improvement in Blow-Pipes.*—Patent dated August 4, 1863.—The alcohol is forced, by a pump in the reservoir, in a stream from the jet pipe, being vaporized in a coil over a lamp just before it issues.

Claim.—The application of atmospheric pressure, by simple pumping, to the alcohol in the reservoir, forcing the same in a liquid state through the jet pipe, and vaporizing it therein just before it issues therefrom, substantially as and for the purposes herein specified.

No. 39,399.—JOHN S. HULL, of Cincinnati, Ohio.—*Improvement in Lamp Burners.*—Patent dated August 4, 1863.—The improvement consists of an inner descending cone passing downward from the base of the deflector, and with scalloped edges deflecting the air downward that enters at the perforations of the outer case.

Claim.—The inner cone partition *C*, arranged in the inside of the lamp burner, in combination with the perforations *a a* of the outer case, substantially as and for the purpose herein specified.

Also, the notches or scallops *c c* in the lower edge of the partition *C*, for the purpose designated.

No. 39,400.—JOHN S. HULL, of Cincinnati, Ohio.—*Improvement in Lamp Burners.*—Patent dated August 4, 1863.—The air passes downward into a chamber around the wick tube, and then up through the perforations in a descending cone to the burner chamber; the object being to keep direct conflicting currents from reaching the flame.

Claim.—Introducing the draught air by first descending, from the outside, into a separate or enclosed chamber *c*, and thence ascending through a perforated partition or "cone" *B* into the burner chamber, in combination with a flat-wick tube, substantially as and for the purpose herein specified.

No. 39,401.—STEPHEN HULL, of Poughkeepsie, N. Y., assignor to Himself and ISAAC W. WHITE, of same place.—*Improvement in Cutters for Harvesters.*—Patent dated August 4, 1863.—The improvement is in the construction and arrangement of the guards relatively to the finger bar and knife, so as to afford a continuous bearing for the sickle, with a discharging space at the rear below the sickle.

Claim.—An open cap-slotted guard finger provided with the depressions *d d'* below and between the elevated plane *c*, and the lowered plane *e*, and with the flanges *b b*, so that the finger beam and the knife-rod have a front bearing about equal to their combined thickness below the plane *c* and the sickle, a continuous top bearing on the flanges *b b*, in combination with separated or spaced back guides *E E*, which allow a free rear discharge of dirt from below the sickle, substantially as described.

No. 39,402.—G. G. HUNT, of Quincy, Adams county, Ill.—*Improvement in Furnaces for Steam Boilers.*—Patent dated August 4, 1863.—The improvement consists of an inclined partition dividing the furnace chamber into two portions, and deflecting downward the gases evolved in combustion, so that they pass through a throat in contact with an air tube, and are ignited in the second chamber. A man-hole is provided in the upper part of the partition for convenience in getting at the flues and to start a draught in kindling the fire.

Claim.—First, the inclined partition *F*, placed within the furnace *A*, and arranged relatively with a perforated air-tube *G*, substantially as shown, whereby the furnace is divided into two compartments, a fire chamber and a combustion chamber, and the smoke and gases compelled to pass down through the fuel or fire in order to pass through the throat *G'* into the combustion chamber, as and for the purpose herein set forth.

Second, the man-hole *I*, in the partition *F*, provided with the cover and damper *J*, arranged as shown, relatively with the door or feed-hole *C* and throat *G'*, to operate as and for the purpose set forth.

No. 39,403.—JOHN JANN, of New Windsor, Carroll county, Md.—*Harvesting Machine.*—Patent dated August 4, 1863.—The improvement consists in the automatic revolving rake and reel arms, whose vertical motion, to bring them seriatim to their effective position, is caused in each case by a pitman from a disk, which is rotated by a bevel pinion driven by gearing from the main shaft. The rotating frame is steadied and supported by side springs.

Claim.—First, operating horizontally revolving reel or rake arms by crank and pitman, substantially as described.

Second, the combination of the crown or bevel cog-wheel *A*, gearing with the clutch pinion *D*, in line with the pivots *f f*, the reel and rake shaft *H*, and the multiplying gearing *A' k'*, and the shaft *r*, mounted within the gear frame *F*, and employed to transmit motion to the cutters, when the said parts are constructed, arranged, and operated in the manner and for the purposes specified.

Third, the combination of the supporting springs *G* with the pivoted gear frame *F*, arranged and operating substantially as and for the purposes set forth.

No. 39,404.—H. H. JENNINGS, of New Haven, Conn.—*Improved Gauge for Metal Planing*.—Patent dated August 4, 1863.—The invention consists in the application of a spring and set screw to the index arm of a gauge by which the work is adjusted on the bed of the planing machine. It has its main vertical adjustment on the standard, and is capable of some degree of vertical vibration under the operation of the set screw and spring for nicer adjustments.

Claim.—The spring *F* and set screw *G*, in combination with the box *E*, index arm *C*, and upright bar *B*, all arranged substantially as shown, to form an improved implement or device, for the purpose specified.

No. 39,405.—BENJAMIN F. JOSLYN, of Stonington, Conn.—*Improvement in Revolving Fire-arms*.—Patent issued August 4, 1863; antedated May 26, 1863.—The improvement consists in a recoil plate on the frame to prevent the spent cartridges from interfering with the free rotation of the cylinder; also in the device for operating the cylinder through the movement of the hammer, and in the device of the rod forming the centre pin, and, when required, a spent cartridge ejector.

Claim.—First, in connexion with revolving fire-arms arranged for the use of metallic cartridges, a recoil plate on the frame or on a breech plate attached to the frame, said recoil plate being situated at the rear of the cartridge, when the latter is in position to be discharged, and operating so as to permit the free turning of the cylinder, as herein described.

Second, the block *E*, arranged to turn in the frame on the movement of the hammer, and having a yielding pin *k* adapted to the recess in the rear of the cylinder, the whole being arranged and operating substantially as and for the purpose herein set forth.

Third, the rod *K*, and tubular rod *K'* with its spring, the whole being connected to the barrel substantially as described, and arranged to serve the double purpose of a front centre pin for the cylinder, and an instrument for discharging the spent cartridges.

No. 39,406.—BENJAMIN F. JOSLYN, of Stonington, Conn.—*Improvement in Revolving Fire-arms*.—Patent dated August 4, 1863.—The improvement consists in the method of constructing the stock and frame in two pieces detachable from each other, to afford facilities for fitting, adjusting and cleaning, in the block, with the teeth in the rear, so adapted to the cylinder and the frame, that it can be forced from the former and through the latter when the cylinder is to be withdrawn; in the device for locking the cylinder, and maintaining it locked except when the dog is revolving it during the cocking of the hammer; and finally, in the rod hung to an arm which is hinged to the barrel and arranged in respect to the cylinder so that it may serve as a centre pin, and a cartridge case ejector.

Claim.—First, making the frame *A* and the stock *B* in two parts, the former carrying the cylinder and the latter carrying the hammer, trigger, mainspring, &c., and the two parts being secured to and rendered detachable from each other, as described, for the purpose specified.

Second, the block *E* adapted to the cylinder *D*, and the frame *A*, as set forth, for the purpose specified.

Third, the spring *K*, with its projection *t*, the loose pin *u* in inclination *y*, and indented block *E*, the whole being arranged for joint action, as and for the purpose described.

Fourth, the arm *G*, hinged to the barrel, and the rod *F*, both being so arranged in respect to the cylinder, and the bores of the same, that the said rod may serve the two-fold purpose of a centre-pin and an instrument for forcing the spent cartridges from the bores, as described.

No. 39,407.—BENJAMIN F. JOSLYN, of Stonington, Conn.—*Improvement in Breech-loading Fire-arms*.—Patent dated August 4, 1863.—This is an improvement on the patentee's former patent of October 8, 1861, and consists of a cartridge case ejector. A cam-shaped projection is secured to the breech piece, and as the latter is elevated and thrown back, the bevelled edge bears against the flange of the cartridge case, and partially withdraws it from the box. A spring is fixed in an opening in the stock at the rear of the barrel so as to bear with its upper end against the rear of the flange of the cartridge case and withdraw it.

Claim.—The bevelled projection *b*, on the breech piece, in combination with the spring *E*, when both are arranged for joint action on the case of the cartridge, substantially as set forth, for the purpose described.

No. 39,408.—JÜRGEN L. JÜRGENS, of the Island of Fohr, Kingdom of Denmark, assignor to Himself and JOHN E. HOOVER, of Washington, D. C.—*Improvement in Vessels-of-war*.—Patent dated August 4, 1863.—The vessel is divided on its gun deck by a number of transverse

compartments, with portholes, and having metallic sides, in which men and ordnance may be protected; and the spaces between them are filled with floatage material. The masts are of concentric tubes; the inclined upper works armed with spikes; the sides protected with fenders, and made double, with an interval provided with pipes and floatage material.

Claim.—First, constructing a ship with funnel-shaped spaces *K K*, passing transversely through her vital parts, substantially as and for the purposes specified.

Second, the transverse chambers *G G G*, provided with oblique metallic armor for the protection of men, guns or machinery, substantially as set forth.

Third, the use of masses *L L*, of cork or other buoyant material, in converging spaces between mail-clad chambers, substantially as and for the objects specified.

Fourth, the combination with the hollow masts *N N* of the central revolving tubes *n*, and swivel plates *O*, constructed and arranged as specified, to preserve the masts from destruction by the penetration of shot.

Fifth, the pikes *R R*, projecting from the bulwarks *Q*, and mounted upon rods or bars *R'*, by which they may be elevated or depressed in the manner described.

Sixth, the side arms or wings *S S*, constructed and operated as described, to fend off or grapple an enemy.

Seventh, the water-tight compartments *T*, between the inner and outer shell, each provided with one or more ascending tubes, to permit the extinction of fire, substantially as described.

No. 39,409.—JAMES KERR, of Southwark, Surrey, England.—*Improvement in Revolving Fire-arms*.—Patent dated August 4, 1863.—The improvement consists in the construction of the lock; the method of adapting the ordinary lock to the purpose; and in the method of attachment of the barrel to the frame and stock.

Claim.—First, the combination of the lever *E*, trigger *F*, link *h'*, stud *h*, hook *g*, and extra "bent" *a*, with the ordinary tumbler and sere, these parts constituting a lock detached from the body or frame, as hereinbefore described and illustrated by drawings.

Second, the adaptation and use to and in revolving fire-arms of the ordinary gun and pistol lock detached from the body or frame, as hereinbefore described.

Third, the peculiar mode, hereinbefore described, of connecting the barrel with the frame and stock, when such barrel is forged apart from the body or frame.

No. 39,410.—W. A. LEGGO, of Quebec, Lower Canada.—*Improvement in Pans for Backing Electrotypes*.—Patent dated August 4, 1863.—The apparatus consists of two plates, the interior or upper one being perforated throughout its surface with minute holes. The object is to avoid the defacement of the electrotype plate by the uneven cooling and consequent shrinking of the backing. The lower pan being heated sufficiently to melt the tin on the electrotype shell, is then laid upon a cooling plate, the upper plate laid on, preserving the required distance between the plates for the thickness of the finished article. The metal is then poured in and descends in a shower upon the back of the electrotype till the interval is filled; cooling evenly from below, upwards.

Claim.—The perforations or holes *d*, in the bottom of the inner pan *B*, when the same is used in combination with the outer pan *A*, in the manner and for the purpose substantially as herein shown and described.

No. 39,411.—CHARLES M. LUFKIN, of Acworth, Sullivan county, N. H.—*Improvement in Ploughs*.—Patent dated August 4, 1863.—The improvement consists in the arrangement by which the coulter is made available on either side of the beam as the mould-board is shifted. It is placed on the end of a lever which is pivoted on the beam and capable of lateral play, so as to drop on either side of the beam with a curved arm on the coulter, catching on a pin in a socket which is provided on each side.

Claim.—A coulter *I*, connected by a lever *H* and slide bar *K* to the mould-board *F*, in such a manner as to admit of the movement of the coulter from one side of the beam *A* to the other by the adjustment of the mould-board, as herein set forth.

Also, the curved arm *f* on the coulter *I*, in connexion with the pin *g* in the socket *J*, and the slide *i* and spring *j*, all arranged to operate as and for the purpose specified.

No. 39,412.—A. S. MARKHAM, of Monmouth, Warren county, Ill.—*Improvement in Cultivators*.—Patent dated August 4, 1863.—The front part of the frame is supported upon rollers, and the two plough beams are hung to a pivoted transverse beam, so as to have a vertical play and be retained in an elevated position by hooks and chains, and to have a simultaneous lateral play by a transverse connecting bar and a slotted attachment to the rocking beam.

Claim.—First, the frame *A*, having a draught-pole *B* attached to it, in connexion with the rollers *C*, fitted in the lower part of said frame *A*, and the plough beams *D* attached to the frame *A*, and connected at their back parts by the bar *G*, substantially as and for the purpose specified.

Second, the particular manner of connecting the plough beams *D* to the frame *A*, to wit, by having the front ends of the beams slotted longitudinally with pins or bolts *g* passing through the slots into bars *I*, which are fitted loosely on shafts *e*, substantially as and for the purpose set forth.

Third, the draught bars J, attached to the front ends of the plough beams D by bolts j, and connected at their upper ends to the frame A by chains l, and having hooks k secured to them, all arranged as shown, whereby the draught may be regulated, and the beams D adjusted longitudinally as may be required.

No. 39,413.—JOHN MCHENRY, of Cincinnati, Ohio.—*Improved Lamp Burner*.—Patent dated August 4, 1863.—The improvement consists of a supplemental inner cap around and directing the flame and attached to the wick-tube inside of the ordinary cap or deflector.

Claim.—The supplemental cap E, constructed as described, and applied to the wick-tube D within the cone or deflector C, in manner substantially as and for the purposes set forth.

No. 39,414.—W. T. MERSEREAU, of Newark, N. J.—*Improvement in Roller for Trunks and Boxes*.—Patent dated August 4, 1863.—The pintle of the roller is journalled in two angle plates which are screwed to the respective sides of the box or trunk.

Claim.—In combination with the plates A and B, constructed as shown, the use or employment of the roller C and journal D, for the purpose substantially as set forth.

No. 39,415.—LEMAN C. MINER, of Hartford, Conn.—*Improvement in Adjustable Carriage Poles*.—Patent dated August 4, 1863; antedated December 19, 1862.—The object of this improvement is to make the distance between the socket joints adjustable, so as to fit carriages whose clips for attachment of the pole are at different distances apart. It consists in dividing the cross brace and making the halves slide on each other, in order to bring the socket joints nearer to each other, while the tongue itself remains central.

Claim.—The arrangement of the adjustable circular slides E E, braces B B, binding clip G, and the vibrating socket joint connexions I K, in combination with the evener bolt C and attachments, in the manner and for the purpose substantially as herein set forth and described.

No. 39,416.—JOHN MOAKLEY, of New York, N. Y.—*Improvement in Ventilating Caps for Tents*.—Patent dated August 4, 1863.—The improvement consists in a circular aperture in the top of the tent, provided with an adjustable revolving cover, supported on arms hinged to a central plate, which has an axis passing down through the ridge pole, and rotated by means of a cross-piece at its lower end.

Claim.—The ventilating apparatus for tents, constructed and operating substantially in the manner described.

No. 39,417.—SAMUEL MORRIS, of Charlestown, Mass.—*Improved Brush*.—Patent dated August 4, 1863.—The back of the brush is covered with a composition which conceals and protects the wires and bristles, to produce a finish.

Claim.—The improved brush, substantially as described, as made with a japan or waterproof and flexible composition applied to its back, so as not only to cover and finish the same and dispense with a solid, separate, covering plate, but enter the bristle holes and hide them and the confining wires from view, substantially as specified.

No. 39,418.—THOMAS W. H. MOSELEY, of Boston, Mass.—*Improvement in Corrugating Sheet Metal*.—Patent dated August 4, 1863.—The sheet is adjusted by gauges on a carriage, which has an intermittent reciprocating motion to and from the corrugating rollers; the mechanism for gauging and determining the correct position of the sheet on the carriage, and for imparting the proper motions to the carriage, are described in the claim.

Claim.—An automatic machine, consisting of the above-described elements or their mechanical equivalents, viz: of first, two fluted or corrugating rollers; second, mechanism for rotating such rollers; third, a carriage for supporting a sheet of metal to be corrugated, and for introducing such sheet between the corrugating rollers; fourth, mechanism for imparting the proper intermittent, reciprocating motions to the said carriage; fifth, machinery for gauging the sheet of metal or determining its correct position on the carriage, preparatory to the sheet being moved up to and introduced between the corrugating rollers.

Also, the arrangement and application of each of the cams k with respect to its corrugating roller or the axis thereof, constructed and operating substantially as and for the purpose described.

Also, in combination with the sheet carriage D and the mechanism for imparting to it reciprocating intermittent movements, as described, such mechanism being the cams k k and yokes u u, a mechanism, viz., the screws q q and nuts s s t t for adjusting the carriage into parallelism with the corrugating rollers.

Also, the combination for determining the position of a sheet of metal on the carriage D, the said combination consisting of the arms u u, the cranked shafts v v, the weight x, the retainer y, and the cam z, the whole being arranged so as to operate substantially as hereinbefore specified.

No. 39,419.—OBED PECK, of Windsor, Vt.—*Improvement in Attaching Bits to Braces*.—Patent dated August 4, 1863.—The bit is retained in its socket by a pivoted jaw, with a projection which engages the notch in the shank of the bit, and the jaw is held closed by a screw-nut or sleeve.

Claim.—The jaw C, hinged to the brace or connected therewith by a joint, in combination with the nut D and screw-thread c, all arranged as shown, to secure the bit B firmly to the brace, and admit of its ready adjustment therein and detachment therefrom, as set forth.

No. 39,420.—CHARLES L. PIERCE, of Buffalo, N. Y.—*Improved Wood Splitter*.—Patent dated August 4, 1863.—The machine consists of a bed plate which rotates by the impulse of a lever, so as to expose another portion of the block to the blow of the axe which is keyed on the end of a lever operated by a crank and pitman.

Claim.—First, the lever B, supported and moving upon the fulcrum shaft C, in connexion with the axe E, and operated by a crank D, for the purposes and substantially as herein described.

Second, the axe E and lever B, supported and moving upon a fulcrum shaft, as aforesaid, in combination with the head block K and revolving plate J, for the purpose and substantially as described.

Third, constructing the axe with a shank provided with a key, as a means of fastening the axe to the lever.

No. 39,421.—HENRY PORT, of New York, N. Y.—*Improvement in the Manufacture of Boots and Shoes*.—Patent issued August 4, 1863; antedated October 16, 1862.—The soles are affixed to the uppers by means of rivets, united by their heads into a skeleton plate. The last has recesses which receive the points of the rivets and turn them alternately in opposite directions. To insure uniformity, the set of holes is punched to correspond with the rivets by a die, and knives cut out the blank at the same operation.

Claim.—The sole moulded with a skeleton plate of rivets and a lip on the edge, substantially as described.

Also, the use of the last with spring recesses, to turn the points of the rivets, as set forth, and of the knife and punches, as described to cut and punch simultaneously.

No. 39,422.—JOHN G. PUGSLEY, of New York, N. Y.—*Improvement in Car Springs*.—Patent dated August 4, 1863.—The invention consists of a series of springs of disk form, and of graduated sizes, placed on a central tube with an annular flange to separate them, and the whole placed in a spring box with thrust rings of concave form by which they bear upon the springs.

Claim.—The use or employment of a cylindrical spring case, having a central flange that sustains the springs on either side, and toward which the springs yield.

Also, the employment of rings on which the springs rest, having a deadening packing between them and the flange described, and also between the rings and the top and bottom plates.

No. 39,423.—BENJAMIN REED, of Allegheny City, Pa.—*Improved Wheel for Marine Propulsion*.—Patent dated August 4, 1863.—The buckets are triangular and secured by one angle to the shaft, set on with alternate inclinations, and at such an angle with the shaft that the points will meet the adjoining buckets—a rod securing their points to each other.

Claim.—The use of angular floats or buckets, having one point secured to the shaft and the two outer points stayed by means of rods or bars, when said shaft is placed transverse to the length of the boat, the whole arranged and constructed substantially as described and for the purpose set forth.

No. 39,424.—CHARLES ROSS, of Hartland, Livingston county, Mich.—*Improved Fastening for Horse-powers*.—Patent dated August 4, 1863.—This device is intended for fastening to the ground the frame of a horse-power; it consists of a curved iron arm, with loops or spurs which engage the frame, and feet which are anchored in the ground to prevent the horse-power from shifting when the power is applied.

Claim.—The employment or use of the arms B with spurs c, and plates or feet C, in combination with the bed pieces A of a horse-power or other contrivance, applied and operating in the manner and for the purpose substantially as shown and described.

No. 39,425.—GUY M. SALSURY, of Wilson, Niagara county, N. Y., and GEORGE S. SALSURY, of Clarendon, Orleans county, N. Y.—*Improvement in Ploughs*.—Patent dated August 4, 1863.—This independent beam is a forward projection from the upper part of the landside, against which the coulter is secured by a link; the landside and coulter being in the same plane, while the beam is laterally adjustable in slots in a projection from the upper junction of the mould-board and landside and in the cross-bar connecting the handles.

Claim.—Providing a plough with the independent short beam H, for the purpose of attaching the coulter, substantially as described.

Also, in combination with the short beam H, the adjustable beam A, when all the parts are constructed and arranged as herein set forth.

No. 39,426.—ALLEN SCHENCK, of Chicago, Ill.—*Improvement in Metallic Baskets*.—Patent dated August 4, 1863.—The basket is composed of sections, corrugated and swaged to the required form, and riveted or soldered together.

Claim.—A sheet-metal basket or vessel composed of a series of sections a bent or swaged in proper form, corrugated or fluted, and secured together by rivets or solder, substantially as herein set forth.

No. 39,427.—C. W. STAFFORD, of New York, N. Y.—*Improvement in Incendiary Sub-Calibre Projectile*.—Patent dated August 4, 1863.—This is a long sub-calibre projectile with a punching face, and having a reduced diameter toward the rear, with a sabot to fit the bore of the gun. It also has a band near the front, and a casing over the reduced central portion, between which and the latter is a chamber for incendiary material.

Claim.—First, the combination, in a sub-calibre projectile, of the following elements, viz., a cutting or punching face, a solid central core, and an annular chamber surrounding the said core, and chiefly or entirely included within the area of the punching face, substantially as herein described, for the purpose of carrying incendiary or explosive material into the aperture made by the shot.

Second, the combination of the central core *a*2, casing B, and band H, operating substantially as described, to retain the contents of the chamber C during the flight of the projectile, and discharge it within the cavity formed thereby.

No. 39,428.—C. C. STEARNS, of Homer, Champaign county, Ill.—*Improvement in Cultivators*.—Patent dated August 4, 1863.—This cultivator consists of a frame mounted on two wheels, with plough beams swivel-jointed to the front cross-bar, and rising, falling, or secured in vertical guides attached to the frame.

Claim.—The rising and falling bars F, having ploughs H attached to them, in connexion with the guides G, provided with the catches L, the above parts being arranged as shown, with the bars D D attached to the axle A and cross-bar E, as and for the purpose set forth.

No. 39,429.—FRANCIS B. STEVENS, of New York, N. Y.—*Improvement in Condensers of Steam Engines*.—Patent dated August 4, 1863.—The improvement consists in diminishing the amount of surface required in a surface condenser or cooler, without impairing the vacuum in the ordinary or common condenser, by combining a surface condenser or cooler with a double eduction. This is accomplished by condensing in an additional condenser (either by surface condensation or by a cooler,) the steam discharged from the cylinder by the first eduction pipe, and by maintaining in this additional condenser a temperature higher than that in the ordinary condenser, and by delivering into the latter the steam discharged from the cylinder by the second eduction.

Claim.—First, the general arrangement, construction, and combination for increasing the average difference between the temperature of the steam to be condensed or of the water to be cooled, and that of the cooling water by the combination of a cooler or of a surface condenser with a double eduction, in the manner herein described.

Second, in connexion with the combination of a cooler with a double eduction, the arrangement by which the water taken from the hot well of the common condenser is injected into the additional condenser, in the manner herein described.

Third, in connexion with the combination of a cooler with a double eduction the arrangement by which a separate cooler is used for each condenser, in the manner herein described.

Fourth, delivering the steam discharged by the first eduction from both the cylinders of two connected condensing engines into one condenser, and by delivering the steam discharged by the second eduction from both these cylinders into another condenser, in the manner herein described.

No. 39,430.—FRANCIS B. STEVENS, of New York, N. Y.—*Improvement in Steam Engines*.—Patent dated August 4, 1863.—This improvement dispenses with the valve moved by the mechanism of the engine to open and close the port, placed midway the length of the cylinder, and consists in proportioning the length of the stroke of the piston, and of the depth of the piston and its packing, and of the width of the midway port, so that this port shall not be uncovered by the piston until that part of the stroke is attained at which it is desired to withdraw the steam through the port, thus making the piston act as the valve to open the port.

Claim.—Taking the steam from the cylinder by the first eduction on the induction side, of the piston without the intervention of a valve moved by the mechanism of the engine, as herein set forth and described.

No. 39,431.—NATHAN P. STEVENS, of Boston, Mass.—*Improvement in Pistons for Steam Engines*.—Patent dated August 4, 1863.—In this improvement the steam is admitted within the hollow piston rings by impingement on the levers, which bear upon it through the medium of the differential pistons of the small cylinder in the piston head.

Claim.—In combination with the piston head and its expansive ring or rings, an apparatus by which, through the action of the steam used in the cylinder for propelling the main piston thereof, the pressure or rate of steam pressure for expanding the rings may be diminished with respect to the pressure or rate of steam pressure exerted on the piston to drive it, while such piston may be in operation within an engine cylinder.

Also, the apparatus, substantially as described, for diminishing the steam pressure on the piston rings relatively to that on the end of the piston, meaning to claim the apparatus whether inclusive or exclusive of the means, as described, for discharging the waste steam from the rear of the two concentric pistons of such apparatus.

No. 39,432.—JOHN STOCK, of New York, N. Y.—*Photographic Camera*.—Patent dated August 4, 1863.—The camera is so arranged, as to be folded together in small compass for transportation, and the plate holder constructed to combine with it the necessary baths required to prepare and complete the plates before and after the picture is taken; without the necessity of a dark room or place, to enable the operator to take pictures by the wet process under any circumstances.

Claim.—First, attaching the front part *a* of a camera to the movable bottom plate *n*, by means of a tongue piece *b*, fitted into a suitable groove and secured by a hook *d*, and brace *e*. Second, attaching the after part *g* of the camera to the sliding bottom *i*, by means of hinges 3, and secured by suitable braces.

Third, attaching the hinges 2, for the purpose of folding the bottom plate *n*, on the under side of said plate, in combination with the strips *o* and *o'*, arranged as described and for the purpose set forth.

Fourth, the strips *p p*, attached to the sides of the bottom plate *n*, acting on the side pieces *k*, of the sliding bottom *i*.

Fifth, the movable back plate *w* of the plate holder, together with its springs *x y* and *z*, and in combination with the extended after part *Z* of the plate holder, when arranged and operating in the manner and for the purpose substantially as set forth.

Sixth, the trough 8, attached to the inside of the back plate *w*, for the purpose of receiving the drippings of the glass plate, as well as to close the opening in the bottom of the plate holder.

Seventh, hanging the plate holder on the top of the after part *g* of the camera, by means of a suitable hook *q*, in combination with a slide plate *h*, attached to the after part *g* of the camera, said plate *h* having regular divisions, through which, in connexion with the pin 5, or its equivalent, the plate holder can be regularly moved, so that any desired number of pictures may be taken.

Eighth, the arrangement and combination of the frame 16, rod *S'*, with nose *S''*, to hold the glass plate *t* in connexion with the rod *S*, to operate the same, and the manner of liberating the glass plate, substantially as described.

Ninth, the arrangement of the packing 14, through which the rod *S* works, for the purpose described.

Tenth, the arrangement and use of the frame 15, with its guide 19, in a developing bath, for the purpose described.

No. 39,433.—J. S. THIBBETS, of Evansville, Ind.—*Improved Bell*.—Patent dated August 4, 1863.—The improvement consists in the shape of the bell, which is oval in horizontal section; and in the edge of its chime, which is prolonged by making the mouth of a "double-lip" form, so as to increase the length of the vibrating edge, and thereby increase and prolong the volume of sound.

Claim.—As an improved article of manufacture, a bell cast of oval form in its horizontal section, and a sinuous chime, as herein set forth.

No. 39,434.—GEORGE W. TRIPP, of Auburn, Cayuga county, N. Y.—*Improvement in Dental Plates*.—Patent issued August 4, 1863; antedated February 7, 1863.—The improvement consists in covering the vulcanized rubber base with a coating of gold plate, and in the bar and semi-spherical protuberance; incisions in the plate are made for the purpose of bracing and affording firm attachment between the rubber and metal.

Claim.—First, the lining coating or covering of vulcanized rubber or other vulcanized gums, when the same are used in dental plates, with a plating of gold or other suitable metal, substantially in the manner and for the uses specified.

Second, the concave band B, figure 2, substantially as and for the purpose specified.

Third, in combination with the gum and metallic plates, the spherical segments *c*, and the incisions D, as set forth.

No. 39,435.—SAMUEL VANSTONE, of Providence, R. I.—*Improvement in Rail Couplings for Railroads*.—Patent dated August 4, 1863.—The invention consists in making a bar of iron equivalent in form and dimensions transversely to one-half of the coupling, for the ends of the adjacent rails, when divided vertically; and in fastening two such half bars together by rivets and welding, and then cutting the said united bar into suitable lengths for coupling the ends of the rail together.

Claim.—The welding of two such half bars together, substantially as described, the bar thereby formed to be cut into the requisite lengths or pieces to form the aforesaid rail coupling, substantially as and for the purpose set forth.

No. 39,436.—HAZEN WEBSTER, of Elgin, Kane county, Ill.—*Improvement in Car Coupling*.—Patent dated August 4, 1863.—The invention consists in providing the head of a draw bar with a lateral curved projection so as to make it act as a bumper, and affixing to each bar a spring hook by which the cars are coupled.

Claim.—The curved projection C, in combination with a hook or catch D, so as to make the coupling operate also as a bumper, substantially as set forth and specified.

No. 39,437.—SAMUEL S. WEED, of Stoneham, Middlesex county, Mass.—*Improvement in Sole-Cutting Machine*.—Patent dated August 4, 1863.—The knife (making a semi-rotation after each cutting operation, so as to cut alternately heel and toe) strikes upon a rotating last-shaped cutting block so as always to point in the direction of the toe, giving a proper bevel. The semi-section of the knife is given by a pin on the rotating shaft of the knife acting in combination with grooves and spring valves in the boxes. The die and block are held by grooves in their ends, and by guides and the slotted vibrating cam admits of the machine being driven in either direction. The vibrating door prevents the cut soles from slipping through at the wrong time and impeding the machine, and the cutting block is regulated by a screw passing through the lever on to the toggle that carries the block shaft.

Claim.—First, rotating the die D, and a last-shaped cutting block, simultaneously, so that the toe of the knife shall always correspond with the toe of the block, substantially as set forth and for the purpose described.

Second, the particular combination of devices for giving a partial rotation of the knife or block, after each cutting operation, said devices consisting of the pin or roller *m*, grooves *X*, and spring valves *W*, substantially as and for the purpose described.

Third, holding the die and block, while the cutting operation is performed by means of grooves in their ends and the guides *P* and *Q* or their equivalents, substantially as set forth and for the purpose described.

Fourth, the slotted, vibrating cam *U*, arranged and operating substantially as described.

Fifth, the valve or door *s*, arranged and operating substantially as set forth.

Sixth, raising or depressing the cutting block by means of the screw *I*, strap *G*, lever *J*, and toggle *H*, substantially as described.

No. 39,438.—MARION J. WELLMAN, of New York, N. Y.—*Improvement in Lamp or Gas Shades*.—Patent issued August 4, 1863; antedated May 19, 1863.—The screens are made in sections and slide past each other so as to open a portion when desired.

Claim.—The employment of opening screens in combination with the shades, as and for the purpose set forth.

No. 39,439.—JOHN L. WHITING, of Portland, Me.—*Improvement in Brushes*.—Patent dated August 4, 1863.—This is an improvement in the method of attachment of the bristles to the handle. The bristles being bunched and the butts dipped in pitch, the pointed or wedge-shaped end of the handle is thrust in, splitting the bunch, and a conical ferrule slipped over, clamping them tightly.

Claim.—A brush with a wedge or cone-shaped point, in combination with a cone-shaped ferrule, the wedge or cone-shaped point being inserted into the butt end of the knot or bristles after being saturated with hot pitch or other resinous substance, as specified.

No. 39,440.—THOMAS J. WHITNEY, of Broad Axe, Montgomery county, Pa.—*Improvement in Railroad Car Brakes*.—Patent dated August 4, 1863.—These brakes are automatic in their action, and controlled by the momentum of the cars when brought into operation, making the specific momentum of each car determine the force of the brakes on its own wheels. The buffer-rods run through the entire train, and the braking power is exerted upon friction drums under the car bed on the axles of the wheels.

Claim.—First, combining with longitudinally-sliding buffer rods *D*, running in a continuous line through the entire train of cars, the lever *E*, connecting rod *F*, friction brake *G*, drums *H* *H'*, double ratchet wheel *J*, pawls *m* *m'*, wheels *k* *k'* *k''*, chain and rod *L* *L'*, and brake-bar *M*, all operating substantially as herein described.

Second, the spring *b*, applied to the buffer-rod *D*, in combination with the lever *E*, and operating substantially as herein described.

Third, the friction drums *H* *H'*, double ratchet wheel *J*, pawls *m* *m'*, in conjunction with the vibrating bifurcated brake *G*, and sliding buffer-rod *D*, operating substantially as herein described.

Fourth, the application of the compound gearing *k* *k1* *k2*, with the double ratchet-wheel *J*, drums *H* *H'*, and brake arms *g* *g'*, to the axle of a car, substantially as and for the purposes herein described.

No. 39,441.—JOHN HARBSTER, of Philadelphia, Pa., assignor to W. M. GRISCOM.—*Improvement in Closing Fruit Jars and other Vessels*.—Patent dated August 4, 1863.—A metal cover sets on the shoulder inside of the neck of the jar; an annular packing is inserted into the crack between the disk and the neck; a cover is fastened on to the packing by a screw passing through a yoke, and the cover has holes in for the insertion of a lever to pry it off.

Claim.—First, the disk *B*, of tinned plate or other anti-corrosive metal or other material, with its bevelled edge *m*, in combination with the plate *E*, and gum-elastic ring *n*, and the screw *E*, and yoke *D*, or other equivalent devices, for imparting pressure to the disk *B*, the whole being arranged, operating and applied to the mouth of the vessel, substantially as described.

Second, forming holes *f* in the cover *F*, for the purpose of readily withdrawing the said cover as described.

No. 39,442.—JAMES A. and HENRY A. HOUSE, of Brooklyn, N. Y., assignors to Themselves and AUGUSTUS G. SEAMAN, of New York, N. Y.—*Improvement in Sewing Machines*.—Patent dated August 4, 1863.—The improvements are sufficiently described in the claim.

Claim.—First, making the casing of a sewing machine in sections, so constructed and connected that they may readily be separated and the mechanism removed, and yet when the sections are united the mechanism shall be enclosed and protected, substantially in the manner described.

Second, mounting one of the guides by which the movements of the frame which carries the stitching mechanism are controlled, upon one section of the casing of a sewing machine, while the other guide and the adjusting gauge are mounted upon the other section, substantially in the manner described.

Third, mounting the stitching mechanism of a sewing machine in a frame which traverses upon the main framing or casing, is enclosed within it, and which can readily be detached therefrom, substantially in the manner described.

Fourth, the combination in a sewing machine of a travelling frame which carries the stitching mechanism and gearing, with a traversing screw mounted upon one end of the frame, and acting upon a fixed point on the casing, substantially in the manner described, for the purpose of traversing the frame as set forth.

Fifth, mounting the nut of the traversing screw by which the frame carrying the stitching mechanism is traversed, in an open bracket upon the casing, substantially in the manner described, for the purpose of readily detaching and removing the traversing frame, stitching mechanism and gearing, as set forth.

No. 39,443.—JAMES A. and HENRY A. HOUSE, of Brooklyn, N. Y., assignors to Themselves and AUGUSTUS G. SEAMAN, of New York, N. Y.—*Improvement in Sewing Machines*.—Patent dated August 4, 1863.—This invention is detailed with clearness in the claim.

Claim.—First, the combination with the presser foot of a sewing machine of a locking-lever, which raises and lowers and holds it in either position as desired, substantially in the manner described.

Second, the combination of an adjusting device on the presser-lever, with a locking lever, substantially in the manner described, for the purpose of adjusting the pressure upon the fabric as set forth.

Third, the combination in a sewing machine of a rigid presser-lever, an elastic presser-foot, and set screw, or other equivalent adjusting device, substantially in the manner described, for the purpose of adjusting the presser-foot to various thicknesses of fabrics, as set forth.

Fourth, a travelling button or disk through which the needle plays for the purpose of keeping down the edges of the fabric, as set forth.

Fifth, the combination with a loose perforated button of a tail or handle for the purpose of adjusting it, without injury to the fingers of the workmen, as set forth.

Sixth, mounting a perforated disk or button loosely in a slot in the presser-foot of a sewing machine, substantially in the manner described, so that it is free to rotate or traverse with, and yet can readily be removed from the needle, while at the same time it is always kept in place, as set forth.

Seventh, the combination of a perforated travelling button with guides or standards on the stitching plate of a sewing machine, substantially in the manner described, for the purpose of holding the button in the proper position while travelling with the needle, as set forth.

Eighth, the combination in a sewing machine of a presser-foot, a disk or button, and a stitching mechanism, in such manner that the button while held in the former travels freely with and conforms to the movements of the latter.

Ninth, the combination in a sewing machine of a clamping device which holds the fabric to be sewed, an eye pointed needle, and a thread carrier or looper, both of which penetrate the fabric and a perforated disk or button connected with the clamping device and conforming to the movements of the stitching mechanism in such manner as always to keep down the edges of the fabric while the stitches are being formed therein.

No. 39,444.—JAMES A. and HENRY A. HOUSE, of Brooklyn, N. Y., assignors to Themselves and AUGUSTUS G. SEAMAN, of New York, N. Y.—*Improvement in Sewing Machines*.—Patent dated August 4, 1863.—The improvements consist, firstly, in arranging the tension apparatus of both needles under the bed-plate or table, leaving a clear space above for the operator; secondly, in combining a frog or gripping lever with the rotary disk or frame upon

which the stitching mechanism is mounted in such a manner as to rotate the disk at the proper moment to work around the edge of a button hole or to commence a new one; thirdly, in combining an eccentric and an adjustable arm with the needle mandrel, for the purpose of graduating the length of its stroke and consequently the length of stitch; fourthly, in driving the looper or threaded carrier by means of a cam mounted on a collar connected with the needle mandrel in such a manner that the movements of the needle and thread carrier shall be isochronous; fifthly, in mounting the tension posts loosely in the disk which carries the stitching mechanism to facilitate the adjustment of the tension.

Claim.—First, arranging the tension apparatus of both needles or the needle and looper or shuttle of a sewing machine underneath the bed-plate, substantially in the manner described.

Second, the combination of a frog and a gripping lever, substantially in the manner described, for the purpose of rotating the stitching mechanism when working the eye of a button-hole, as set forth.

Third, the combination of the eccentric O and adjustable arm O' with the needle mandrel, substantially in the manner described, for the purpose of graduating the length of the stroke of the needle mandrel, as set forth.

Fourth, the combination of the needle mandrel, the collar S, and the vibrating cam S' with the shaft of the thread carrier, substantially in the manner described, for the purpose of rendering the movements of the needle and thread carrier isochronous, as set forth.

Fifth, the combination of the loose or removable tension posts T with the rotating disk, substantially as described.

No. 39,445.—JAMES A. and HENRY A. HOUSE, of Brooklyn, N. Y., assignors to Themselves and AUGUSTUS G. SEAMAN, of New York, N. Y.—*Improvement in Sewing Machine.*—Patent dated August 4, 1863.—The devices and operation are described with sufficient clearness in the claim.

Claim.—First, the combination in a sewing machine of a slotted or grooved needle shank or bar with a looper or thread-carrier which plays within the slot, substantially in the manner and for the purpose described.

Second, mounting the looper rock-shaft of a sewing machine in bearings adjustable relative to the needle with which the looper co-operates in forming a stitch, substantially in the manner described, whereby we are enabled to use loopers of different sizes and thus to vary the stitch, as set forth.

Third, the combination in a sewing machine of an eye pointed needle which works up from beneath the table and penetrates the fabric, with a looper or thread-carrier, also working up from under the table, penetrating the fabric and playing in a slot in the needle arm, substantially in the manner described.

Fourth, the combination of the adjustable thread guide with the needle mandrel, substantially in the manner and for the purpose set forth.

Fifth, the combination of the friction springs π 2 and rotary disk, as and for the purposes described.

Sixth, the combination of the forked shifting lever and friction rollers with the rotary disk in the manner described, for the purpose set forth.

Seventh, mounting the spool-cases on a bar or bracket attached to the disk in such manner as to leave a space between the bottom of the spool-cases and the disk for the guides, as set forth.

No. 39,446.—SETH H. INGALLS, of New Bedford, Mass., assignor to Himself, JOSHUA K. INGALLS, and WM. S. SAMPSON, of New York, N. Y.—*Improvement in Oil Tanks.*—Patent dated August 4, 1863.—The tanks, open at bottom, are submerged in cisterns of water, which is displaced as they fill from below, and fills up into them as the oil is discharged from their top by syphon or pump.

Claim.—First, the tank, arranged substantially as specified, for the purpose of holding oils, &c, under water, so as to sustain the oils against the top of the tank by the pressure of water and thereby prevent all possibility for accumulation of gases or vapors and all danger of fire or explosion therefrom.

Second, the method, substantially as specified, for introducing and discharging the oils by hydraulic force.

No. 39,447.—JONATHAN L. JONES, of St. Louis, Mo., assignor to Himself and JAMES V. WESTLAKE, of same place.—*Improvement in Truss Bridges.*—Patent dated August 4, 1863.—The bridge consists of chords, stringers, braces, and screw-rods, arranged so that the parts will accommodate themselves to the change of camber resulting from heavy loading or the variations of temperature, and also in the means for reproducing or restoring the camber after it has been impaired.

Claim.—First, the production of a camber or "verse sine" or changing or reproducing the same in a truss bridge, by means of plates H, or their equivalents, applied in combination with longitudinal sections of the upper stringer, substantially as set forth.

Second, the construction of the plates H with bolt holes, in combination with the perforated

blocks and perforated flanges of the longitudinal sections of the upper stringer, substantially as and for the purposes set forth.

Third, the use of the plates H in combination with the blocks E, tie-rods B, and braces D D', substantially as and for the purpose set forth.

Fourth, the combination of the plates H, blocks E, tie-rods B, braces D D', and upper and lower sectional stringers, substantially as and for the purposes set forth.

No. 39,448.—OSCAR H. KRATZE, of Leipsic, Kingdom of Saxony, assignor to FERDINAND F. MANGELSDORF, of Stapleton, N. Y.—*Improvement in Gas Engines.*—Patent dated August 4, 1863.—The invention consists of a cone covered with absorbent material and saturated with hydro-carbon and placed in such relation to the cylinder that by the suction of the piston a current of air is caused to pass by it and become charged with vapor to be ignited in the cylinder. The saturation of the air with vapor is regulated by an outer cone, which is in proximity to the absorbent-charged surface by compelling the air to a more or less immediate contact therewith, so as to obtain a proper relative amount of hydro-carbon vapor and atmospheric air for combustion. The flame is prevented from burning back to the generator by means of the interposition of wire-gauze plates in the induction ports of the cylinder.

Claim.—First, the arrangement of the cone e, covered with some absorbent material, in combination with the adjustable cone f and cylinder A, constructed and operating in the manner and for the purpose substantially as described.

Second, the arrangement of one or more layers of wire-gauze in the induction ports, substantially as and for the purpose set forth.

No. 39,449.—ROBERT H. LONG, of Philadelphia, Pa., assignor to JOSEPH GRICE, of New York, N. Y.—*Improvement in Operating Gun Carriages.*—Patent dated August 4, 1863.—The invention consists in lifting the gun carriage from the ways to its bearing upon the wheels by the act of drawing it in or out of battery, so that when not being operated the wheels are free. This is accomplished by double wedges running between rollers in the pedestal by which the carriage is lifted.

Claim.—First, so combining the axle bearings E E with the carriage and with tackles for working the gun that when there is no strain on the said tackles the body of the carriage will rest directly on the bed with its wheels free, but that by the act of hauling on the tackles to run the gun in or out the weight of the gun and carriage is brought on the wheels so that the carriage will run freely, substantially as herein described.

Second, the employment for combining the axle bearings with the carriage and tackle of a novel system of double wedges I I and levers J J, applied to operate substantially as and for the purpose herein described.

No. 39,450.—C. E. MEADE and G. E. STEVENSON, of Denmark, Lee county, Iowa, assignors to C. E. MEADE, aforesaid.—*Improvement in Cultivator.*—Patent dated August 4, 1863.—The improvement consists in the arrangement for the vibration of the ploughs so as to follow the sinuosities of the rows, and it consists of a pivoted lever and sliding bar with pendants attached to the beams, while the beams are moved vertically by means of treadles and ropes which pass over pulleys and are attached to the beams.

Claim.—The slide bar G attached to the axle A, substantially as shown, and provided with the pendants H H, in combination with the lever I, plough-frames J J, shield or guard L, and treadles K K, all arranged to operate as and for the purpose herein set forth.

No. 39,451.—G. W. SMITH, N. B. VOSBURGH, A. I. KRAMER, and W. L. WINTER, of Linn county, Iowa.—*Improvement in Beehives.*—Patent dated August 4, 1863.—The doors are on each side of the hive and the comb-frames are supported on slides which traverse in metallic ways, so as to be slipped into or out of the hive.

Claim.—The slide E in combination with the metal sheaths b, the comb-frames h, and the doors B, the whole constructed and arranged in the manner and for the purpose herein set forth.

No. 39,452.—SMITH E. G. RAWSON, of Saratoga Springs, N. Y.—*Improvement in Testicle Supporter.*—Patent dated August 4, 1863.—This consists of a pouch suspended from a belt and having straps to hold it in position. Other points in the invention are obvious from the illustration.

Claim.—First, a suspensory for the testicles, composed of the elastic waist-band d, bag a, and elastic buttock straps g g, constructed and arranged substantially as described.

Second, making the bag a with a penis opening b through it, surrounded by a rubber or other elastic band c, substantially as described, said bag being furnished with elastic straps d g g, for the purposes set forth.

No. 39,453.—THOMAS C. BALL, of Springfield, Windsor county, Vt.—*Improvement in Ventilating Apparatus for Wounded Limbs.*—Patent dated August 4, 1863.—This invention consists in a trough, above which are longitudinal supports to hold the webbing or other suitable traverse support for a wounded limb, together with a fracture box and foot-rest, and above a water box with dripping points to keep a moderate supply of water on the limb.

Claim.—A ventilating trough constructed of any suitable substance or materials, with rods or slats raised above the trough proper, to which are secured the bands or supports for the wounded limb to rest on, in the manner and for the purposes set forth, or in any equivalent form.

Also, in combination with said rods or slats a fracture box, as set forth.

Also, in combination with said rods or slats a foot-rest, as set forth.

Also, in combination with said trough proper and rods or slats the water fountain, as set forth.

Also, in combination with the water fountain the dripping pins, in the manner and for the purposes set forth.

No. 39,454.—WILLIAM V. PERRY, of Burnett, Dodge county, Wis.—*Improvement in Take-up for Sewing Machines.*—Patent dated August 4, 1863.—The invention consists of an elastic rod, provided at or near one end with an eye for the reception of the thread, and attached at the other end to a rigid bar regulated in the degree of its elasticity, by means of a sliding strap, which varies the working length of the rod.

Claim.—The combination of the elastic rod A, bar B, and shifting strap C, arranged and operating substantially as and for the purposes set forth.

No. 39,455.—JOHN S. ADAMS, of Taunton, Mass.—*Improvement in Breech-loading Firearms.*—Patent dated August 11, 1863.—By pivoting the breech-block within its frame, in the manner described in the claim, great facility is afforded for taking it out for cleaning or repair. The packing-piece and taper screws, which constitute the subject of the second claim, are for tightening up the breech-block against the rear of the barrel, to compensate for wear. To adapt the sight to be employed as a rammer, it is pivoted at *r*, and made sufficiently long to afford the requisite leverage. When the chambered breech-block is turned up to its open position, the cartridge inserted therein, and the sight turned up on its pivot, a cup in the projecting part of the sight fits over the front of the ball, so that by drawing back the upper end of the sight or lever the ball may be forced into the chamber.

Claim.—First, the pivoting of the breech within the frame by means of the rings *b b*, or their equivalents, having combined with them the springs *c c*, and the false trunnions *f f*, the whole applied and operating substantially as herein set forth.

Second, the packing-piece *k* combined with the movable breech by means of the taper screws *m m*, substantially as and for the purpose herein set forth.

Third, so constructing and applying the sight E, that it constitutes a rammer to operate in combination with a movable chambered breech, substantially as and for the purpose herein specified.

No. 39,456.—J. L. ALBERGER, of Buffalo, N. Y.—*Improvement in Refrigerating Apparatus.*—Patent dated August 11, 1863.—A series of pipes or air-passages, open at both ends, are arranged in a case *a*. A chamber *c*, provided with a head *d*, is connected with a passage *f*, with a reservoir D which contains the water or other evaporating fluid, which, when condensed, is caught in a pan or receiver F. An air-trap E allows the condensed fluid to escape without admitting air therein. The air is driven through the cooling chamber by a fan I, which may be worked by any suitable motor.

Claim.—An apparatus constructed substantially as herein described for cooling the air of a closed apartment, by causing it to circulate naturally or unforced through the apartment, and through and in contact with pipes or plates which are artificially cooled by an evaporating fluid and a forced current of air, in the manner substantially and for the purpose described.

No. 39,457.—MANOAH ALDEN, of Philadelphia, Pa.—*Improved Universal Chuck.*—Patent dated August 11, 1863.—A circular plate is fitted to an outer case, on the front face of which are cut radial slots attached by pins to the jaws of the chuck. A portion of the edge of the case is cut away for the admission of a worm spindle, which fits into spiral teeth on the side of the plate. The key of the spindle being turned, the plate revolves, carrying the pins with the jaws inward, grasping firmly any object placed between them.

Claim.—First, the combination of the plate C and its spiral teeth with the screw spindle D, when both are applied to the case A of the chuck, and arranged to operate the jaws *a a a*, substantially in the manner described.

Second, the combination of the jaws *a*, pins *d*, and plate C with its curved slots, the whole being constructed and arranged within the case substantially as described.

No. 39,458.—JOHN BAIRD, of New York, N. Y.—*Improvement in Steam Engines.*—Patent dated August 11, 1863.—The object of the invention is to prevent the unequal wear or cutting which arises in horizontal or inclined cylinders, from the fact that the lower side of the bore carries the weight of the piston; and this improvement consists in supporting the weight of the piston upon a rod or rods, which, fastened at each end of the cylinder, pass through the piston.

Claim.—First, in combination with a piston and a cylinder, a stationary rod or rods passing through the piston, and operating substantially as specified, the combination being substantially such as described.

Second, a bush or sliding block and appropriate packing in combination with a piston, a stationary rod and a cylinder, the whole acting substantially in the manner and for the purpose set forth.

Third, in combination a cylinder, a piston, and a stationary rod, operating in combination as described, where the latter is likewise combined with the cylinder covers or heads as described, whereby the rod performs the double duty of sustaining the piston and the cylinder heads, substantially as set forth.

No. 39,459.—WILLIAM BRAND, of Burlington, Des Moines county, Iowa.—*Improvement in Dish Heaters.*—Patent dated August 11, 1863.—This improvement consists of a shallow extended box with a horizontal division, set upon adjustable legs, and with furnaces underneath; the lower section constituting a smoke and heating chamber, and the upper one having its floor covered with water, constituting a steam chamber, with orifices above, for the setting in of plates, &c.; communication between the two above water-mark is made by pipes by which surplus steam escapes into the smoke-chamber.

Claim.—First, the combination of chambers G B with a stove or stoves A, and steam-pipes *h h*, and domes *g g*, the whole constructed and operating substantially as and for the purposes described.

Second, in combination with the horizontal chambers or box herein described, the adjustable standards or legs *k k*, for the purpose of keeping the water pan level as set forth.

Third, the arrangement of stoves A A beneath a shallow horizontal box, constructed with the dish-holding plate C, water-chamber G, smoke-chamber B, and a direct steam and smoke escape flue *b*, substantially as described.

No. 39,460.—CLARISSA BRITAIN, of St. Joseph, Berrien county, Mich.—*Improvement in Ambulances.*—Patent dated August 11, 1863.—In this improvement the couch is suspended upon carrying poles, which at their ends rest upon bars, supported by springs, the latter permanently fixed to a bar adjustable vertically in posts at the corner of the wagon.

Claim.—First, the removable slotted posts B, in combination with the transverse bars or rails G G', springs H, holding-down bars J J, and wagon body A, all arranged and operating substantially as and for the purposes described.

Second, suspending the stretchers E E upon poles *c c*, arranged and supported upon springs substantially in the manner herein described.

No. 39,461.—LAURA M. BRONSON, of New York, N. Y.—*Improvement in Fastening for Studs and Buttons.*—Patent issued August 11, 1863; antedated December 31, 1862.—The invention consists in making the button of a metal ring or S-shaped wire, with a portion so arranged as to form a cross-bar to the other portion, the part so formed being bent in the middle so as to form a counter eye or rest for the button eye, so that it may remain fixed in place, and not work or slide upon the bar.

Claim.—The ring or S-shaped wire of metal with the cross-bar and counter eye, as shown and for the purposes set forth as specified.

No. 39,462.—WILLIAM FELIX BROWN, of New Bedford, Mass.—*Improvement in Invalid Back-Rests.*—Patent dated August 11, 1863.—This rest consists of a cushioned and spring frame, backed with cloth or felt, and retained in any desired position by a hinged frame underneath, the latter inclined more or less by latches pivoted to the upper member of the swinging frame, and falling into notches on the lower member of the same.

Claim.—An improved invalid back-rest as made of a cushioned frame D, a series of helical springs F F', an auxiliary frame E, a covering of cloth or ratan *b*, and the two frames A B (hinged together and provided with a latching apparatus,) arranged in manner and so as to operate as specified.

No. 39,463.—W. W. BURSON, of Atkinson, Henry county, Ill.—*Improvement in Grain Binders.*—Patent dated August 11, 1863.—This machine binds the grain wire with upon the reaper platform; the gavel having been placed thereon, the handle of the wire lever is shoved forward, the ratchet rod acts continuously to tighten the wire, the cam rod presses the slide, forcing the wire into position, and the spring compressors are thrown around the gavel, releasing the strain on the wire; the crank P is then grasped, the finger depressing the spring V, acting upon the strap catch W, raises it out of the notch, and the crank is turned one revolution; this turns the pinion T, the cam of which raises a hook, opening the jaws of the pliers, assisting the spring in cutting the wire. It is then fastened by the rotation of the twisting claws; the lever A is raised, and the sheaf removed with the foot.

Claim.—First, the combination of the wire-lever A and double grooved supports B B overhanging the gavel, constructed and operating substantially as described.

Second, the combination of the slide D, cam-rod I, and lever A, acting substantially as described and for the purpose set forth.

Third, the combination of the spring-rod *x* and coil-spring Y, with lever A and slide D, acting as set forth.

Fourth, the combination of the spring pliers *b*, slide D, and twisting claws *c*, substantially as described.

Fifth, the combination of the ratchet rods L L', ratchet pulley M, springs O O', and lever A, acting substantially as described, and for the purpose set forth.

Sixth, the combination of the spool G, wire-covering belt H, and bar Q, substantially as set forth.

Seventh, the combination of the crank P, spring U, rod m, drop catch W, and wheel T, acting substantially as described.

Eighth, the combination of the hook a, cam d, and pliers b, acting substantially as described and for the purpose set forth.

No. 39,464.—H. M. & W. W. BURSON, of Atkinson, Ill.—*Improvement in Grain Forks*.—Patent issued August 11, 1863; antedated July 3, 1863.—The improvement consists in making a sliding pitman in the handle of the fork, the protrusion of which projects a thumb, which clasps the gavel as in a hand.

Claim.—First, attaching to a grain fork the clasp C, for the purpose set forth.

Second, the combination of the handle A, fork B, clasp C, and pitman D, acting substantially as described and for the purpose set forth.

No. 39,465.—S. S. and DANFORTH CHENEY, of Galesburg, Knox county, Ill.—*Improved Lathe for Turning Locomotive Crank Pins*.—Patent dated August 11, 1863.—To the face of the wheel, spanning the hub, is a bridge secured to the spokes; slides across this afford a means of adjustment for a head, which spans centrally the crank pin. Within this circular head is a rotating frame, pivoted at its outer end in a frame, which likewise supports the driving gearing, which rotates the frame, in a rod of which latter is a slide carrying the cutter.

Claim.—The plates A D, in connexion with the revolving tool or cutter frame composed of the ring t, disk r, and rods s, and provided with a sliding head H, having a tool stock a' attached to it and operated through the medium of the screw r, star wheel r', and pin u, all arranged to operate substantially as and for the purpose herein set forth.

No. 39,466.—M. C. COGSWELL and A. G. WILLIAMS, of Buffalo, N. Y.—*Improvement in Grain Dryers*.—Patent dated August 11, 1863.—The case, in which the cylinder with its radial wings revolves, has an opening on one side above the centre in such a way that as the grain is carried round it cannot be crowded out, but all volatile or light matter may freely pass. The grain is fed in at one end of the case and discharged at an orifice at the other end, being exposed in its passage to a longitudinal passage way or slit for evaporation and removal of dust.

Claim.—An orifice or opening made at the side of the case, in such a manner that it will open upwardly and prevent the grain from passing out, and at the same time increase the pressure and effectiveness of the air within, and also allow the evaporation, dust, air, &c., to escape, substantially as set forth.

Also, the jacket B (with or without its lid b') in combination with the case A, for the purposes and substantially as described.

No. 39,467.—D. M. COOK, of Mansfield, Richland county, Ohio.—*Improvement in Cane Mills*.—Patent dated August 11, 1863.—This invention consists in making the rollers of a circular wedge form, or with deep angular corrugations fitting corresponding wedge-shaped protuberances on the other rollers, presenting large crushing surfaces which act so as to splinter the rind of the cane, but not break it transversely, and to expose the pith without forcing out the bitter, albuminous and coloring matter of the rind; sufficient friction is produced between the rollers that the motion of the one driven by the pulley is communicated to the others without the intervention of gearing. A director plate, between the two auxiliary rollers, fitting the outline of their shape, is placed vertically between them so as to direct the cane between the second crushing surfaces, and a scraper is placed in connexion with the primary roller to remove adhering matter.

Claim.—First, the matching circular wedges arranged on and constituting the splintering and expressing surfaces of a roller-cane mill, substantially as and for the purposes set forth.

Second, a roller cane mill constructed to operate upon the cane with the one series of interlocking rolls, in the manner set forth.

Third, splintering cane, expressing the juice therefrom, driving the ungeared rolls and relieving the journals of the rolls, by means of circular wedges, as set forth.

Fourth, the combination of the rollers, director C and scraper f, all constructed and arranged substantially as described.

No. 39,468.—C. T. DAY, of Newark, N. J.—*Improved Fastening for Skates*.—Patent dated August 11, 1863.—This improvement consists of a method of securing the skate to the boot, by means of approaching clamps which grasp the sole and heel. Clamping jaws are attached to two plates, from which depend pins which traverse in eccentric slots in a circular rotating plate. As the pins traverse, they approach each other and cause the jaws to impinge upon the sole and heel, and the parts are held in position, a pin traversing an eccentric slot in the plate.

Claim.—Operating or adjusting the bars D, which have the jaws d, at their ends through the medium of the circular plates E, arranged so as to turn on pivots g, and provided with

eccentric slots f, into which pendent pins e, at the inner ends of the bars D, are fitted, substantially as and for the purpose set forth.

Also, holding the plates E, and consequently the jaws d, in proper position by means of the pendent screws j, attached to the plates C, and passing through eccentric slots i in the plates and having thumb-nuts F fitted on them substantially as described.

No. 39,469.—GEORGE DRAPER, of Milford, Worcester county, Mass.—*Improvement in Let-off Mechanism for Looms*.—Patent dated August 11, 1863.—This device operates by a detent and escape wheel, to let off yarn from the beam, and at the same time to prevent the beats of the reed of the lay against the cloth from operating to cause the "let-off" mechanism to let off yarn from the beam. The action of the let-off is arrested while beating up with the lay, and the recession of the lay allows the let-off mechanism to be operated by the strain of the warps and cloth.

Claim.—A combination consisting not only of the escapement detent lever k, its wheel i, and the apparatus as described for depressing or operating such detent lever, but of a stopping mechanism, (viz., the lever G and its connecting rod I,) to be operated by the lay, or while the lay may be beaten up, the whole being arranged substantially as and for the purpose specified.

No. 39,470.—ALFRED EDWARDS, of Chicago, Ill.—*Improvement in the Construction of Sheet-Metal Tanks*.—Patent issued August 11, 1863; antedated May 18, 1863.—Two sides and the bottom being cut of suitable shape, out of a sheet of metal, the remaining two ends and the bottom are cut as before; the bottoms being laid over each other, and the sides, &c., bent up. The angles are joined, or lapped, according to the shape they have been cut, making a receptacle of two pieces of sheet metal with a double bottom.

Claim.—Not only the construction of a receptacle with a double bottom, by means of cutting and bending two pieces of the material, &c., in the manner as set forth and described, but also by means of cutting and bending any number of pieces according to the size and shape of the receptacle; the pieces in all cases to be laid crosswise on each other, so as to form a bottom of two or more thicknesses.

No. 39,471.—HOSEA ELLIOTT, of New York, N. Y.—*Improvement in Lighting Street Lamps*.—Patent dated August 11, 1863.—This consists of a lamp and case; the former is capable of being tilted by a thumb-piece and connecting rod so as to project the wick tube and light outside of the case, opening the hinged door for the purpose; and on the return of the lamp to its vertical position the door is closed by a spring.

Claim.—The arrangement of the tilting lamp A, in combination with the case C, self-closing door d, pole B, and thumb-piece D, all constructed and operating in the manner and for the purpose substantially as shown and described.

No. 39,472.—R. B. FITTS, of Philadelphia, Pa.—*Improvement in Treating Night-Soil for Agricultural Purposes*.—Patent issued August 11, 1863; antedated December 19, 1862.—The improvement consists in fermenting the night-soil in close vessels connected with a gas-receiving chamber, precipitating the fertilizing matters of the urine with solid fecal matter, absorbing the gases with sulphate of lime and charcoal, mixing the compound with the fecal matter, and reducing all to a pulverulent condition.

Claim.—The process herein described and specified, for the purposes set forth.

No. 39,473.—ADDISON C. FLETCHER, of New York, N. Y.—*Improved Paddle Wheel*.—Patent dated August 11, 1863.—The frame of the wheel consists of three rings, and the floats consist of curved plates attached between the rings, arranged in series, and alternating on each side of the central ring.

Claim.—The construction of a paddle-wheel with alternating narrow semi-parabolic or curvilinear buckets D E F, arranged in series as described, and rings C C C', outside of and between the said buckets, the whole combined and arranged substantially as herein described.

No. 39,474.—HANNIBAL FOLSOM, of Milford, Mass.—*Improvement in Welt Guide for Sewing Machine*.—Patent dated August 11, 1863.—The welt guide is made with a bottom plate and end wall and a top plate; the distance between the upper and lower plate being sufficient to allow the welts to pass easily through, while the tension is produced upon them by a spring which, projecting through the lower plate, presses the welt against the upper surface.

Claim.—In combination with the gauge B, the welt guide C, made with the bearing surfaces a b c, and with a spring g, or its equivalent, for keeping the welt in lateral position, and for creating tension upon it, as set forth.

No. 39,475.—E. T. FORD, of Stillwater, Saratoga county, N. Y.—*Improvement in Potato Diggers*.—Patent issued August 11, 1863; antedated October 23, 1862.—A frame on wheels carries two vertical shafts, armed with teeth and scrapers, respectively, which rake and separate the potatoes out of the earth, which is raised by the broad, flat share. A yoke carrying plough-shares is suspended forward of the wheels, to throw a furrow-slice outward on each side.

Claim.—First, the combination and arrangement of the two rotating wheels, one armed with teeth *a a a*, the other with scraper blades *K K*, separately or combined, the frame *C C* and the divider *D*, all constructed and operating substantially as and for the purpose above described.

Second, and in combination with the above, the arrangement of the yoke *G*, ploughs *F F*, flange *S s*, lever *H*, gauge bar *i*, double flange *Y*, and driving wheels *A A*, as and for the purpose above described.

No. 39,476.—JOHN C. FULLER, of Chicago, Ill.—*Improvement in Mounting Artificial Teeth.*—Patent dated August 11, 1863.—This dental plate consists of a rubber base and porcelain alveolar process enveloping the fangs of the teeth, and a platina plate between the gums and the base, to which the teeth are anchored by pins.

Claim.—First, constructing a platina or other metallic base plate for the teeth and gums, with grooves and hooks, or other suitable anchorages, in the trough of this plate, substantially as described.

Second, the combination of continuous porcelain gum *a*, having the teeth *b* affixed therein substantially as described, with a vulcanized rubber base, substantially as and for the purposes herein described.

No. 39,477.—THOMAS GARRICK, of Providence, R. I.—*Improved Spur for Horsemen's Use.*—Patent dated August 11, 1863.—The shank is screwed into the heel of the boot, and thereby compresses the points on the clamps into the leather, so as to bind the sections of leather together and retain the spur in position.

Claim.—The improved spur for horsemen's use described, consisting of a spur with a screw shank *D* and a compressing and supporting clamp *B*, provided with the spur points *a a a*, or their equivalents, substantially as and for the purposes specified.

No. 39,478.—R. W. GREEN, of Bradford, McKean county, Pa.—*Improvement in Dumping Wagons.*—Patent dated August 11, 1863.—The invention consists of a wagon with a semi-cylindrical bed, having a longitudinal orifice in the bottom, which is closed with segmental doors attached by arms to a centre of rotation, and capable of being vibrated by windlass and chain, so as to open the bottom and discharge the contents of the bed.

Claim.—The box or body of the dumper, constructed with circular sides *J J* and hinged sections *M M*, in combination with the pivoted frames *K K*, all arranged and operating substantially as and for the purposes specified.

No. 39,479.—HENRY GROSS, of Tiffin, Seneca county, Ohio.—*Improvement in Breech-loading Fire-arms.*—Patent dated August 11, 1863.—This fire-arm has a movable breech plug connected to and moving with the lever guard, for opening and closing the breech of the barrel, and allowing the insertion of the cartridge. On the forward end of the breech plug is a projection fitting within an enlargement at the rear of the barrel when driven home. The operation is performed by the vibration of the trigger-guard, which is pivoted to the breech plug eccentrically, so as to withdraw or project the plug in a rectilinear line until it is out of range of the bore. Above the breech plug, and connected to it, is a plate pivoted to the stock, which, when depressed, forms a guide for the insertion of the cartridge. A segment on the eccentric closes behind the plug when locked for firing.

Claim.—First, as an auxiliary device to a breech-loading fire-arm operating substantially as described, the pivoted guide *E* working in the slot *D*, and maintaining during its up and down movement in the path of a circle a close relation between its forward end and the breech end of the gun barrel, substantially as and for the purpose set forth.

Second, connecting the plug-carrier *F* to the guide *E*, substantially as described.

Third, the construction of the slot *D*, with its face *a* concentric with the axis *a'* of the guide *E*, in combination with the auxiliary device *E* and breech-piece *F c*, substantially as and for the purpose described.

Fourth, a breech-piece *F*, with plug *c* on its front end, made so as to receive an eccentric within it, and to wholly encircle the same, and also to admit a wedge segment *J* in rear of it, and likewise to admit a guide *E* above it, all substantially as and for the purpose set forth.

Fifth, the combination of the guide *E*, sliding segment *F*, and eccentric *G*, substantially as described.

Sixth, the combination of the lever *H*, segment *J*, eccentric *G*, breech-piece *F c*, space-closing device *E*, and peculiarly-formed slot *D*, substantially as and for the purpose set forth.

No. 39,480.—W. H. GWYNNE, of White Plains, Westchester county, N. Y.—*Improvement in the Manufacture of Water-Gas.*—Patent dated August 11, 1863.—The steam is decomposed by being passed through molten metal, for the purpose of obtaining the hydrogen for illuminating purposes.

Claim.—Passing steam, superheated or otherwise, through melted metal or ores, for the purposes described and shown.

No. 39,481.—JOSEPH CHARLES HOWELLS, of Washington, D. C.—*Improvement in Filling Moulds with Vulcanizable Gums.*—Patent dated August 11, 1863.—The vulcanizable gum is contained in a syringe, and injected into the space between the upper and lower parts of the flask, whose surfaces represent the required configuration.

Claim.—The introduction of vulcanizable gums into moulds or flasks by injection, substantially as set forth, and by the apparatus herein described, or its equivalent.

No. 39,482.—JOSEPH CHARLES HOWELLS, of Washington, D. C.—*Improvement in Secret Pockets of Wearing Apparel.*—Patent dated August 11, 1863.—The improvement consists in providing the pocket with a lapel independent of the ordinary one, the former one covering a secret pocket.

Claim.—A secret lapelled pocket to be worn in garments, substantially as specified and herein set forth.

No. 39,483.—H. R. HUIS, of Hayward's, Alameda county, Cal.—*Improvement in Gang-Ploughs.*—Patent dated August 11, 1863.—The plough frame is mounted upon a crank axle on wheels, and the crank is caused to rotate under the vibration of the lever, so as to raise and lower the beam and vary the depth of the furrow. By means of the slotted oval and the projecting pin from the axle, the position of one wheel may be relatively lowered, so as to run in a furrow and preserve the machine in a horizontal position.

Claim.—The peculiar arrangement, construction, and application of the axle *D* and arm *E*, the slotted oval *a*, and the spring slide and lever *A B*, for the purpose herein specified and described.

No. 39,484.—RICHARD KUHFS, of St. Louis, Mo.—*Improved Smoothing-Iron.*—Patent dated August 11, 1863.—This smoothing-iron is constructed with a grating in the bottom, a register plate in the rear, a hinged lid, and ventilating apertures on the upper part of the sides, under the edge of the lid.

Claim.—The arrangement and combination of the body *A*, spaces *a*, hinged lid *B*, and grate *g*, all being constructed, arranged, and adjusted to operate substantially as herein shown and specified, for the purposes set forth.

No. 39,485.—ROBERT H. LECKY, of Allegheny, Pa.—*Improvement in Piston Valves for Steam Engines.*—Patent dated August 11, 1863.—In this invention the steam is introduced and exhausted between piston valves in a cylindrical valve-chest so arranged that the pressure is always equal in both directions.

Claim.—The arrangement of the open end side pipe or steam chest *C*, heads *g g* and *F F* on the valve rod *E*, exhaust openings *h h*, and steam ports *i i*, the whole being arranged, constructed, and operated substantially as herein described and for the purpose set forth.

No. 39,486.—CONRAD LIEBRICH, of Philadelphia, Pa.—*Improvement in Padlocks.*—Patent dated August 11, 1863.—The improvement consists in the construction and operation of the lever, which is so operated by the bit of the key as to eject the loop of the shackle when the bolt is withdrawn, and retain the latter. For this purpose it rocks upon a pivot, under the pressure of the key, which likewise raises and adjusts the tumblers and springs the bolt.

Claim.—The lever *D*, in combination with the shackle *B* and the spring *n*, or its equivalent, when the said lever is formed and hung to the lock substantially as set forth, for the twofold purpose of throwing up the shackle when the bolt is withdrawn from the same, and of retaining the bolt when withdrawn, as described.

Also, forming on the lever *D* a projection *t*, arranged substantially as described, so as to serve the purpose of a cross-ward.

No. 39,487.—MARVIN LINCOLN, of Malden, Mass.—*Improvement in Artificial Arms.*—Patent dated August 11, 1863.—The fore and upper arm are hinged together and provided internally with a lock plate and catch to retain them in a flexed position when required; to release the forearm, a projecting catch is touched which releases the lock plate and allows the arm to swing; to fasten it flexed, it is thrown forward, when the lock catches of itself. The hand is secured on to the forearm, and the fingers and hand are made rigid, and in a grasping position; the thumb has a constantly acting internal spring and retains articles placed in the grasp between the thumb and fingers.

Claim.—Applying to an artificial arm a detachable hand made capable in itself of holding and grasping in the manner as set forth, and of being removed for the attachment of a hook or other instrument by the mechanism described.

Also, the combination of hinges *i*, joints *h*, spring *s*, and cord *t*, applied to the thumb as set forth.

Also, combining with the solid and rigid fingers, a movable or spring thumb, arranged and operated with respect to the hand as above described.

Also, giving to all or part of the fingers, when made of solid and rigid construction as described, a curved hooking form, for the purpose specified.

Also, applying a locking mechanism, substantially as described, to operate in connexion with the parts B C, for the purpose of locking the forearm in position.

Also, combining in an artificial hand a spring thumb and rigid fingers having a grasping function with fingers having a rigid and hooking form, to give them a holding function as set forth.

No. 39,488.—LOUIS LOEFFLER, of East Cambridge, Mass., citizen of Prussia.—*Improvement in Lamps*.—Patent dated August 11, 1863.—The hollow base of the lamp stand is a hydrogen gas generator, and it communicates by a tube with a jet which discharges a stream of hydrogen into the flame, on the other side of which is a piece of spongy platinum. The purpose of the device is to inflame the wick at any time without removing the chimney or applying a light directly.

Claim.—The combination of a lamp or burner, a piece of spongy platinum, or its equivalent, and an apparatus for the generation of hydrogen gas, and discharge of such gas on the said piece of spongy platinum, the whole being substantially as and for the purpose above specified.

No. 39,489.—J. H. MALLORY, of South Bend, St. Joseph county, Ind.—*Improved Washing Machine*.—Patent dated August 11, 1863.—The rotating cylinder, with its corrugated surface, operates against polygonal rollers, mounted on vibrating curved arms, which are pivoted to the sides of the suds box.

Claim.—The cylinder B, having its periphery fluted longitudinally, in combination with the polygonal rollers C, attached to curved or segment bars *g h i*, and the latter connected together and to the yielding bars D, said parts being placed at one or both sides of the cylinder B, and all arranged as and for the purpose specified.

No. 39,490.—JAMES A. MORRELL and PETER BARGION, of Richmond, Ind.—*Improvement in Apparatus for Evaporating Saccharine Liquids*.—Patent dated August 11, 1863.—The invention consists of a furnace and divisional evaporating pans communicating by openings provided with closing slides. The rear portion of the pan communicates by a strainer partition with the others; a filterer with charcoal, discharging into a cooler at the side of the furnace, and a heating tank, by the chimney, for the supply of the pans, are provided for their respective uses, in connexion with the operation.

Claim.—First, the combination of the strainer M, polygonal divisions R R, and pan B.

Second, the arrangement of the pan B, with its polygonal divisions R R, in combination with the pans C C, when used in combination with the chambers A51 A51' A52, damper K, openings A1 A2, and *y z*, and I I and U.

Third, the arrangement of the chambers A51 A51' A52, in combination with the damper K, and openings A1 and A2, and *y* and Z, and the dampers I I and U.

Fourth, the combination of the cooler and filterer when constructed, arranged and operated substantially as above described.

Fifth, the tank D, when used in combination with the pans B and C C, and chambers A51 A51' and A52, damper K, openings A1 A2, and *y* and Z, and I I and U, the whole being arranged, constructed, and operated substantially as above described.

No. 39,491.—EZRA NICHOLSON, of East Rockport, Cuyahoga county, Ohio.—*Improvement in Farm Gates*.—Patent issued August 11, 1863; antedated April 18, 1863.—The gate is operated by moving the lever, by which the spring latch is raised, the gate thrown out of perpendicular, unlatched, opened, and swung round, and secured; it is then closed by moving the other lever in the same direction.

Claim.—The arrangement of the spring latch *i*, under the hinge lever *a*, in combination with the notched segment *h*, and stop-plate *q*, the bell-crank *k*, and levers *d* and *a*, operating in the manner as and for the purposes herein set forth.

No. 39,492.—AUGUST NITTENGER, Jr., of Philadelphia, Pa.—*Improved Meat Cutter*.—Patent dated August 11, 1863.—The block has a rotary motion under the knives, which are arranged in a vertically reciprocating frame, and the driving mechanism of the block is so arranged, by alternate straight and spiral thread on the worm wheel which rotates it, that the block moves only in the intervals between the blows of the knives. The knife frame is capable of being rotated a quarter of a revolution, and being locked in that position, so as to have the knives out of the way to get at the meat.

Claim.—First, any convenient number of reciprocating blades K, and the block N, when such an intermittent rotary motion is imparted to the said block that the latter is stationary when the blades are acting on the meat.

Secondly, the worm U, having a thread partly straight and partly spiral, as described, for the purpose of imparting an intermittent rotary motion to the block N, through the medium of the gearing herein described, or any equivalent to the same.

Thirdly, the crosshead *i*, with its blades K, when the said crosshead is arranged to turn in the sliding block *b*, substantially as set forth, for the purpose herein specified.

Fourthly, the grooved retaining pin M, passing through the sliding block *b*, and crosshead M, in combination with the spring latch L.

No. 39,493.—CHARLES P. NOBLE, of Chicago, Ill.—*Improvement in Smoke Stacks for Locomotive Engines*.—Patent dated August 11, 1863.—The cap of the stack is provided with a globular enlargement, and an inner deflecting cone, both studded with projections, against which the sparks impinge on their way to the contracted upper orifice.

Claim.—First, the globular or swelled pipe D, when the inner surface is continuous, and is provided with the projections *a a*, and when its discharging orifice or mouth C is contracted nearly or quite to the diameter of the pipe A.

Second, the combination of the swelled pipe D, deflecting head E, rods *c*, and teeth *a* with the pipe A, substantially as set forth and specified.

No. 39,494.—JOHN PERCY, of Albany, N. Y.—*Improvement in Breech-loading Fire-arms*.—Patent dated August 11, 1863.—The improvement consists in the chambered neck to the stock containing the lock and lock plate, and having openings for the triggers, and for the hammer rod, which passes through a perforation in the diaphragm or recoil plate. The chamber consists of a box and cover fitted together so as to form a water-tight joint.

Claim.—First, the construction of the neck of the stock of a gun with a chamber which has segmental seats for the triggers, a removable plate J, and a perforated diaphragm *a*, in combination with the lock and hammer mechanism, which is arranged and operates substantially as described, the whole constituting a device which is sufficiently water-proof for all practical purposes, as set forth.

Second, in combination with the solid shield or diaphragm *a*, pivoted hammer *e*, and breech-loading barrel D, the water-tight lock chamber formed in the casting or portion B C, substantially as described.

No. 39,495.—ISAAC N. PYLE, of Decatur, Adams county, Ind.—*Improvement in Railroad Car Brakes*.—Patent dated August 11, 1863.—The invention consists of a continuous shaft rotated by a winch on the engine and passing through the length of the train, having suspended from it by chains a series of wedges adapted to be lowered between the wheels of the train, and an inclined plate or pedestal from the bed of the car so as to bind the wheels.

Claim.—The wedges F F', in combination with the continuous shaft G and inclined plates E E', the latter being placed in the relation as shown, with the wheels C or drums *a* attached to the axles D thereof, and all arranged as and for the purposes herein set forth.

No. 39,496.—EDWARD A. RAYMOND, of Brooklyn, N. Y.—*Improvement in Ratchet Drills*.—Patent dated August 11, 1863.—The ratchet wheel on the head of the tool-holder is contained within the ring of the stock, and the teeth of the wheel are engaged by a spring pawl whose socket is in the stock or handle.

Claim.—The tool-holder *a*, ratchet *d*, pawl *g*, and stock *e*, constructed, combined, and arranged as specified.

No. 39,497.—C. D. REED, of Hamilton, Ohio.—*Improvement in Rakes for Harvesters*.—Patent dated August 11, 1863.—This rake vibrates upon a fixed centre, on a horizontal plane, parallel with the segmental platform. The rake shaft is provided with a segment of a pinion and a rack wheel, which traverses upon an arc-shaped way so that at the commencement of its effective stroke the tines are turned down to catch the grain and maintain this position to the end of their stroke, when they are thrown up and retained in a position parallel to the platform during their return stroke so as to clear the cut grain on the platform. The length of the stroke is regulated by set screws on the end of the way, and the adjustment of the pin of the connecting rod in the slot of the crank wheel. The cam and lever device by which the motion of the rake is arrested at the rear of the platform, and the locking arrangement, are described in the claim.

Claim.—First, the combination of a reciprocating rack *m*, with a toothed segment *k*, oscillating rake-shaft K, slide-rest J, and arresting screws *h h'*, substantially as described.

Second, the combination of adjustable crank-arm *e*, pitman G, and adjustable arresting screws *h h'*, substantially as described.

Third, the toothed spring L in combination with the reciprocating rack *m*, and inclined projections *p' p''* on the slide-rest J, operating substantially as described.

Fourth, the combination of cam *s* on rake-shaft K, lever *t*, lever *c'*, and pulley *b*, with a clutching device applied to the driving shaft *a*, all arranged and operating substantially as described.

Fifth, releasing the lever *c'* by means of a cam *s* applied to the rake-shaft, substantially as described, so that the rake can only be stopped, while the machine is moving forward, at the terminus of its backward stroke.

Sixth, the combination of the reciprocating rack *m*, toothed segment K, oscillating rake-shaft K, and slide-rest J, arranged and operating substantially as described.

No. 39,498.—ROBERT SAFELY, of Cohoes, Albany county, N. Y.—*Improvement in Water Wheels*.—Patent dated August 11, 1863.—The object of this invention is to protect the step of the wheel shaft from water and have it accessible for lubrication. The step is located in a hollow beam passing horizontally through the lower part of the casing, and having at its top a stuffing box through which the shaft passes.

Claim.—The hollow beam H, in combination with the stuffing box J and the oil cup O arranged and fitted substantially as described and for the purposes set forth in this specification.

No. 39,499.—DANIEL SCATTERGOOD, of Nottingham, England.—*Improvement in Circular Knitting Machines.*—Patent dated August 11, 1863.—The object of this improvement is to narrow or widen out in the manufacture of fabrics, so that the fabric may on being sewed up on its edges present the required shape without cutting. In order to produce this result a certain number of needle plates or carriers with their needles are removed from the circle of needles, yet the same space between every two needles in the circle is preserved, while the needle plates or carriers have constantly a bearing or support at back upon a hollow conical collar and conical supports which are moved to present a circle of decreased diameter when the needle plates and needles are removed, and which are again moved in a contrary direction to afford bearings of increased diameter when the needles are replaced.

Claim.—The employment, in circular frames or roundabouts, of a cono and conical supports or bearings for the needle jacks or carriers, so as to afford them a continuous bearing whatever the diameter of the circle of needles, and imparting motions to the loop and dividing landing, and knocking over wheels so that they shall perform their usual functions, whatever the diameter of such circle, all substantially in manner hereinbefore described, whereby fashioned or narrowed work may be produced and finished, as far as the fashion is concerned, before being removed from the frame.

No. 39,500.—J. L. SEAVERS, of Worcester, Mass.—*Improvement in Vacuum Box of Paper-making Machines.*—Patent dated August 11, 1863.—This is an improvement in the arrangement of the bearing rolls which support the wire apron in the vacuum box under atmospheric pressure. The rollers rotate in cheeks which are inside of their bearings and which are flush with the upper sides of the rollers, so that the wire apron makes a tight joint to preserve the vacuum beneath. The spaces between the cheeks and the sides of the box are filled with water to preserve the packing and prevent leakage of air.

Claim.—The combination with the vacuum box of a paper machine of a series of rolls supported in stationary bearings at each end inside of said bearings, with a movable cheek packed where the rolls pass through it, when said cheek is made continuous, or to fit closely in and against the sides of the box, as set forth.

Also, in combination with the rolls of a paper machine vacuum box, means for adjusting the height of the stationary bearings, for the purpose specified.

No. 39,501.—J. HAMILTON SHAPLEY, of Exeter, Rockingham county, N. H.—*Improvement in Gun Lock.*—Patent dated August 11, 1863.—This is a side lock for fire-arms. The hammer is pivoted between two plates on the inside of the lock plate, to which latter the hammer spring is attached. The sear is attached to one of these plates with an angular projection which engages the notches in the heel of the hammer.

Claim.—The sear and the nose of the sear and all its parts, which are above fully described, or their equivalent, and the mode of using or applying the same.

No. 39,502.—HENRY C. SMITH, of Clarksville, Clinton county, Ohio.—*Improved Mortising Machine.*—Patent dated August 11, 1863.—This is an improvement on the patentee's former patent of September 4, 1860. The chisel is journaled in brackets at the bottom of the sash, and is vibrated in a semicircular path by a pitman and lever; the sash is supported by the engagement of its pinion in a rack, and the downward feed is by means of the alternate lifting of the pawls which engage the two sets of ratchet of the wheel on the pinion shaft.

Claim.—In the described combination with the mortising sash D, and its accessories, the compound or right-and-left ratchet wheel G G', pawls H and H', feed hand L l, rod P, hooked nut Q, and dog R, or their equivalents, substantially as set forth.

No. 39,503.—WILLIAM H. SOMERS, of Urbana, Champaign county, Ill.—*Case for Record Books.*—Patent dated August 11, 1863.—The books rest upon their backs and are enclosed by flaps, which, as the books are drawn forward, fall down and allow the books to lie open upon the desk; they are closed again by a lever in the act of pushing them back into the case.

Claim.—The method of opening and closing the same with the record by means of the lever A, operating to close the drawer by the act of sliding into the case, substantially as shown and described.

No. 39,504.—LEOPOLD THOMAS, of Alleghany City, Pa.—*Improvement in Nut Machine.*—Patent dated August 11, 1863.—This machine makes the nut blanks by compression swaging, and punching, ready to receive the screw threads. The devices and operation are clearly defined in the claim.

Claim.—First, compressing, swaging, and punching nuts in a cavity which has for its sides the vibrating shear blocks M, in its ends the stationary perforated die h', and the movable perforated die h and its top and bottom, the portions o and r, all constructed, arranged, and operating substantially as described.

Second, the combination of the reciprocating punch-carrying bar f with the perforated reciprocating die block A, bar g, and cheek pins j, arranged and operating substantially as described.

Third, transmitting a reciprocating motion to the punch bar f, by means of links w w, and vibrating levers k k, which carry the cutting and closing blocks m m, substantially as described.

Fourth, the vibrating arm u, carrying on its upper end a block r, which constitutes, when in a horizontal position, the bottom of the cavity in which the nuts are swaged and punched, in combination with the stationary die h' and moving die h, substantially as described.

Fifth, the reciprocating perforated die block o h, so arranged with reference to the dies h' r as to form the top and one side of the cavity in which the nuts are swaged and punched, and combined with the levers k k, punch bar f, and links w w, so that after the nuts are punched they may be discharged from the punching tool, substantially as described.

Sixth, the combination of vibrating arms k k, link connexions w w, cross arm z, spring y, punch bar f, and sliding die block h, substantially as specified.

Seventh, the combination of the reciprocating die-carrying bar g with the reciprocating punch bar f, stop pin j, vibrating arms k k, links w w, and pendent guides d d, substantially as herein described.

No. 39,505.—THOMAS THOMPSON, of Baltimore, Md.—*Improvement in Fire Escapes.*—Patent dated August 11, 1863.—The improvement consists in the method of attaching the risers to the central column, which is by means of a curved plate on the inner end of the riser; and also in supporting the steps under the riser above, and upon the riser below.

Claim.—The curved flange D on the risers, in combination with the hollow standard for supporting the steps, as described.

Also, supporting the steps with the curved flanges D and hollow standard by fastening the rear edge to the lower edge of the riser above, and letting the front edge rest on the riser below.

No. 39,506.—JAMES B. TIDBITS, of Palmyra, Wayne county, N. Y.—*Improved Harness Snap.*—Patent dated August 11, 1863.—The lip of the snap, which shuts against the hook, is pivoted to a projection from the latter, as bows from each of these parts unite to form the loop, and the lip is kept closed by the leather strap therein.

Claim.—The employment or use, in combination with the main portion or body A of a harness snap provided with a hook a' and an eye a, of a tongue C, pivoted to the part A, and provided with an eye f, all arranged as herein described.

No. 39,507.—JOHN TINGLEY, of Waterford, Camden county, N. J.—*Improvement in Churns.*—Patent dated August 11, 1863.—The head of the barrel is removable at pleasure, for cleaning, filling, &c., the head having an annular groove on its edge with a packing ring, and the chine of the barrel having a clamping hoop, with a link and lever attached, for pressure upon the head to make a tight joint.

Claim.—First, the clamping hoop C, operated by the lever M, link N, and plate I, or their equivalents, substantially as described.

Second, the head B, provided with the groove E and the elastic strip F, or their equivalents, in combination with the clamping hoop, the lever, the link, and the plate, as above described.

No. 39,508.—W. B. TREADWELL, of Albany, N. Y.—*Improvement in Cooking Stoves and Ranges.*—Patent dated August 11, 1863.—The improvements consist in the construction of the fire-pot and the valves and flue spaces of single or double oven-cooking ranges, stoves, &c., to obtain a more even distribution of heat; and secondly, in the frame for holding the mica light in the stove doors, and in the button fastenings for confining the doors and the outer rings of the mica frames in place.

Claim.—First, the open fire-pot B constructed as described, in combination with an iron or soapstone backing, arranged substantially as described.

Second, openings i l, chambers k C E D3, and deflector m, of the oven D, all arranged and operating substantially as described.

Third, the arrangement of flues V G2 G1 G3 k', in combination with opening i, and oven G, operating substantially as described.

Fourth, the combination of the space 2, between the open fire-pot and the backing thereto, with the dampers m' m' m', so that the combustion of the fuel may be retarded or regulated by a counter or upper current outside of the fire-pot, substantially as described.

Fifth, the combination with a range or stove and the doors thereof of the button fastening, consisting of a fixed screw pin n, plate p, button n', and nut p'', substantially as described.

Sixth, the combination with a range or stove and the doors or windows thereto of the mica frame H' r s, constructed as represented, and the button fastening n n', and p p'', all substantially in the manner and for the purposes set forth.

No. 39,509.—J. H. L. TUCK, of St. Charles, Kane county, Ill.—*Improved Fruit Dryer*.—Patent dated August 11, 1863.—This consists of a tray supported in an inclined position by legs covered by glazed sash and ventilated by gauze-covered openings at the ends and sides.

Claim.—A fruit-drying case formed of a shallow box A, having ventilating openings at its sides and provided with a glazed sash B for a top, and with folding legs or props D D, one at each side, and used in connexion with a stake or post C, substantially as described.

No. 39,510.—ALEXANDER UNDERWOOD, of Kenosha, Wis.—*Improvement in Binding Attachments to Harvesters*.—Patent dated August 11, 1863.—This machine is to be attached to the side or rear of a harvesting machine to gavel the grain as it falls on the platform, and to bind and discharge it in sheaves of any required size. The improvement consists in the devices for passing the cord around the sheaf, for securing and tying the band, and for throwing the mechanism in and out of gear. The devices for accomplishing these objects are too numerous and intricate for a brief description.

Claim.—First, the self-acting shifting levers E and D, operated by the cams or inclined planes m and n' on the wheel K, and the cam 7 on the wheel L, all as herein described.

Second, the arm B, provided with the cam groove m2 in its rear half, the friction rollers e2 on the forward part, and the mortise L near the centre, and operated substantially as explained.

Third, the combination of the arm B, forked lever A, shaft U, stud e2, guide rollers h2 e2, and ways f2, all constructed and arranged in the manner and for the purposes described.

Fourth, the combination of the spiral cam H, rack R, pinions T b2 e2, swinging hanger a2, yoke h, pin or roller d4, and cam-grooved gear wheel F, when the said parts are constructed and arranged as herein described, so as to impart a reciprocating motion to the arm B, by a continuous motion of the cam and gear wheel F.

Fifth, the combination of the hooks l2 r, radially slotted pinion o2, sliding bar C, and shear blades h3 and n, when the said parts are constructed and arranged in the manner hereinbefore described, so as to adapt them to uniformly twist and subsequently knot and sever the band.

Sixth, the stud k, operated by the sliding bar C, and employed in the described combination with the shear blades h3 and n, to hold the said blades in close proximity and retain the end of the cord, as explained.

Seventh, the combination with the gear wheel G, sliding bar C, stud k, and blades h3 and n, of the roller a', grooves s g', shifting, curved, inclined plane t, and spring stop z, operating as explained, to impart an alternate motion to the bar C, to sever the cord on one or the other branch of the blade n.

Eighth, the combination with the gear wheels I F and G of the clutch pinion V, clutch J2, cams f o, lever g2, and dog r2, whereby an intermittent motion is imparted to the wheel G and the dog r2, inserted in and retracted from a notch therein, as explained.

Ninth, the combination with the gear wheel G, pinion o2, and hook l2 of the lever k', rack d', pinion e', connecting rod h3, rock shaft u2, hook w2, and finger l, operating in the manner described to catch, loop, and tie the ends of the cord around the sheaf.

Tenth, the hook l2, operated by the cam i', lever k', and rod w', to draw down the cord in readiness for the next sheaf, as explained.

No. 39,511.—WILLIAM VAN ANDEN, of Poughkeepsie, N. Y.—*Improvement in Harvesters*.—Patent dated August 11, 1863.—This machine when in operation is mainly supported upon the driving wheel next to the cutter bar, allowing the other wheel a certain amount of vertical play to enable it to pass over trifling inequalities without affecting the position of the frame or cutting apparatus, or tipping over the main supporting wheel. The devices are fully described in the claim.

Claim.—First, supporting the frame of a reaping or mowing machine in such a manner that its weight, together with that of the cutting apparatus, will be supported on or sustained by one wheel of a double wheel machine, (when the wheels are used together for the purpose described,) by means substantially as set forth.

Second, making the main draught frame A to counterbalance the weight of the cutting apparatus in a double wheel machine, when both the cutting apparatus and the draught frame are supported upon the propelling wheel C, and this wheel made to serve as the fulcrum of both, substantially as described.

Third, so supporting the main draught frame A upon the tapering axle e of the wheel C that the "outer" wheel D is allowed to rise and fall, in surmounting obstacles, without tipping, or otherwise affecting either the wheel C or the position of the cutting apparatus, substantially as described.

Fourth, the elongated stirrup G, in combination with frame A, vibrating axle B, and short axle e, substantially as described.

Fifth, the wheel C, arranged upon a tapering tubular axle e, substantially in the manner and for the purposes described.

Sixth, supporting the main draught frame A upon a short tubular axle e at one side, and guiding said frame in its vibrating motions by means of the stirrup G and box j, substantially as described.

Seventh, in combination with a draught frame, supported and balanced substantially as described, the tongue or pole J, pivoted to the vibrating axle B, and supporting the driver's seat K, arranged substantially as described.

Eighth, the combination with the oscillating frame A, supported and controlled in its motion as described, of the auxiliary axle B and wheel D, substantially as described.

Ninth, pivoting the "inner" shoe m, of the finger bar V, to the frame A, by means of the tubular connexion l, fixed rod K, and front and rear supports H H', and central support n, substantially as described.

Tenth, keying the main drawing spur wheel E to the tubular axle e, and connecting said wheel to the fulcrum wheel C, by means of a ratchet and detent, or their equivalents, substantially as described.

Eleventh, the two large supporting wheels C D, in combination with the auxiliary oscillating axle B and oscillating frame A, arranged and operating substantially as described.

No. 39,512.—SYLVANUS WALKER, of Boston, Mass.—*Improved Wringing Machine*.—Patent dated August 11, 1863.—The rubber rollers are included between rigid rotating rollers, and are rotated by contact therewith.

Claim.—The employment or use, in clothes-washing and wringing machines, of India-rubber or other elastic pressure rollers arranged in a suitable frame, in connexion with wooden or other rigid rollers, in such a manner that the latter will keep the former in proper position, and communicate motion to the same, substantially as herein set forth.

No. 39,513.—JAMES WARREN, of New York, N. Y.—*Improvement in Window Sash Stopper*.—Patent dated August 11, 1863.—The improvement consists of rollers of India-rubber in suitable cases inserted into recesses in the edge of the window sash, so as to bear against the side of the casing with sufficient force to keep the sash in the position in which it may be placed, while undue friction is prevented by the insertion of plates of ivory on the opposite edge of the sash.

Claim.—The combination of the whole of the above-described machinery, and its appropriation to the purposes herein specified.

No. 39,514.—WILLIAM WEAVER, of Nashua, Hillsborough county, N. H.—*Improved Heel Iron and Ice Caulk*.—Patent dated August 11, 1863.—This invention consists of a reversible semicircular serrated band whose ends act as pivots, so that it can be rotated, exposing its serrated edge to the ice, or by reversal, placing it in front of the heel under the hollow of the foot; a sliding double wedge projecting before and behind loosens it from its position when desired.

Claim.—The double sliding wedge D, used for the purposes and in the manner as herein set forth.

I do not limit my claim to the particular form of wedge, as herein shown, but extend it to any other substantially the same.

No. 39,515.—JOHN C. WHITE, of Auburn, Cayuga county, N. Y.—*Rolling Seams of Boots and Shoes*.—Patent dated August 11, 1863.—This machine is intended to roll down the seams of sewed leather, and consists of a roller arm, connected with a rotary shaft working on a straight bed which supports the leather, so that, by the rotary movement of the shaft, a reciprocating rectilinear motion is imparted to the pressing rollers which pass repeatedly over the seam on the bed, the latter being adjustable to conform to the shape of the seams and the pressure modified by springs.

Claim.—First, the employment or use of the reciprocating roller arm E and stationary bed F, when said arm connects by suitable mechanism with the rotary shaft C, or its equivalent, substantially as and for the purpose specified.

Second, the arrangement of the adjustable roller j and spring roller n, in combination with the roller arm E and bed F, constructed and operating substantially as and for the purpose set forth.

Third, making the outer part o' of the bed F adjustable by a set screw p, or other equivalent means, as and for the purpose described.

Fourth, the arrangement of the swivel elamps q, in combination with the bed F, constructed and operating in the manner and for the purpose substantially as specified.

No. 39,516.—JAMES WILKINSON, of Prophetstown, Whiteside county, Ill.—*Improvement in Equalizing Draught in Horse-powers*.—The invention consists of supplementary sweeps pivoted to the hub on the central shaft; cords from the said sweeps pass over sheaves on the ends of the usual sweeps, and are attached to rods occupying the position of the usual stay rods, but which are capable of lateral vibration as the team may pull unequally upon different parts.

Claim.—The supplemental sweeps C, sweeps proper B, cords or chains E, and rods d, combined and arranged to operate in the manner as and for the purpose herein set forth.

No. 39,517.—JAMES WILKINSON, of Prophetstown, Whiteside county, Ill.—*Improvement in Draught-Equalizing Attachment*.—Patent dated August 11, 1863.—The object of the im-

provement is to equalize the draught on all the horses in the team. The double-tree is provided with two single-trees on each end, and each of them is hitched by one end to a leader, and by the other end to a wheel-horse, the traces of the leaders passing through the neck-yoke.

Claim.—The combination of the double-tree B, two pairs of whiffle-trees D D', traces F F' G G', and neck yoke E, all arranged to operate as and for the purpose herein set forth.

No. 39,518.—W. H. WILLARD, of Cleveland, Ohio.—*Improved Rail Capstan for Ships.*—Patent issued August 11, 1863; antedated July 27, 1863.—This capstan is rigged so that the drum is mounted above the ship rail, while the gearing works between the stanchions and above the plank sheave. The ratchet wheel sets immediately above the ship rail, and the pawl is raised when required by a rod passing vertically through the drum, having a projecting handle.

Claim.—The herein-described construction and arrangement of a rail capstan and haul post, when the several parts are arranged and operated as and for the purpose specified.

No. 39,519.—GEORGE F. WILSON, of East Providence, R. I.—*Improved Fertilizer or Manure.*—Patent dated August 11, 1863.—This improvement consists in mixing the condensed products from dry distillation of bones with the residuary products left after the partial abstraction of phosphoric acid from the bones by the sulphuric acid process.

Claim.—The compound fertilizer obtained by the admixture of the above-described bone-sulphate of lime, with the ammoniacal and other bodies condensed in the distillation of bones.

No. 39,520.—WALTER WORTH, of Jackson, Mich.—*Improvement in Gates.*—Patent dated August 11, 1863.—The object of the improvement is to swing the gate, as occasion may require, over the snow levels. A right angle notch is cut in the corner of the post from the top to near the base, terminating in a shoulder; a sliding bar, with a rack attached, moves in this notch, and to the bar, which is attached by metal loops to the post, the gate is hinged. A spring stop engages the teeth of the ratchet bar to retain the gate in an elevated position.

Claim.—The arrangement of the notched post A, slide rack bar B, hinged gate D, loops f, and stop g, substantially as and for the purpose described.

No. 39,521.—WILLIAM YAPP, of Cleveland, Ohio.—*Improvement in Tinsmiths' Fire-pot.*—Patent dated August 11, 1863.—This consists of a fire chamber, suitably provided with openings and doors and an ash-pan, and with tubular chambers open to the outside for the insertion of the soldering tool.

Claim.—The combination with the rectangular box or casing A' of one or more longitudinal cylinders A, grate B, openings C E, doors D H, and sliding drawer K, all arranged as and for the purposes specified, and adapted for completely preventing circulation of air when required.

No. 39,522.—THOMAS C. BIGELOW, of Lake Mills, Jefferson county, Wis., assignor to Himself, LUTHER E. PORTER, and SAMUEL M. ROWE, of same place.—*Improved Paddle Wheels.*—Patent dated August 11, 1863.—The object of this invention is to so construct a paddle that the buckets may be kept in a vertical position during the whole of their revolution, so as to enter and emerge from the water with as little loss of power as possible, and present, while in the water, the greatest amount of surface.

Claim.—First, providing the prolonged float-shafts and the arms f with the anti-friction rollers c c', when used in combination with the grooves g a' and the projections or grooves b b', arranged and operating as and for the purposes herein shown and described.

Second, the combination and the arrangement of the frame C, the floats F, provided with fixed and prolonged shafts, as shown, the arms f, and the anti-friction rollers c c', with the outer frame A A', provided with the peculiarly arranged circular grooves a a', all operating substantially as and for the purposes shown and specified.

Third, the combination and arrangement of the floats F provided with the prolonged fixed shafts, as shown and described, the arms f, the anti-friction rollers c c', the endless chain G, and drive-wheels D D, with the grooves a a', and projections or grooves b b', as and for the purposes herein delineated and set forth.

No. 39,523.—JOSEPH CHURCH, of Chester, Meigs county, Ohio, assignor to J. N. RATHBUN and E. T. BRANCH, of Rutland, Ohio.—*Machine for Shaving Cane for Weavers' Reeds.*—Patent dated August 11, 1863.—The cane is passed through a long tunnel, where it is fed between a double series of rollers and exposed to knives which shave and divide it, and reduce it to the desired proportions.

Claim.—The series of pairs of feed rollers C C' in combination with the cutters G H I and plates E, provided with the channel e, all arranged substantially as shown to operate in the manner as and for the purpose herein set forth.

No. 39,524.—JOSEPH DODIN, of Brooklyn, N. Y., assignor to JAMES EDGAR, of Bergen, N. J.—*Improved Lamp Burner.*—Patent dated August 11, 1863.—The lamp burner is made

up of five pieces—one forming a skeleton support, two others the frame of the deflector, and the remaining two perforated panels for the deflector; they are united by slots, through which lips of the adjacent parts are inserted and lapped.

Claim.—First, the particular shape of the plate of metals, Figs. 3 and 4, with their openings e.

Second, the shape of the plate, Fig. 5, with the mode of fastening it to the plate, Figs. 3 and 4 at a, Figs. 3, 4, and 5.

Third, the shape of the plate, Fig. 6.

Fourth, the mode of fastening the cone b, Fig. 1, to the base G, Fig. 2, substantially as described.

No. 39,525.—PHILIP ELEY, of Philadelphia, Pa., assignor to Himself and R. B. FITTS, of same place.—*Improvement in the Manufacture of Manure.*—Patent dated August 11, 1863.—The invention consists in a process for separating the water from night soil, and mixing the phosphoric acid, ammonia, and the other soluble fertilizing compounds with the insoluble matter; afterwards desiccating and deodorizing it by means of sulphate of lime and charcoal and reducing it to a pulverulent state.

Claim.—The process or method herein described of treating night-soil for agricultural purposes.

No. 39,526.—D. L. EMERSON, of Rockford, Winnebago county, Ill.—*Improvement in Harvesters.*—Patent dated August 11, 1863.—The invention is so fully described in the claim as to need no further description.

Claim.—The combination of the grain wheel directly with the back beam of the harvester, as set forth, so that the employment of a cross-bar connecting the grain ends of the finger beam and back beam, for the purpose of connecting the grain wheel arm or axle with the finger beam and back beam, is unnecessary.

Also, the combination of the grain ends of the finger beam and back beam, without a connecting cross-bar, by means of a removable raking platform or its appurtenances, substantially as set forth.

Also, the combination of the front end of the reach, the tongue, and the easter wheel in such manner that the machine may be used interchangeably with a stiff tongue laterally or a limber tongue, by shifting the connexion of the tongue from the easter-wheel yoke to the front end of the reach, or *vice versa*, substantially as set forth.

Also, combining the thrust bar of a harvesting machine with the machine by means of an adjustable pivot bearing, substantially as set forth.

Also, the combination of the driver's seat with the machine by means of an adjustable seat standard connected at its foot with the frame, in such manner that the seat can be adjusted by varying the connexion of the foot of the standard, as described.

Also, the combination of the driver's seat with its support by means of an adjustable brace and spring, substantially as set forth.

Also, the combination of the driver's foot-board with its support by means of an adjustable brace, substantially as set forth.

Also, the device, herein described, for imparting two different speeds to the sickle of a harvester, consisting of the combination of a double-rimmed cog wheel upon one of the shafts of the gearing, with two pinions which are connected with the next shaft, in such a manner that one is fastened to the shaft while the other runs loose upon it, and *vice versa*, substantially as set forth.

Also, the combination of a finger-beam of plate metal bent into a trough-form with a wood filling in the hollow of the trough, substantially as set forth.

Also, constructing the finger-beam with a recess, in which the crank of the sickle can revolve, so that the sickle can be withdrawn past the face of the crank without displacing the crank, substantially as set forth.

Also, the combination of the raking platform of a harvester with a tipping or hinged dumping box, whose bottom is not above the level of the adjacent part of the raking platform, and which is also skewed sidewise, so that the cut grain can be discharged from the platform directly into said dumping box and can be dropped therefrom, but downward, at the side of the track of the sickle, so as to be entirely out of the way of the machine and the horses when cutting the next swath, substantially as set forth.

Also, the combination of a tipping dumping box with a driver's seat, located sufficiently behind the finger beam to permit the driver supported thereon to rake the grain from the raking platform and drop it upon the ground, substantially as described.

No. 39,527.—SAMUEL D. GILSON, of Syracuse, N. Y., assignor to Himself and JOSEPH HALL, of Rochester, N. Y.—*Improvement in Steam-engine Cylinders.*—Patent dated August 11, 1863.—This invention consists in providing the inner surface of the cylinder with annular channels in which the pressure of steam forms an eddy behind the piston head, preventing the steam from escaping past the piston by breaking the current.

Claim.—Providing the inner surface of steam cylinders with several annular channels e, or their equivalents, in combination with the piston head D, substantially as and for the purpose specified.

No. 39,528.—CHARLES W. S. HEATON, of Salem, Marion county, Ill., assignor to JABEZ J. PEGGOTT.—*Improvement in Cultivators*.—Patent dated August 11, 1863.—This improvement consists of devices for throwing the direct strain upon the plough beams and relieving the jar caused by collision with obstructions; the forward ends of the beams are attached to a slotted cross-bar which is stayed by angle rods from the tongue, the draught rods having a vertical play by the motion of the clevis pin in an upright slot in the tongue. The lateral adjustment of the plough beams is by means of slots in the cross-beams, to which the former are clamped by set screws.

Claim.—First, the arrangement in a cultivator of the brace rods *h h*, and stay rod *k*, in such manner that the longitudinal strain upon the implement shall be thrown upon the side beams *B B*, and front beam *C*, when the implement is unobstructed by stones, &c., but when the implement is obstructed by stones, &c., the sudden jar due upon the tongue *A* shall be relieved by the oblong slot *c*, and finally be sustained by the stay rod *k*, all substantially in the manner set forth.

Second, the arrangement, in a cultivator, of the automatically shifting brace rods *h h*, pin *d*, and vertical slot *c*, in the manner and for the purposes described.

Third, the arrangement of the inclined stay rod *k*, beam *C*, and tongue *A*, substantially as and for the purpose set forth.

Fourth, a cultivator combining in its construction the tongue *A*, side beams *B B*, upper and under slotted cross-beams *C C'*, V-shaped adjustable braces or stocks *E E'*, brace rods *h h*, and stay rod *k*, the several parts being constructed and arranged as described.

No. 39,529.—EGBERT HINMAN, of Syracuse, N. Y., assignor to JOHN RANKIN, of Homer, N. Y.—*Improvement in Churns*.—Patent dated August 11, 1863.—The cream is exposed to a preliminary beating in a chamber which has register openings to regulate the rate of discharge into the main chamber. The driving wheel is adjustable longitudinally on its shaft, so as to engage with the pinions on the upper or on the lower shaft, or both.

Claim.—The employment of the preliminary dasher *a*, constructed as described, in combination with the case *b*, provided with a register for varying the capacity of the discharge apertures, the whole arranged and operating as set forth.

Also, regulating the capacity of the apertures through which the liquid and solid mass escapes from the case *b*, as and for the purpose described.

Also, making the driving gear *E* adjustable in its shaft, as described, in combination with the clutching device, or its equivalent, whereby the driving gear may be adjusted to run in mesh with either one or both of the dasher pinions, as and for the purposes set forth.

No. 39,530.—T. T. PROSSER, of Fond du Lac, Wis., assignor to Himself and M. C. and K. A. DARLING, of same place.—*Improved Steam Boiler*.—Patent issued August 11, 1863; antedated January 31, 1863.—The exhaust steam of the engine is conducted by a pipe or pipes occupying the place of the ordinary tubular flues, and is utilized by being introduced into a jacket around the steam boiler.

Claim.—First, the application of the exhaust steam of the engine to the boiler for the purpose and in the manner set forth.

Second, the combination of the chamber *A A' A'' A'''*, and the enclosed tubes or flues, with the exhaust pipe or pipes of the engines, in the manner and for the purpose set forth.

No. 39,531.—RICHARD SAVARY, of Pittsburg, Pa., assignor to Himself and ROBERT C. TOTTEN, of same place.—*Improved Process of Uniting Iron and Steel with Copper, Brass, &c.*—Patent dated August 11, 1863.—One formula is as follows: the piece of copper or alloy is placed in a flask with the surface exposed to which the iron is to be attached; this is cleaned with muriatic acid, and treated with the following compound: pulverized borax, 35 parts; sal ammoniac, 7 parts; arsenic, 8 parts; cast-iron filings, 25 parts; copper filings, 25 parts, made into a paste with molasses. The melted iron is then poured into the flask.

Claim.—Uniting pieces of iron, whether cast, wrought, or steel, with copper, brass, bronze, or other alloys of copper, by casting one metal on to a solid piece of the other, having interposed between the surfaces to be thus united a flux composed of the ingredients hereinbefore described, or their equivalents.

No. 39,532.—JOHN J. TAYLOR, of Attica, Fountain county, Ind., assignor to Himself and E. F. GILES, of Washington, D. C.—*Improvement in Machinery for Operating Churns*.—Patent dated August 11, 1863.—The coiled spring and gearing which operate the dasher shaft are contained within the lid.

Claim.—A portable lid that shall contain within its interior all the machinery and power to operate a churn-dasher, automatically, when constructed and operated substantially as described and set forth in the accompanying drawings and specifications.

No. 39,533.—C. D. TISDALE, of East Boston, Mass., assignor to C. D. and B. W. TISDALE and M. B. BOYNTON.—*Improvement in Car Axles*.—Patent dated August 11, 1863.—The main or inner axle is in one piece, and has a journal at each of its ends; it passes through

both wheels, and is fastened to one only; the other being fixed to a sleeve which surrounds the inner axle, and extends from one wheel to the other. Each wheel has a stuffing box, one being on the inside of the wheel, and the other on the outside.

Claim.—The improved arrangement and application of the wheels, their sleeve, axle and stuffing boxes, substantially in the manner as described.

No. 39,534.—MARTIN U. TRASK, of Meriden, Conn., assignor to PARKER and PERKINS, of same place.—*Improvement in Manufacturing Flesh-Hooks and Forks*.—Patent dated August 11, 1863.—The hook is cast with a light hollow handle for convenience of handling which is afterwards twisted one-quarter round to bring the handle to the proper presentation.

Claim.—First, casting in one piece with the tines *A*, and shank *B*, of a flesh-hook or fork, a hollow handle *C*, substantially as and for the purpose described.

Second, casting the handle *C* and shank *B* in one piece, and after the metal is rendered malleable, giving said shank a quarter twist, so as to bring the flat, broad part of said handle parallel with a line passing through the points of the tines *A*, substantially as set forth and for the purpose described.

No. 39,535.—JOHN G. TREADWELL and WILLIAM HAILES, of Albany, N. Y., assignors to MARTIN L. MEAD and WILLIAM HAILES, of same place.—*Improvement in Coal Stoves*.—Patent dated August 11, 1863.—This is an improvement on the patentee's former patent of May 7, 1861, and consists in an illuminating window to the flame-expansion chamber, about the base of the coal-supply reservoir, and the top of the fire-pot, and which connects by a flue with the chamber under the grating of the fire-pot. A damper draught flue communicates directly with the chimney. The coal chamber has a fire-clay throat supported by rings of metal. A poker hole communicates with the fire chamber, and has a branch hole leading to the ash chamber to allow the escape of live coals to the said chamber, when drawn from the fire in poking. A portable grate in the ash chamber affords the means for starting a fire under the lower strata of coal.

Claim.—First, the combination of the illumination openings, flame-expansion chamber, coal-supply reservoir, fire-pot, descending flue and draught flue, substantially in the manner and for the purpose described.

Second, the combination with the flame-expansion chamber formed at the base of the coal-supply reservoir, and around the upper edge of the fire-pot of a base-burning stove, of the branch draught flue with damper, when the same are located with respect to the flame-expansion chamber, fire-pot, coal-supply reservoir, and descending combustion flues, substantially as and for the purpose described.

Third, a fire-brick or fire-proof throat for a coal-supply reservoir of base-burning stoves, when such throat is wholly free, so far as expansion and contraction are concerned, from the different parts of the stove, and is loosely set upon that portion which sustains it in place, and is constructed of encircling rings of metal and fire-brick or other fire-proof substance, substantially as described.

Fourth, the branch to the poke-hole, substantially as and for the purpose described.

Fifth, the portable auxiliary grate, constructed and adapted as specified, for use with base-burning reservoir stoves, in the manner and for the purpose set forth.

Sixth, providing the ash pan with unobstructed holes in its sides, about midway of its length, for the purpose set forth, and so that side handles or a bale which is permanently attached and liable to become heated may be dispensed with.

No. 39,536.—G. W. N. YOST, of Nashville, Tenn., assignor to Himself and WILLIAM DILWORTH, Jr., of Pittsburg, Pa.—*Improvement in Ploughs*.—Patent dated August 11, 1863.—The standards are attached to the beam by means of holders provided with two flanges, between which the standard is locked by a clevis.

Claim.—First, the wrought-iron standard holders *A B*, constructed and arranged as described, in combination with the beam *C*.

Second, the combination and arrangement of the standards *D E* with the standard holders *A B* and beam *C*.

No. 39,537.—G. W. N. YOST, of Nashville, Tenn., assignor to Himself and WILLIAM DILWORTH, Jr., of Pittsburg, Pa.—*Improvement in Ploughs*.—Patent dated August 11, 1863.—The standards are fastened in a slotted plate bolted to the beam. They may be adjusted on one side of the beam, the rear one cutting in the bottom of the furrows of the forward one, thus acting as a subsoiler; or on different sides of the beam, to turn two furrows of equal depth.

Claim.—First, the construction and arrangement of the wrought-iron standard holders *A B*, in combination with the beam *O* of the plough, substantially as herein set forth and described.

Second, the combination and arrangement of the plough standards *C D* with the beam of the plough, operating so as to turn two furrows wide or two furrows deep, substantially as herein set forth.

No. 39,538.—J. A. MCCLELLAND, of Louisville, Ky.—*Improvement in Dental Plates*.—Patent dated August 11, 1863.—The plate consists of a combination of rubber and metal, the latter in the form of a perforated plate or wooden wire, so as to be completely surrounded and permeated by the rubber.

Claim.—First, the employment or use of a metallic dental plate closely perforated or woven, so that India-rubber may penetrate and adhere to it, as described.

Second, the combination in a dental plate of a skeleton or plate of woven or perforated metal with a base or filling of vulcanized India-rubber, in order to unite the perfect adaptability of rubber to the mouth with the strength of metal, substantially as explained.

No. 39,539.—SAMUEL ARCHER, of Globe Village, Worcester county, Mass.—*Improvement in Process for Finishing Flannels.*—Patent dated August 18, 1863.—The cloth as it comes from the loom is immersed in water at a temperature not above 130° Fahrenheit, to decompose the dressing of the warp. After being scoured and fulled to its proper width it is washed and dried, and the surface gigged to give it a nap. It is then "got out" to its width by a fulling machine, using soap, then washed without removing all the soap, stretched, dried on tenters, folded and baled.

Claim.—The process substantially as above described.

No. 39,540.—JOSEPH BANKS, of New York, N. Y.—*Improvement in Rotary Pumps.*—Patent dated August 18, 1863.—This improvement is adapted to that class of pumps wherein a piston wheel with four sliding pistons revolves in an eccentric cylinder, and the object is to produce a tight joint between the edges and ends of the sliding pistons and the inner surface and heads of the cylinder; for this purpose the valves are arranged in slots or recesses in the edges of the pistons, and the latter being connected by stems with their opposite pistons, and operated by springs, are kept up to their working surfaces.

Claim.—First, arranging the valves *G G'* in slots or recesses in the edges of the pistons *F*, as and for the purpose shown and described.

Second, the springs *b b'* under the valves *G G'*, when the same are used in combination with the pistons *F*, connected by stems *a*, in the manner and for the purpose substantially as specified.

No. 39,541.—JOHN A. BASSETT, of Salem, Essex county, Mass.—*Improved Apparatus for Carburetting Gas.*—Patent issued August 18, 1863; antedated March 18, 1863.—This invention consists in increasing the illuminating power of gas by supplying hydro-carbon liquid to the burner in a small stream, where it is evaporated and consumed; also, in an arrangement of flanges and deflecting plate to secure the result more perfectly.

Claim.—The uniform carburation of gas under varying conditions of temperature by the direct application of the hydro-carbon liquid to the burner by the means shown, and the use, in combination, of the flanges *C1 C2* with the deflecting plate *D*, or their equivalents, when used for this purpose, the whole arrangement operating together substantially as represented and for the object set forth.

No. 39,542.—FREDERICK E. BEARDSLEE, of College Point, Queens county, N. Y.—*Improvement in Firing Fuzes by Electricity.*—Patent dated August 18, 1863.—This invention is designed to avoid certain practical difficulties in the discharge of powder by an electric current, and accomplishes the purpose by connecting the two ends of the conductors by a feeble conductor, such as a number of fine particles of a conducting substance, to induce a flash.

Claim.—Connecting the two conducting wires by a feeble conductor, substantially such as herein described, and placed in contact with or in close proximity to the powder, substantially as set forth.

No. 39,543.—GEORGE W. BEARDSLEE, of College Point, N. Y.—*Improvement in Firing Cannon by Electricity.*—Patent dated August 18, 1863.—This invention consists in the insertion of an insulated plug from the bore to the outside, in combination with a cartridge having two conducting wires, one to be in contact with the bore and the other with the insulated plug; the object being to avoid having a vent or touch-hole.

Claim.—Combining with the barrel of the cannon or other fire-arm an insulated plug extending through the metal from the bore to the outside, substantially as specified, to be used with a cartridge having a fuze provided with two conducting wires, so that when inserted in the bore one will be in contact with the bore and the other with the insulated plug, as described.

No. 39,544.—J. C. BREED and CHARLES K. BRADFORD, of Lynn, Mass.—*Improvement in Gaiter Boots.*—Patent dated August 18, 1863.—The improvement consists in making the two parts constituting the front and back overlap each other, with the eyelets agreeing, so that the lace can be passed through and through and secured at the top by a stop or fastener, through which it is passed and a few round turns taken to secure it.

Claim.—First, a gaiter boot, the two parts *A* and *B* being so constructed as to overlap each other from the sole to the top, with a row of eyelets in the one part directly over and parallel with a similar row in the other part, substantially as set forth and described.

Second, the sliding stop or fastener *f* in combination with the lacing arrangement, substantially as and for the purpose described.

No. 39,545.—NAHUM F. BRYANT, of East Boston, Mass.—*Improvement in Railway Carriage.*—Patent dated August 18, 1863.—This is a combination acting automatically, so as to shift or change the gauge of the wheels of a railway truck so as to run from a narrow to a broad gauge or vice versa, by means of chocks at the extremity of the axle of each wheel, each being independent. This is effected by running up inclined planes and on to chock rails to bring an action to bear upon the interior of the journal box, which shall shift the wheels in or out according as one or the other of the chocks is brought into operation, that being determined by the height of the chock rail and adapted to the change required.

Claim.—The automatic combination, consisting not only of the chock rails, or their mechanical equivalents, applied to the roadway, and the chocks, or their mechanical equivalents, applied to the truck-frame and its wheels, but the two tracks of different gauges and their wheel-changing track, or the same and its flanch guide rails, the whole being arranged and so as to operate substantially as specified, and in combination therewith the projections or guides *n n*, for the purpose specified.

No. 39,546.—BENJAMIN Q. BUDDING, of Milford, Mass.—*Heel-Polishing Machine.*—Patent dated August 18, 1863.—In this machine the boot is placed on the top of a vertical shaft, the bottom of the heel raised against a plate bearing and springs; in this condition it is operated upon by three rubbers, one at each side and one behind, which have a motion in an arc of a circle on a horizontal plane. The rubbers are suspended from a sleeve, which is adjustable vertically and rotates upon a shaft, and the reciprocating motion is imparted to them by a rod which is pivoted to the foot of the sleeve and passes through a universal joint in the face of a rotating wheel. A greater or less motion is produced by setting the wheel further from the sleeve and bringing the vibrating bar nearer to the axial line of the driving wheel. The pressure of the polisher is modified by weight applied on a treadle communicated by a rod to the upper part of the sleeve, which, by means of a link and spring, bears the rubbers inwards against the heel.

Claim.—The polishers *F* when arranged so as to be capable of simultaneous pressure against and reciprocating rotary movement around the edge or side of the heel, as set forth.

Also, the combination of arms *G*, springs *f*, collar *I*, and link *g*, or their equivalents, for producing the motion of the polishers against and away from the heel, as above described.

Also, the arrangement of mechanism consisting of the plate *e*, adjustable crank-pin *g3*, joint *i*, and crank-wheel *k*, or the mechanical equivalent thereof, operating together substantially as described.

Also, combining a pressure mechanism, as shown by the arm *G*, collar *I*, link *g*, shaft *J*, rods *I' L*, and treadle *K*, or other suitable mechanism for producing the pressure of the polishers, with a shipping mechanism consisting of lever *q*, rod *p*, or their equivalent, for their simultaneous operation, substantially as above set forth.

Also, in combination with the bearing plate *d* the springs *c c*, operating in the manner and for the purpose as described above.

No. 39,547.—W. J. CAMPBELL, of Philadelphia, Pa.—*Improved Pack Saddle.*—Patent dated August 18, 1863.—The saddle is built on two shoulder pieces, joined by arched metallic pieces forming a pommel, and together making the forward part of a tree, the rear or cantle being formed of a metallic arch with horns or projections for staying the load. The forward bars have detachable projections for the same purpose, and rings or eyes on each side of the cantle and pommel give points of attachment for lashing ropes.

Claim.—First, the two bars *A* and *A'* connected together and maintained a given distance apart from each other by the wrought-iron arched pieces *B* and *B'*, as set forth.

Second, the piece *D* with its projections *d* and *d'*, the whole being applied to the two bars, substantially as described.

Third, the detachable pins *E* arranged on the two bars, substantially as set forth.

Fourth, the rings or eyes *M* and *N* arranged on the two bars for the reception of the binding rope, substantially as described.

No. 39,548.—MYRON CASE, of Kasong, N. Y.—*Improvement in Hand Corn Planters.*—Patent dated August 18, 1863.—The slide under the pressure of the handle passes down and makes an instant connexion between the reservoir and the recess in the back piece, which is thus charged with a portion of seed as the slide returns; this seed escapes into the discharge angle at the bottom, and in the return of the slide is extended and thrust into the ground.

Claim.—The combination of the slide *i* provided with the inclined seed aperture *j*, passing entirely through it, the recess *n*, the back piece *c* below the seed reservoir, the plates *f B*, partition *h*, and gum-elastic cut-off *k*, placed within and attached to the seed-box *A*, the whole being constructed and arranged as and for the purposes specified.

No. 39,549.—A. E. CHAMBERLAIN and WM. CAVEN, of Cincinnati, Ohio.—*Improvement in Cooking Stoves.*—Patent dated August 18, 1863.—This improvement consists in an arrangement of flues and deflector in combination with an extended top in which the partition

extends between the boiling flue and the back flue; a deflector in the place ordinarily occupied by the damper is so placed at the upper part of the up-cast flue as to deflect the heated air sideways, from whence it passes through the ventage to the chimney.

Claim.—First, the deflector K in the described combination with the extended box-top G, boiler opening J, and ventage nozzle L, substantially as set forth.

Second, the construction of an extended box-top with the incurved partitions M M between the heat chamber G and the boiling flue B, for the provision of an extended stove-top within the shortest practicable limits, as explained.

Third, as a new and improved manufacture of extended-top cooking stoves the extended box-top or chamber G having the incurved partitions M M, deflector K, supplementary boiler openings J, and a ventage nozzle L in the rear thereof, the whole being combined and operating together in the manner set forth.

No. 39,550.—EZRA COLEMAN, of San Francisco, Cal.—*Improved Machine for Amalgamating Precious Metals.*—Patent dated August 18, 1863.—Within a cylindrical chamber a wheel with grinding surfaces above and below revolves horizontally between plates likewise armed with corrugations or flanges. The middle plate is hung on a balance rine and driven by the rotation of its spindle from bevel gearing beneath; it is adjusted by a central wheel, which raises or lowers the balance rine; the upper plate is adjusted by four set screws at opposite points.

Claim.—The use in amalgamating pans of a plate with grinding surfaces top and bottom, said plate revolving between two plates.

Also, the use of a top plate D in amalgamating pans for the purpose of regulating the agitation of the pulp, the whole substantially as described and for the uses and purposes as hereinbefore set forth.

No. 39,551.—C. E. CORBETT, of Corbettsville, Broome county, N. Y.—*Improvement in Coal Oil Lamps.*—Patent dated August 18, 1863.—The invention consists in surrounding the wick-tube of the lamp with a packing of porous material to absorb the oil which runs over the sides of the tube and prevent smoking.

Claim.—Surrounding the tube of the ordinary coal-oil lamp with packing of cotton or other porous substances, as and for the purposes described.

No. 39,552.—PHILIP H. CORBETT, of Manchester, Alleghany county, Pa.—*Improvement in Spark Extinguishers for Locomotives.*—Patent dated August 18, 1863.—The improvement consists in a cylindrical chambered valve with a receiving and a discharge orifice placed at the bottom of the smoke-box and connected therewith by a throat in the latter, which corresponds with the receiving opening in the valve, so that as the valve is worked in its chamber its receiving and discharge ports are alternately brought in connexion with the opening in the smoke-box and with the exterior discharge opening, without at any time having a passage through by which air can be admitted into the smoke-box.

Claim.—First, a chambered valve E with one or more openings *e e'*, so arranged in regard to the throat *a* and discharge orifice *a'* that when the discharge orifice is open the receiving opening is closed, and *vice versa*, thus preventing the admission of a current of air into the smoke-box while the cinders are being discharged, as specified.

Second, working the valve by a crank motion, rock shaft, pawl and ratchet, or gears, as and for the purpose specified.

No. 39,553.—SAMUEL COWAN, of Bloomfield, Davis county, Iowa.—*Improvement in Cultivators.*—Patent dated August 18, 1863.—This cultivator consists of a frame on wheels with four dependent plough or shovel standards. These standards are hinged at a point below their attachment to the frame and open forwards, being attached by rods to the ends of levers to the other end of which a treadle platform is suspended under the control of the driver. To the upper ends of the shovel standards a transverse bar is attached, and to this bar a lever which, by vibration to right or left, changes the position of the ploughs.

Claim.—In combination with the adjustable and hinged cultivator stocks, herein described, the levers K, rods N O, and treadles M, substantially in the manner and for the purpose set forth.

Also, in combination with the adjustable and hinged cultivator stocks, herein described, the lever H and transverse bar G, for the purpose of shifting said cultivators sidewise, substantially in the manner and for the purposes set forth.

No. 39,554.—WILLIAM C. DAVIS, of Cincinnati, Ohio.—*Improvement in Teakettles.*—Patent dated August 18, 1863.—The whole of the parts involved in this hinged teakettle lid are cast on the lid or kettle and the pintle of the hinge is inserted in its appropriate socket, where it is retained by its gravity while closed and by the projection of its tongue I into an aperture in the kettle when open.

Claim.—The mode of hinging the covers of teakettles and other cast hollow-ware, consisting of the oval socket D E E', pintle F F', tongue I, and aperture H, or their equivalents, the whole being combined and operating as set forth.

No. 39,555.—HENRY W. DE PUY, of Jalapa, Dodge county, Territory of Nebraska, assignor to Himself and DANIEL E. SOMES, of Washington, D. C.—*Improvement in Cooking-Stove Covers or Shields.*—Patent dated August 18, 1863.—The shield has a rim on its upper edge by which it maintains its hold upon the stove-top while the body is recessed and projects downwardly into the flue of the stove so as to hold the recessed bottom portion of the cooking utensil.

Claim.—The combined stove cover and shield, as shown in figure 2, when used in combination with any cooking utensil, as and for the purpose set forth.

No. 39,556.—THOMAS J. DUNKIN, of New York, N. Y.—*Improvement in the Manufacture of Textile Fabrics.*—Patent dated August 18, 1863.—The invention consists in the use of the down of the *Asclepias Syriaca*, pure or mixed with other fibre, in the manufacture of textile fabric, batting, &c.

Claim.—The employment or use in the manufacture of textile fabrics, &c., of the silky down contained in the seed cells of milk-weed or *Asclepias Syriaca*, substantially in the manner herein set forth and described.

No. 39,557.—JAMES EATON, of Boston, Mass.—*Improvement in Spindles of Spinning Machines.*—Patent dated August 18, 1863.—The improvement consists of a small projection or nipple on the end of the spindle, which, while it temporarily detains the yarn, brings it near to the axis of rotation.

Claim.—The small nipple or projection, having its base upon a shoulder, which extends to the periphery of the spindle, by which means the yarn is brought near to the axis of rotation, and at the same time prevented from slipping off the end of the spindles, as herein described.

No. 39,558.—G. EBERIUS and F. A. HEINIG, of Washington, Mo.—*Improvement in Grinding Mills.*—Patent dated August 18, 1863.—To obviate the heating of the flour, in the process of grinding, a blast of air is introduced through apertures in the runner, and thence between the stones carrying the flour, which is discharged into the enlarged chamber around the stones and from thence collected into a spout.

Claim.—The introduction of a continuous current of air between the grinding surfaces of millstones, in combination with the open space *g* and receiving chamber *h*, all being constructed and arranged substantially as and for the purposes set forth.

No. 39,559.—DANIEL L. EMERSON, of Rockford, Winnebago county, Ill.—*Improvement in Harvesters.*—Patent dated August 18, 1863.—The invention consists in making the finger beam extensible for cutting swaths of different widths by means of making one of its parts overlap the other so as to bring a greater or less number of fingers into use; the rear part of the frame and the divider is regulated to correspond with the said extension.

The lower edge of the gathering board or wing of the divider is so combined with the other portion as to present the wing in any required position to the grain to gather more or less to the sickle, the point of the divider being fastened in such a manner that it has a vertical and a lateral motion.

Claim.—An extensible finger beam constructed of parts combined together in such manner that one part overlaps another so as to be capable of extension and construction by overlapping the parts less or more, substantially as herein set forth.

Also, the combination of an extensible finger beam with a back beam adapted to secure the rear of the divider frame in different positions, substantially as herein set forth.

Also, the combination of the gathering board of the divider at its lower edge with the fixed part of the divider, by means of hinge connexions and an adjustable controlling instrument, in such manner that this board can be set at a greater or less inclination to gather in less or more grain, substantially as herein set forth.

Also, the combination of the divided point with the remainder of the divider, by fastenings, in such a manner that it can be set in different positions both laterally and vertically, substantially as herein set forth.

No. 39,560.—R. B. FITTS and J. W. THACKARA, of Philadelphia, Pa.—*Improved Hand Cultivator.*—Patent issued August 18, 1863; antedated January 16, 1863.—This tool is intended for cultivating around plants which are grown singly in hills, and consists of a central vertical handle attached to a ring provided in its interior with detachable cutters or teeth, scrapers, and hilling plates. The ring is set down around the plant and revolved by the handle, tilling the soil or hilling it if so desired.

Claim.—First, the stem A, in combination with the ring B, constructed and arranged to receive the detachable teeth C C C, and cutting scrapers D D D, substantially in the manner described and set forth, for the purposes specified.

Second, the teeth C C C in combination with the ring B, the said teeth being arranged so that they may be detached, substantially as described for the purpose specified.

Third, the cutting scrapers D D D, in combination with the ring B, the said scrapers being arranged substantially as described for the purpose specified.

extends between the boiling flue and the back flue; a deflector in the place ordinarily occupied by the damper is so placed at the upper part of the up-cast flue as to deflect the heated air sideways, from whence it passes through the ventage to the chimney.

Claim.—First, the deflector K in the described combination with the extended box-top G, boiler opening J, and ventage nozzle L, substantially as set forth.

Second, the construction of an extended box-top with the incurved partitions M M between the heat chamber G and the boiling flue B, for the provision of an extended stove-top within the shortest practicable limits, as explained.

Third, as a new and improved manufacture of extended-top cooking stoves the extended box-top or chamber G having the incurved partitions M M, deflector K, supplementary boiler openings J, and a ventage nozzle L in the rear thereof, the whole being combined and operating together in the manner set forth.

No. 39,550.—EZRA COLEMAN, of San Francisco, Cal.—*Improved Machine for Amalgamating Precious Metals.*—Patent dated August 18, 1863.—Within a cylindrical chamber a wheel with grinding surfaces above and below revolves horizontally between plates likewise armed with corrugations or flanges. The middle plate is hung on a balance rine and driven by the rotation of its spindle from bevel gearing beneath; it is adjusted by a central wheel, which raises or lowers the balance rine; the upper plate is adjusted by four set screws at opposite points.

Claim.—The use in amalgamating pans of a plate with grinding surfaces top and bottom, said plate revolving between two plates.

Also, the use of a top plate D in amalgamating pans for the purpose of regulating the agitation of the pulp, the whole substantially as described and for the uses and purposes as hereinbefore set forth.

No. 39,551.—C. E. CORBETT, of Corbettsville, Broome county, N. Y.—*Improvement in Coal Oil Lamps.*—Patent dated August 18, 1863.—The invention consists in surrounding the wick-tube of the lamp with a packing of porous material to absorb the oil which runs over the sides of the tube and prevent smoking.

Claim.—Surrounding the tube of the ordinary coal-oil lamp with packing of cotton or other porous substances, as and for the purposes described.

No. 39,552.—PHILIP H. CORBETT, of Manchester, Alleghany county, Pa.—*Improvement in Spark Extinguishers for Locomotives.*—Patent dated August 18, 1863.—The improvement consists in a cylindrical chambered valve with a receiving and a discharge orifice placed at the bottom of the smoke-box and connected therewith by a throat in the latter, which corresponds with the receiving opening in the valve, so that as the valve is worked in its chamber its receiving and discharge ports are alternately brought in connexion with the opening in the smoke-box and with the exterior discharge opening, without at any time having a passage through by which air can be admitted into the smoke-box.

Claim.—First, a chambered valve E with one or more openings *e e'*, so arranged in regard to the throat *a* and discharge orifice *a'* that when the discharge orifice is open the receiving opening is closed, and *vice versa*, thus preventing the admission of a current of air into the smoke-box while the cinders are being discharged, as specified.

Second, working the valve by a crank motion, rock shaft, pawl and ratchet, or gears, as and for the purpose specified.

No. 39,553.—SAMUEL COWAN, of Bloomfield, Davis county, Iowa.—*Improvement in Cultivators.*—Patent dated August 18, 1863.—This cultivator consists of a frame on wheels with four dependent plough or shovel standards. These standards are hinged at a point below their attachment to the frame and open forwards, being attached by rods to the ends of levers to the other end of which a treadle platform is suspended under the control of the driver. To the upper ends of the shovel standards a transverse bar is attached, and to this bar a lever which, by vibration to right or left, changes the position of the ploughs.

Claim.—In combination with the adjustable and hinged cultivator stocks, herein described, the levers K, rods N O, and treadles M, substantially in the manner and for the purpose set forth.

Also, in combination with the adjustable and hinged cultivator stocks, herein described, the lever H and transverse bar G, for the purpose of shifting said cultivators sidewise, substantially in the manner and for the purposes set forth.

No. 39,554.—WILLIAM C. DAVIS, of Cincinnati, Ohio.—*Improvement in Teakettles.*—Patent dated August 18, 1863.—The whole of the parts involved in this hinged teakettle lid are cast on the lid or kettle and the pintle of the hinge is inserted in its appropriate socket, where it is retained by its gravity while closed and by the projection of its tongue I into an aperture in the kettle when open.

Claim.—The mode of hinging the covers of teakettles and other cast hollow-ware, consisting of the oval socket D E E', pintle F F', tongue I, and aperture H, or their equivalents, the whole being combined and operating as set forth.

No. 39,555.—HENRY W. DE PUY, of Jalapa, Dodge county, Territory of Nebraska, assignor to Himself and DANIEL E. SOMES, of Washington, D. C.—*Improvement in Cooking-Stove Covers or Shields.*—Patent dated August 18, 1863.—The shield has a rim on its upper edge by which it maintains its hold upon the stove-top while the body is recessed and projects downwardly into the flue of the stove so as to hold the recessed bottom portion of the cooking utensil.

Claim.—The combined stove cover and shield, as shown in figure 2, when used in combination with any cooking utensil, as and for the purpose set forth.

No. 39,556.—THOMAS J. DUNKIN, of New York, N. Y.—*Improvement in the Manufacture of Textile Fabrics.*—Patent dated August 18, 1863.—The invention consists in the use of the down of the *Asclepias Syriaca*, pure or mixed with other fibre, in the manufacture of textile fabric, batting, &c.

Claim.—The employment or use in the manufacture of textile fabrics, &c., of the silky down contained in the seed cells of milk-weed or *Asclepias Syriaca*, substantially in the manner herein set forth and described.

No. 39,557.—JAMES EATON, of Boston, Mass.—*Improvement in Spindles of Spinning Machines.*—Patent dated August 18, 1863.—The improvement consists of a small projection or nipple on the end of the spindle, which, while it temporarily detains the yarn, brings it near to the axis of rotation.

Claim.—The small nipple or projection, having its base upon a shoulder, which extends to the periphery of the spindle, by which means the yarn is brought near to the axis of rotation, and at the same time prevented from slipping off the end of the spindles, as herein described.

No. 39,558.—G. ENERIUS and F. A. HEINIG, of Washington, Mo.—*Improvement in Grinding Mills.*—Patent dated August 18, 1863.—To obviate the heating of the flour, in the process of grinding, a blast of air is introduced through apertures in the runner, and thence between the stones carrying the flour, which is discharged into the enlarged chamber around the stones and from thence collected into a spout.

Claim.—The introduction of a continuous current of air between the grinding surfaces of millstones, in combination with the open space *g* and receiving chamber *h*, all being constructed and arranged substantially as and for the purposes set forth.

No. 39,559.—DANIEL L. EMERSON, of Rockford, Winnebago county, Ill.—*Improvement in Harvesters.*—Patent dated August 18, 1863.—The invention consists in making the finger beam extensible for cutting swaths of different widths by means of making one of its parts overlap the other so as to bring a greater or less number of fingers into use; the rear part of the frame and the divider is regulated to correspond with the said extension.

The lower edge of the gathering board or wing of the divider is so combined with the other portion as to present the wing in any required position to the grain to gather more or less to the sickle, the point of the divider being fastened in such a manner that it has a vertical and a lateral motion.

Claim.—An extensible finger beam constructed of parts combined together in such manner that one part overlaps another so as to be capable of extension and construction by overlapping the parts less or more, substantially as herein set forth.

Also, the combination of an extensible finger beam with a back beam adapted to secure the rear of the divider frame in different positions, substantially as herein set forth.

Also, the combination of the gathering board of the divider at its lower edge with the fixed part of the divider, by means of hinge connexions and an adjustable controlling instrument, in such manner that this board can be set at a greater or less inclination to gather in less or more grain, substantially as herein set forth.

Also, the combination of the divided point with the remainder of the divider, by fastenings, in such a manner that it can be set in different positions both laterally and vertically, substantially as herein set forth.

No. 39,560.—R. B. FITTS and J. W. THACKARA, of Philadelphia, Pa.—*Improved Hand Cultivator.*—Patent issued August 18, 1863; antedated January 16, 1863.—This tool is intended for cultivating around plants which are grown singly in hills, and consists of a central vertical handle attached to a ring provided in its interior with detachable cutters or teeth, scrapers, and hilling plates. The ring is set down around the plant and revolved by the handle, tilling the soil or hilling it if so desired.

Claim.—First, the stem A, in combination with the ring B, constructed and arranged to receive the detachable teeth C C C, and cutting scrapers D D D, substantially in the manner described and set forth, for the purposes specified.

Second, the teeth C C C in combination with the ring B, the said teeth being arranged so that they may be detached, substantially as described for the purpose specified.

Third, the cutting scrapers D D D, in combination with the ring B, the said scrapers being arranged substantially as described for the purpose specified.

Fourth, in combination with the stem A and ring B, the cylindrical cutter E, the same being made adjustable on the stem A, substantially as described and set forth for the purposes specified.

Fifth, in combination with the cylindrical cutter E, the detachable hilling plates F F F, the said plates being formed and arranged to operate therewith in the manner substantially as described for the purpose specified.

No. 39,561.—HENRY K. FLINCHBAUGH, of Conestoga Centre, Lancaster county, Pa.—*Improvement in Carriage Wheels*.—Patent dated August 18, 1863.—The metallic spokes are screwed into projections on the tire and converge alternately toward points on each side of a central line around the hub, which is moulded and cast around the inner ends of the spokes.

Claim.—The wrought-iron spokes, when inserted directly into the ridge *r* on the tire, by means of a screw cut on the outer end, bringing their other ends alternately to the right and left of a central line around the hub, in which they are firmly imbedded, by having the hub moulded and cast around them, substantially in the manner specified.

No. 39,562.—JAMES B. FRANCIS, of Lowell, Mass.—*Improvement in Shaft Bearings*.—Patent dated August 18, 1863.—The invention consists in the employment of mercury as a bearing for upright shafts, which is accomplished by placing a quantity of this metal in a suitable receptacle, and causing a drum or circular float, which is attached to the shaft and revolves with it, to be partially or wholly immersed in the mercury.

Claim.—The employment of mercury as a bearing for upright shafts, substantially in the manner as set forth.

No. 39,563.—ELBRIDGE GALE, of Pavilion, Kendall county, Ill.—*Improvement in Wire Fences*.—Patent dated August 18, 1863.—The wire is drawn through the holes in the posts and wrapped or bent to maintain its tension while the ends are fastened by being hooked together, the barbs of the hooks being confined by links.

Claim.—First, the fastening of the wire firmly to the posts by looping or wrapping the wire around the whole or a portion of the posts, or by drawing the wire through the post and bending on either side, as described.

Second, the use of the link *k*, in the manner and for the purpose set forth.

No. 39,564.—THOMAS W. GOODWIN, of Portsmouth, Va.—*Improvement in Engine Levers*.—Patent dated August 18, 1863.—This device consists of a lever attached to the main-shaft, immediately or otherwise, and so arranged with cross-bars, the lower one armed with teeth engaging the ratchet wheel on the main shaft, that the teeth may be made to engage with either the right or the left hand movement and propel the ratchet wheel in a corresponding direction, slipping over the ratchet teeth on the return motion.

Claim.—First, the use of the lower cross-balance bar *c*, having the teeth *g g*, substantially as and for the purpose described.

Second, the construction and use of the upper cross-balance bar *k* in one solid piece, of the form of an inverted cross, substantially as and for the purpose set forth.

No. 39,565.—CARROLL E. GRAY, of St. Louis, Mo.—*Improvement in Apparatus for Rendering Oils and Fats*.—Patent dated August 18, 1863.—In this apparatus the fluid fat is quietly removed from the digester into a reservoir without taking off the steam pressure, the condition and quantity of the fat being observable as it passes by means of a glass section in the connecting pipe.

Claim.—First, the application of a second steam-tight vessel for receiving melted fat or other fluid material that may have been cooked under steam pressure, and for cooling down and purifying the same until it is in a proper condition for exposure to the atmosphere, substantially as before described.

Second, the placing of a glass tube in the draw-off pipe from the digester, or similar apparatus for the treatment of material under steam pressure for the purpose specified, substantially as before described.

No. 39,566.—RICHARD GREGG, of Lawrenceburg, Dearborn county, Ind.—*Improvement in Stock for Shearing Sheep*.—Patent dated August 18, 1863.—This consists of clamps for holding the legs of the sheep, made adjustable as to height and relative inclination, by means of the rotation of the bar on whose ends they are placed; and likewise by the vertical and horizontal adjustment of the arm, upright, and bed-piece, so as to present the sheep in any position required.

Claim.—The adjustable upright D, in combination with the arm E, formed of two parts *g h*, connected together by a swivel joint *i*, and the revolving bar F, provided with clamps G, and fitted in the outer end of the arm E, all being arranged substantially as and for the purpose herein set forth.

No. 39,567.—THOMAS J. HALLIGAN, of New York, N. Y.—*Improvement in Sewing Machine Shuttlers*.—Patent dated August 18, 1863.—The improvements consist of a hinged lever

bobbin frame consisting of a stationary and a parallel jaw with a tension screw, by which a pressure is brought upon the spindle of the bobbin; also of a smooth bar spanning an opening in the top of the shuttle, around which bar the waxed thread is wound to assist in regulating the tension.

Claim.—First, a shuttle for waxed-thread sewing machines constructed with the hinged lever bobbin frame and direct-acting tension screw, substantially as shown in figure 3, for the purposes set forth.

Second, the combination and arrangement of the smooth transverse bar *c*, opening *b'*, formed as described, and bobbin *b*, whereby the desired tension on the thread is obtained, and, while I pass the thread through the top of the shuttle, prevent the scraping off of the wax from the thread, substantially as described.

No. 39,568.—CHARLES B. and JOHN HARDICK, of Brooklyn, N. Y.—*Improvement in Valves for Pumps*.—Patent dated August 18, 1863.—The improvement consists of stops to check the motion of the valve, the said stops extending all across the valve chamber.

Claim.—The stops *p*, extending from side to side of the valve chest over the seat, and receiving the cylindrical or prismatic valves, as specified.

No. 39,569.—EMANUEL HARMON, of Washington, D. C.—*Improvement in Stockings*.—Patent issued August 18, 1863; antedated March 1, 1863.—The stockings are made in sections and afterwards "sewed" together so that any particular part may be renewed that may have become worn.

Claim.—As a new article of manufacture, sections of stockings made as and for the purposes specified.

No. 39,570.—EMANUEL HARMON, of Washington, D. C.—*Improvement in Stockings*.—Patent issued August 18, 1863; antedated March 12, 1863.—The stocking is made of textile material, and the heels and toes covered with flexible leather.

Claim.—As an improved article of manufacture, stockings made of any textile material and covered at the heels and toes with flexible leather, or its equivalent, substantially as described.

No. 39,571.—EDWARD A. HILL, of Galesburg, Ill.—*Improvement in Galvanic Batteries*.—Patent issued August 18, 1863; antedated April 9, 1862.—The invention consists in so arranging the elements of the battery that the negative metal is placed in the bottom of the jar, immersed in a strong solution of a salt of said metal, while the positive metal is suspended high up in the said jar in a dilute saline solution, the different specific gravities of the solutions admitting of the respective positions of the solutions being maintained without a porous cup or partition.

Claim.—The peculiar local positions of the elements with reference to each other, and the use of two or more saline solutions without a porous partition to separate them, substantially as set forth.

No. 39,572.—J. M. HOADLEY, of Derby, New Haven county, Conn.—*Improvement in Crochet Needles*.—Patent issued August 18, 1863; antedated January 17, 1863.—The needles are pivoted to the handle and close therein like a pocket knife; when closed, a ferule slips over the end and secures it closed, and when open the ferule slips upon it and holds it readily open.

Claim.—A crochet needle or instrument so constructed that the needle may be folded or closed into the handle, and distended, or held out firmly in a working position, at pleasure, substantially as and for the purposes set forth.

No. 39,573.—THOMAS T. HOLDSWORTH, of Brooklyn, N. Y.—*Improvement in Grates for Furnaces*.—Patent dated August 18, 1863.—The alternate grate bars have lugs projecting downwardly from their lower edges, in which a cam on a rock-shaft is made to engage, so as by the motion of the shaft to move the said alternate grate bars longitudinally to clear them from accumulation of ashes.

Claim.—The arrangement of the shaft D, cams *a*, and lever E with the alternate toothed bars, in the manner herein shown and described, so as to produce the motion upon said alternate bars in connexion with the teeth, all as set forth.

No. 39,574.—LEWIS HOVER, of Chicago, Ill.—*Improved Case for a Ratchet Wheel for Lamps*.—Patent dated August 18, 1863.—The invention consists of a cap or cover to protect the wick-elevator which is attached to the wick-tube, by the passage of the ends of the cap through perforations in the tube, one of the ends being made to press upon the wick to sustain it in the tube.

Claim.—First, the described manner of securing the cap on the wick tube or burner, by inserting one or both ends of said cap in perforations made in the burner for that purpose.

Second, one or more perforations made in the burner for the insertion of the ends of the cap, and thus constituting a fastening for said cap, as explained.

Third, the cap herein described, when one or both ends are made to act as a spring or wick sustainer, as explained.

No. 39,575.—ISAIAH S. and JOHN W. HYATT, Jr., of Chicago, Ill.—*Improved Ice Creeper*.—Patent dated August 18, 1863.—This creeper consists of a plate to be secured to the heel by a screw, and having on its upper side a spur which enters the leather, and thus, by locking it, prevents rotation, while the downwardly projecting points penetrate the surface of the ice.

Claim.—The self-locking creeper, herein described, as a new article of manufacture, the same being a single piece, with the central screw A holding spurs D and ice spurs or surfaces C, arranged to operate together, substantially as herein described.

No. 39,576.—PIERRE JOUVIN, of Rochefort, France.—*Improvement in Preserving Iron Plated and Other Vessels*.—Patent dated August 18, 1863.—The iron composing the frame and siding of the ship is covered with sheet zinc, zinc paint, or felt sprinkled with metallic zinc, according to location and circumstances. To prevent incrustations on ships' bottoms and marine works, they are covered with a compound of herbith mineral and Prussian blue, which, in contact with the alkaline chlorides of sea-water, produce a poisonous compound.

Claim.—First, the applying, and the mode of applying on the internal part of the holder of iron ships, zinc sheets, either alone or combined with the use of a metallic zinc paint, or of felt sprinkled with metallic zinc powder, to preserve iron-plated and other ships from the destructive action of sea-water, as hereinbefore described.

Second, the production of a poisonous compound and its application to iron ships' bottoms, and to wood employed to secure dikes, embankments, docks, and for naval and other constructions, in order to prevent, for the former, the deposit of barnacles and sea-weeds, and to protect the latter from injury from teredos, as hereinbefore described.

Third, the application to iron articles of a paint having pulverized metallic zinc for base to replace the red lead paint, as hereinbefore described.

No. 39,577.—WILLIAM S. JUDD, of Clanhassen, Carver county, Minn.—*Improvement in Pumps*.—Patent dated August 18, 1863.—This consists of a submerged pump having a tubular rotating and reciprocating piston rod and valve and stationary water passages within the cylinder.

Claim.—The tubular reciprocating rotating piston rod C, provided with the piston K, in combination with the plates d, placed within the cylinder A, and provided with valves M, all arranged to operate as set forth, and either with or without the pipe N.

No. 39,578.—HIRAM A. KIMBALL, of Philadelphia, Pa.—*Improvement in Artificial Limbs*.—Patent dated August 18, 1863.—The improvement consists in the use of vulcanized gum cast in the requisite form for the purpose.

Claim.—As a new article of manufacture, an artificial limb having its members made of vulcanized gum, cast in moulds, and in imitation of the exterior form of the natural limb, as set forth for the purpose specified.

No. 39,579.—HENRY KNIGHT, of Brooklyn, N. Y.—*Improved Drain Tile Machine*.—Patent dated August 18, 1863.—The clay is filled into an outer cylinder, and the interior surface of the pipe is made by drawing a tapering former or mole through the mass; the axial position of the former is secured by a central guide rod on which the tool traverses. The rings on the upper and lower ends of the cylinder form the square ends of the pipe, their central orifice corresponding to the diameter of the former.

Claim.—First, guiding and directing the passages of the forming tool through the pipe, in its operation of spreading the cement thereon, by means of a stationary rod G, substantially as described.

Second, the employment of base and cap rings a c, or their equivalents, in conjunction with a conical forming tool G, substantially as and for the purposes described.

No. 39,580.—WILLARD KNOWLES, of Boston, Mass.—*Improvement in Hose Couplings*.—Patent dated August 18, 1863.—The hose necks are connected to two interlocking flanges, so constructed that one may be inserted axially into the other, and on being revolved therein a short distance, will be retained in it; quadrantal arc projections on one part lapping on corresponding portions of the other part.

Claim.—The said improved hose coupling as consisting of the two interlocking connexions C D, and the screws g h, constructed, arranged, and applied together, and to the hose necks or tubes A B, substantially in manner as specified.

No. 39,581.—J. H. LEE, of Leavenworth, Kansas.—*Improvement in Locks for Wheel Vehicles*.—Patent dated August 18, 1863.—This improvement consists of jointed bars with toes which are projected by the locking lever from the lower edge of the bed, so that the toes engage with the felloes of the wheels, and prevent their rotation; they are disconnected by a trigger arrangement which frees the toes and allows the wheels to slide past, when the parts are restored to their normal position by springs, and by the return of the locking lever.

Claim.—First, the employment or use of one or two bars G attached to the body of the vehicle, and arranged with joints in such a manner that they may be moved in both a vertical and horizontal plane, and provided with hooks I, which, by the movements of the bars

forementioned, may be engaged with or detached from the wheels, in order to lock and unlock the same, as set forth.

Second, the manner of attaching or arranging the hooks I with the bars G, so as to admit of the former being readily released from the wheels, to wit: by having the hooks I attached to rods H, which are pivoted in slots in the bars G, and having springs i connected with the hooks and arms J, or any suitable clicks to engage with the rods H, substantially as set forth.

Third, the shaft B provided with the spring E, the lever C, and arm L, with the rods K, and arms J, in combination with the bars G, spring M, and rods H provided with the hooks I, all arranged to operate substantially as and for the purpose herein set forth.

No. 39,582.—DENNIS G. LITTLEFIELD, of Albany, N. Y.—*Improvement in Coal Stoves*.—Patent dated August 18, 1863.—For the purpose of heating the chamber in the base of the stove, the fire-pot is suspended therein; the supply chamber is suspended from the upper section above the fire-pot, the mouth of the said chamber immediately exposed to the fire, consisting of a soapstone or clay cylinder, separately suspended by ears and hasps from the superior portion of the said chamber.

Claim.—In stoves using a supplying cylinder for reserve coal, and an external case surrounding the same, the suspension or arrangement of the fire-pot or burning chamber, in a chamber C at the base of the stove, entirely shut off or separated from the chamber which receives the heat directly from the burning fuel, and the heated products of combustion, so that the said chamber C may separately receive the heat radiated from the outer surfaces of the fire-pot, and transmit it to the surrounding case, and from thence radiate it near the floor, to the apartment to be warmed, substantially as herein specified.

In combination with the fire-pot, suspended or arranged in a separate chamber at the base of the stove, also, the suspension of the supplying cylinder in the combustion and heat transmitting chamber G, above and separate from the fire-pot, substantially as and for the purpose herein set forth.

Also, suspending the detachable soapstone or fire-brick supporting cylinder L of the separately suspended supplying cylinder, by means of the eyes o o, and stirrups or hasps p p, or their equivalents, in order that the said section may be detached from below, without the necessity of raising it through the supplying cylinder itself, substantially as herein specified.

Also, the construction and arrangement of the stove, in such a manner that it not only may be a connected individual whole, but may be readily separated into two sections, (Figs. 3 and 4,) each complete in itself, to the extent described when thus applied in relation to the suspended fire-pot in a separate chamber at the base of the stove, and to the separately suspended supplying cylinder, substantially as and for the purposes set forth.

No. 39,583.—RICHARD McDOWELL, of Lambertsville, Hunterdon county, N. J.—*Improved Variable Exhaust for Locomotives*.—Patent dated August 18, 1863.—The size of the opening of the exhaust is modified by the action of the steam which operates against the pressure of the spring which tends to close the wings.

Claim.—The combination of the spring g with the wings b b and exhaust D, in the manner herein shown and described.

No. 39,584.—HARMAN OSTER, of Philadelphia, Pa.—*Improvement in Pantaloon*.—Patent dated August 18, 1863.—The leg of the garment is made of one entire piece, having but one seam, which commences at the bottom of the fore part, and runs up in a line with the opening in front.

Claim.—A garment having legs, each leg formed by the sutures C I D H E J, substantially as shown and described.

No. 39,585.—WILLIAM PINKERMAN, of Bridgeport, Conn.—*Improvement in Faucets*.—Patent issued August 18, 1863; antedated November 12, 1862.—This consists of a double cylinder, the inner one traversing in the outer, by means of a screw thread, and rotated by the engagement of the square on the end of the faucet with the socket in the outer end of the inner cylinder.

Claim.—The double screw faucet A and B, the inner one travelling in and out by the action of the coupling D, in the manner described and for the purpose substantially as set forth.

No. 39,586.—WILLIAM PORTER, of New York, N. Y.—*Improvement in Lanterns*.—Patent dated August 18, 1863.—The improvement consists of an annular piece of cork, leather, or similar material, placed in the socket through which the cap of the lamp is inserted, so that the latter may be slipped vertically downwards; the shaft of the wick-raiser being in line with the slot in the case, through which it passes to the outside of the lantern.

Claim.—The socket N provided with a ring e of leather, cork, or other suitable material, in connexion with the smooth cylindrical part f of the cap, substantially as and for the purpose herein set forth.

No. 39,587.—A. D. PUFFER, of Somerville, Middlesex county, Mass.—*Improved Soda-Water Cooler*.—Patent dated August 18, 1863.—The object of the invention is to avoid the estab-

lishment of a central current in the pipes, which shall not be in direct contact with the cold surface of the pipes, by compelling the soda-water to impinge against the adjacent end of the cylinder next in course, and then being reversed, to flow against the surface of the cylinder to its opposite end, and there reverting, be passed into the next pipe to be similarly treated.

Claim.—So constructing the inlet and outlet pipes of a series or system of cooling cylinders, and the pipes connecting said cylinders, that the orifices in said pipes shall be adjacent to the nearest ends of said cylinders, substantially as and for the purpose set forth.

No. 39,588.—CHARLES H. ROBINSON, of Bath, Sagadahock county, Me.—*Improvement in Hay and Cotton Presses.*—Patent dated August 18, 1863.—The press consists of two levers which are connected by rods to the uprights of the frame and supported on bars, the lower ends of which rest on the upper platform, while to the upper ends of the levers are attached rods by which the follower of the press is suspended and raised as the lower ends of the levers are drawn in by the action of the ropes and pulleys.

Claim.—The levers B B, and bars C, connected together as shown, in combination with the follower G, rods E F, and windlass H, all being arranged and applied to the framing A, to operate as and for the purpose herein set forth.

No. 39,589.—DAVID ROBINSON, of Cold Spring, Putnam county, N. Y.—*Improvement in Applying Wash to Sand Moulds.*—Patent dated August 18, 1863.—This device consists of a central tube with a funnel, and is contained in a cylinder with a conical head; its purpose is to be introduced into a sand mould to apply a wash coating to the interior surface.

Claim.—The cylinder A, provided with an internal tube B, and shell D, of conical or other form, all arranged and combined substantially as and for the purpose set forth.

No. 39,590.—IVES SCOVILLE, of Chicago, Ill.—*Improvement in Machines for Making Nuts and Washers.*—Patent dated August 18, 1863.—The work of the machine is done upon a horizontal rotating disk which carries the die blocks; these slide freely up and down in square apertures in the disk so that the nuts may be punched and swaged while lying in the aperture, and then be thrown out by the rising of the block. The said disk rests upon a stationary disk which has cams on its upper surface to raise the die blocks. The blanks are cut upon a stationary table over the revolving die carrier, and drop into the pockets in the carrier, which has an intermittent motion, bringing the contents of the pockets successively under the punches.

Claim.—First, in a machine for making perforated nuts or washers, combining a stationary bed G with one or more cams G' on its working face, a rotating die-carrying disk, and a horizontally oscillating and vertically sliding ring G', substantially as and for the purpose set forth.

Second, in a machine for making perforated nuts or washers, providing the groove i, in and around the under side of the die-carrying disk H, substantially as and for the purpose set forth.

Third, punching nuts or washers upon the top of perforated sliding die boxes g' and within enclosing and supporting walls of the dies of the rotating disk, substantially as and for the purpose set forth.

Fourth, both swathing and punching nuts or washers at one operation upon the top of perforated sliding die boxes g' of a rotating disk H while the metal out of which the nut is formed is enclosed by the walls of the die, substantially as and for the purpose set forth.

Fifth, in a machine which makes perforated nuts or washers, effecting the discharge of the finished nuts or washers at the top of the horizontally rotating die-carrying disk H by means of sliding perforated die blocks g', which are carried around with the rotating disk H, substantially as set forth.

Sixth, in a machine which makes perforated nuts or washers, constructing the bed G with a hub in combination with the fitting of the bed and the die-carrying disk together, by means of a screw or screws and a spring, substantially as and for the purpose set forth.

Seventh, fitting the ring G' to the bed G, and upon springs, substantially as and for the purpose set forth.

Eighth, constructing the die-carrying disk of a machine which makes perforated nuts or washers with inclines e' and notches t, in combination with the constructing of the ring G', with inclines e', substantially as and for the purpose set forth.

Ninth, the combination in a machine which makes perforated nuts or washers of a rock shaft N, retaining catch R, inclines e e', and notches t, substantially as and for the purpose set forth.

Tenth, the combination in a machine which makes perforated nuts or washers of the rock shaft N, retaining catch R, notches t, inclines e e', cams G2, and movable perforated die boxes g', substantially as and for the purpose set forth.

Eleventh, the combination in a machine which makes perforated nuts or washers of the flat or plain end cutting tool K, and a table L, which has a stationary enclosed guiding and cutting die formed in it, substantially as and for the purpose set forth.

Twelfth, in a machine which makes perforated nuts or washers, the table L, with its die k, constructed in it, arranged over the die-carrying disk H, and in the relation described to

the pockets g, and so that it forms an independent or auxiliary die and an enclosing guide for truly delivering the blanks into the pockets, substantially as set forth.

Thirteenth, a stationary die table L, with ledges l l', and guide die k, for use in connexion with machines which make perforated nuts or washers, substantially as set forth.

Fourteenth, producing the blanks from a strip of metal within an enclosed auxiliary die and immediately delivering them therefrom into the pockets g, substantially as and for the purpose set forth.

No. 39,591.—JOSEPH N. SMITH, of Cincinnati, Ohio.—*Improvement in Magazine Fire-arms.*—Patent issued August 18, 1863; antedated January 21, 1863.—The stock of this fire-arm is divided longitudinally and vertically, and contains a groove forming a magazine for cartridges which are fed along by a follower drawn by a cord and spring. The cartridges lie side by side in the groove transversely to the axis of the piece, and are received and turned by a turn-table, from whence they are driven by a plunger operated by a toothed pinion into a cylinder, the plunger acting on a recoil shield. The cock is raised by means of a partially cogged wheel and retained by the engagement of a notch; the cylinder is operated by a cam wheel, plate, and bar, so as to make the right presentation of its chamber to the rear end of the bore.

Claim.—First, constructing the stock of the gun in two parts with a broad groove A', so that the cartridges may be placed in said groove horizontally transverse to the stock, substantially as herein set forth.

Second, the wheel 17 and ratchet 16, used as described with the cord 15, and follower 14, and spring 18, for moving and stationing the cartridges, substantially as specified.

Third, the turn-table E, with openings for admitting the cartridges laterally, operating substantially as specified, for the purpose of turning the cartridges in the right direction, substantially as set forth.

Fourth, the use of the opening through the breech-piece at R, corresponding with the opening in cylinder C, for the purpose herein set forth.

Fifth, the employment of the rack bar C', in combination with the spring catch or brace D, constructed and operating substantially as set forth.

Sixth, the employment of the cam wheel L and plate M, or their equivalents, constructed and operating substantially as set forth.

Seventh, the use of the bar N, or its equivalent, for operating cylinder C and table E, as herein set forth.

Eighth, the employment of the segment H, as constructed, when used in connexion with the cock and the segment pinion on the shaft D, arranged substantially as set forth.

Ninth, the employment of the wiper 8, or its equivalent, and the plate 7, for the purpose specified.

No. 39,592.—DANIEL E. SOMES, of Washington, D. C.—*Improvement in Fire-arms.*—Patent dated August 18, 1863.—In this fire-arm the ball is held in the barrel by means of sliding bolts operated by springs and gauge screws until the maximum explosive force of the charge is attained, when the ball is instantly liberated.

Claim.—First, the construction of a gun so that by means of springs, or their equivalents, the ball or projectile shall be held at any given point of the barrel until any required force of the charge is exerted upon it.

Second, the sliding bolts e e e, the springs f f f, and the gauge screws g g g, substantially as and for the purpose described.

No. 39,593.—JOSEPH NOTTINGHAM SMITH, of New York, N. Y.—*Improvement in Elongated Projectile for Fire-arms.*—Patent dated August 18, 1863.—This improvement consists of an elongated cylinder to fill the bore of the gun, having a charge chamber in its rear portion which contains the powder for propulsion. The point consists of a pointed axial bolt whose rear is furnished with a percussion cap to be exploded by the forward motion of a striker on the concussion of the projectile. The spaces within the striker, around and to the rear of it, are connected, filled with powder, and successively exploded, forcing the pointed bolt further into the object struck.

Claim.—First, the combination of the point bolt E and cylinder D with their powder chambers m and i, arranged so as to ignite the powder therein successively, from the concussion of the projectile in striking, substantially as and for the purpose herein specified.

Second, the arrangement of the magazine chamber h, in the shaft of the projectile, in combination with the powder chamber i and m, so as to fire the powder in succession, after the firing of the charges in the other chambers, substantially as and for the purposes herein set forth.

No. 39,594.—E. M. STEVENS, of Boston, Mass., assignor to ALFRED B. ELY, of Newton, Mass.—*Stiffening for Heels of Boots and Shoes.*—Patent dated August 18, 1863.—The stiffening heel cap consists of a mixture of India-rubber and fibrous material.

Claim.—As a new article of manufacture, for the heels of boots and shoes, a stiffening made of India-rubber, mixed with ground rags, or other suitable fibrous material, substantially as set forth and for the purpose described.

No. 39,595.—AUGUSTUS W. SÜS, of New York, N. Y.—*Improvement in Ambulances*.—Patent dated August 18, 1863.—The lower tier in the ambulance is provided with folding hinged boards which serve as seats or beds; the upper tier is adapted for cots, or to be folded back for loading or unloading the ambulance; a head rest to the cots allows of their being folded away, and a water tank is furnished under the bed.

Claim.—First, the movable seats E E', constructed and secured substantially as set forth. Second, the hinged cots or stretchers K K', in the described combination with the movable seats E E'.

Third, the folding head and foot rests M N, applied to the hinged cots K K, substantially as shown and described.

Fourth, the described arrangement of the water tank U, and drawer V, beneath the body A of the ambulance.

No. 39,596.—ELISHA A. SUTCLIFFE, of New York, N. Y.—*Improvement in Breech-loading Ordnance*.—Patent dated August 18, 1863.—The circular breech plate, which occupies a groove at the rear of and which is larger than the bore of the gun, is hung by a pin to the end of a hollow screw plug, which as it rotates admits of the dropping of the breech-piece to allow the insertion of the load from the rear and by the return motion closes the breech tightly within its appropriate groove.

Claim.—Connecting the movable breech-piece C with the hollow tightening and sustaining screw B, by means of a pin c, or its equivalent, by which the turning of the said screw in and out is made to raise and lower the breech-piece and so close the breech of the gun substantially as herein described.

No. 39,597.—JAMES P. TOSTEVIN, of Racine, Wis.—*Improvement in Cultivators*.—Patent dated August 18, 1863.—The improvement consists in the method of attaching the teeth to the frame, which is by a hook, with a shank and nut in the frame above the tooth, and a forked brace abutting against a rear bar of the frame and secured by a staple.

Claim.—The combination and arrangement of braces H, hooks I, nuts J, and staples L, operating substantially in the manner and for the purposes set forth.

No. 39,598.—B. T. TRIMMER, of Rochester, N. Y.—*Improvement in Smut Mills*.—Patent dated August 18, 1863.—The apparatus consists of a conical case with teeth projecting from its inner surface, and a cone corresponding to the case in form, and likewise armed with teeth which revolve in the intervals of those in the case. The fans or beaters are secured upon the cone by being screwed to one of the faces of the triangular jacks or lugs, being removed from one face to the other according to the direction in which the cone is to be revolved. They are secured by screws which enter slots in the lugs.

Claim.—The double-faced bearings or lugs H H, provided with the slots k k, or their equivalent, in combination with the beaters I I, for attaching, adjusting, and shifting said beaters, and adapting the machine to be run in either direction, substantially as herein described.

Also, in combination with the beaters thus attached and adjusted, and provided with teeth m m, the intermeshing teeth n n, arranged and operating substantially as and for the purposes herein specified.

No. 39,599.—THOMAS WREN, of San Francisco, Cal.—*Improvement in Artificial Legs*.—Patent dated August 18, 1863.—The improvements consist in the flexor and extensor cords and springs by which the motions of the knee, ankle, and toes are given. The metatarsal tendons pass over the instep and up over a pulley and down to a lug attached to the heel. The tendon Achilles has an insertion to the same spot on the heel and is carried up over a roller attached to a spring. The metatarsal joints are further governed by springs inserted in the foot; a strap secured to the foot at two points suspends it from an elastic point of attachment in the leg, and the motions of the knee are governed by cords passing over rollers and attached to the knee-pan.

Claim.—First, in combination with the toe and metatarsal joints the cord c and springs S and S', for raising and lowering the toes and metatarsal joint, substantially as herein described.

Second, the cords a, and strap or cord a', in combination with the pulleys p and p', substantially in the manner and for the purpose set forth.

Third, in combination with pivoted foot C, the strap r, passing over pulley p, for the purpose of giving steadiness to the ankle joint, substantially as herein described.

Fourth, the knee-pan K, in combination with cords n, and pulleys o, for the purpose of retaining the leg in any desired position while in a sitting posture, substantially in the manner herein described.

Fifth, in combination with the tendon Achilles strap X, the strap i, and spring S'', substantially in the manner and for the purpose herein set forth.

No. 39,600.—HENRY P. WESTCOTT, of Seneca Falls, N. Y.—*Improvement in Churn Dashers*.—Patent dated August 18, 1863.—Two dashers are placed upon the shaft, the lower one of a circular form and attached to the lower end of the shaft, the upper one of an inverted conical shape and adjustable on the threaded shaft so as to work efficiently on the amount

of cream then present. The dashers are both perforated and the upper one fixed at its point of adjustment by a jam nut.

Claim.—First, the dasher h, constructed and made adjustable as and for the purpose set forth.

Second, the adjustable dasher h, in combination with the dasher, or its equivalent.

No. 39,601.—JOHN WHEATLEY, of the Royal Navy, England.—*Improved Ship-of-War*.—Patent dated August 18, 1863; patented in England December 2, 1862.—The ship is formed with a sharp projecting bow forming an angle with the keel of about 25°. The deck forms a glacis covered with armor plates. The guns are mounted so as to trail forward and are directed or "laid on" to the mark by the steering of the ship.

Claim.—The arrangement of the sharp bow and glacis, forward of the centre of the ship, so as to admit of the placing and "laying" of the guns, by the steerage of the ship, as set forth and shown.

No. 39,602.—JOHN A. WHIPPLE, of Boston, Mass.—*Camera Stand*.—Patent dated August 18, 1863.—The stand has a sliding support being raised by means of helical springs acting upon fuses and cords, and depressed by the hand in opposition to the influence of the springs. Its motion is arrested by a brake lever.

Claim.—Elevating and arresting the camera by the mechanism arranged and operating substantially as herein described.

No. 39,603.—E. WHITELEY, of Cambridge, Mass.—*Improvement in Cooking Apparatus*.—Patent dated August 18, 1863.—The kettle with its steam jacket and lower portions is cast solid in one piece.

Claim.—Casting the kettle A in one piece with its steam chamber B and solid portions c, in the manner and for the purpose substantially as described.

No. 39,604.—NORMAN WIARD, of New York, N. Y.—*Improvement in the Construction of Ordnance*.—Patent dated August 18, 1863.—This gun is so constructed that a series of cavities exist in the thicker portion of the gun so arranged as that the gun when heated by rapid firing and thereby expanded unequally may not be fractured; the gun consisting practically of a central solid portion, a zone of webs or connecting flanges, and an enveloping reinforce band.

Claim.—First, the within-described arrangement in guns of the oblique holes B, for the purpose of promoting both the longitudinal and radial expansion of the inner metal as herein set forth.

Second, in connexion with such holes B, or with equivalent holes or parts thereof extending parallel or nearly parallel to the axis, the employment of the oblique or curved connexions A3, between the outer and inner metal of a gun for the purpose herein set forth.

Third, the within-described arrangement and combination of a highly compressive reinforce A2, the elastic webs A3, and the interior metal A1, of a gun, substantially as and for the purpose herein set forth.

No. 39,605.—S. LLOYD WIEGAND, of Philadelphia, Pa.—*Improvement in the Manufacture of Illuminating Gas*.—Patent dated August 18, 1863.—The improvement is in the mode of construction of the retorts and the manner of arranging them in the furnace. The retorts are placed nearly vertically extending through an oven above a furnace and so constructed as to be withdrawn endwise without disturbing the setting. The crown of the oven is of tiles and the oven heated by flues controlled by dampers. The retorts are charged with carbon from the top and receive the hydro-carbon material through pipes at the top, and the generated gas passes through pipes at the lower end.

Claim.—First, the hereinbefore described form of retorts, whether cylindric or prismatic, as hereinbefore described, when arranged in the oven in the manner and for the purpose set forth and used as hereinbefore specified.

Second, the arrangement of flues and dampers when combined as set forth with the retorts of the form specified.

Third, the construction of the top of the oven when used in combination with the retorts as hereinbefore specified.

No. 39,606.—S. LLOYD WIEGAND, of Philadelphia, Pa.—*Improvement in Manufacture of Illuminating Gas*.—Patent dated August 18, 1863.—The invention consists in separating the volatile parts of coals, &c., by passing superheated steam through them at a high temperature, and redistilling the volatile products in the presence of a supply of superheated steam for the purpose of converting them permanently into illuminating gas.

Claim.—The combination of the processes of separating the volatile parts of hydro-carbons, by the aid of superheated steam at a lower temperature than will convert the hydro-carbons into gas, and the subsequent decomposition of said volatilized hydro-carbons simultaneously with superheated steam in the presence of incandescent carbon, at temperatures which convert both the steam and the hydro-carbon vapors into permanent illuminating gas, when conducted in the manner substantially as set forth, or in any other equivalent manner.

No. 39,607.—S. LLOYD WIEGAND, of Philadelphia, Pa.—*Improvement in Distilling Oils and Paraffine from Peat and other Substances*.—Patent dated August 18, 1863.—The steam is passed through a heated retort filled with carbon into a second heated retort filled with peat or bituminous coal; the gaseous results are condensed.

Claim.—The use of the products of the decomposition of steam by means of incandescent carbon in the separation of hydro-carbon oils and paraffine from peat or coal or other bituminous substances, whether used by themselves or in combination with superheated steam.

No. 39,608.—F. B. WILLIAMS, of Sterling, Whiteside county, Ill.—*Improved Device for Centring Shafting*.—Patent dated August 18, 1863.—The device consists of a shank with prongs to be placed in the mandrel of the head block of a lathe, a forked bar to be placed on the tool jack to support the shaft, and a tool to be placed in the mandril of the tail block, the said tool consisting of a drill and wing cutters by which the shaft is centred and turned off square.

Claim.—The combination of the driving and centring device A, support B, and the drill and cutters or blades *g f f*, constructed and applied to a lathe for the purpose of centring shafts, as herein set forth.

No. 39,609.—JAMES YOUNG, of New York, N. Y.—*Improved Machine for Dyeing, Bleaching, &c.*—Patent issued August 18, 1863; antedated March 13, 1863.—In this machine the goods are placed on an endless apron which moves over corrugated rollers of glass, and the liquid used in dyeing or bleaching is taken from different reservoirs and conducted by pipes through the hammer which is formed of India-rubber or bristles, a cut-off being so arranged as to stop the flow of liquid when the hammer rises from the goods, and to flow when it descends. The hammer is operated by a treadle and the machine used for beating in dyes or beating out chemicals, &c., with which the goods have been saturated.

Claim.—First, the employment of the reciprocating rising and falling hammer G, in combination with the endless apron D, constructed and operating substantially as and for the purpose described.

Second, passing the liquid or liquids through the hammer into the goods or clothes, substantially as and for the purpose set forth.

Third, the arrangement of two or more stirrups *l*, in combination with the longitudinally sliding guide roller *j*, and with the hammer G, constructed and operating substantially as and for the purpose specified.

Fourth, the combination with the reciprocating rising and falling hammer G of a tank C, divided into a series of compartments *e f g*, and provided with faucets *e' f' g'*, all arranged and operating substantially in the manner and for the purpose described.

Fifth, the arrangement of the automatic cut-off L, in combination with the hammer G, constructed and operating substantially in the manner and for the purpose specified.

Sixth, the employment of corrugated glass rollers *q*, in combination with the hammer G and apron D, as and for the purpose set forth.

Seventh, the arrangement and combination of the table A, tank C, hammer G, endless apron D, and wringer E, all constructed and operating substantially as and for the purpose described.

No. 39,610.—W. M. BAKER, assignor to Himself and W. R. HEATH, of Walpole, Hancock county, Ind.—*Improved Refrigerator*.—Patent dated August 18, 1863.—The object of this invention is to provide a thorough system of ventilation and drainage with a convenient and economical arrangement of parts by which the refrigerator is kept free from moisture and at a low temperature.

Claim.—First, the provision shelves formed of the rods *e*, in combination with the inclined plates *f*, and filter or water receptacle F, and the grooves *i*, in the sides of the frames J, for the purpose of affording an escape for the moisture within the refrigerator, as set forth.

Second, the close chambers *k*, in connexion with the chutes *l*, ice-box K, and filter or water receptacle F, all arranged as and for the purpose specified.

Third, the fibrous covering D and reservoir I, in combination with the ventilator G and the openings *d* in the walls B, to operate as and either with or without the ice-box K, for the purpose set forth.

Fourth, the combination of the provision shelves *e*, inclined plates *f*, chambers *k*, chutes *l*, ice-box K, fibrous covering D, ventilator G, and openings *d*, all arranged to form a new and improved refrigerator, substantially as set forth.

No. 39,611.—MOSES C. BIGNALL, of Seneca Falls, N. Y., and R. F. OSGOOD, of Rochester, N. Y., assignors to DOWNS & CO., of same place.—*Improvement in Water Elevators*.—Patent dated August 18, 1863.—The invention consists in a method of projecting the bucket out of the vertical line in reference to its point of suspension from the windlass so as to place it over the inner edge of the discharging spout of the well-curb.

Claim.—The inclined lever or bar M, provided with the cross-head *l*, resting over the top of the bucket, and striking against the lugs *n m*, or their equivalent, on opposite sides thereof, the whole arranged, combined, and operating substantially as and for the purpose herein specified.

No. 39,612.—MILLS L. CALLENDER, of New York, N. Y., assignor to CHARLES H. WEL- LING and ELBERT PERCE, of same place.—*Improvement in Submarine Explosive Projectile*.—Patent issued August 18, 1863; antedated October 16, 1862.—This projectile consists of a propeller and a torpedo; the former intended to be driven by the evolution of gas in a forward chamber, issuing in the rear of a downward projecting bulb or chamber, and the propeller guided by tiller ropes from a boat; the torpedo is ensconced in a chamber underneath in such a way that on the collision of the propeller with the enemy's vessel the torpedo is ejected by the momentum of its motion and weight, and, swinging on a guy, is forcibly collided with the vessel and exploded in a position with its axis at right angles to the body of the vessel.

Claim.—First, the application and use of a water-rocket or self-propelling vessel or projection to move upon or beneath the water, for the purpose and in the manner substantially as described.

Second, driving a torpedo or explosive case or magazine under and through the water at any object by the momentum gained by the moving force of another body or by discharging it by other force with a view to explode it under or against a vessel or other object under water.

No. 39,613.—EDWIN EAGLES, of Mamaroneck, Westchester county, N. Y., assignor to Himself and J. H. GUION, of same place.—*Improvement in Insulators for Lightning Conductors*.—Patent dated August 18, 1863.—The invention consists in the mode of combining the holder with the insulator to enable it to be set at any angle and adapt itself to the direction of the conductor on wall or roof. The glass insulator is set in a support with a straight or crooked shank and is cast around a central axial pin, which affords attachment for the wire holder.

Claim.—First, the fitting of the shank *c* of the holder C to a socket or hole *e* in the pin B which attaches it to the glass A, substantially as and for the purpose herein described.

Second, the support D having its eye *d* for the reception of the glass at a right angle to its shank or stem A, substantially as and for the purposes herein specified.

No. 39,614.—JAMES P. HERRON, of Washington, D. C., assignor to Himself and DANIEL E. SOMES, of same place.—*Improvement in Boots and Gaiters*.—Patent dated August 18, 1863.—The improvement consists in making the opening or slit in the back of the boot instead of at the front or side, being closed by any of the ordinary means such as buttoning, elastic membrane, &c.

Claim.—The opening *b*, in the manner and for the purpose set forth.

No. 39,615.—THOMAS HODGSON, of Brooklyn, N. Y., assignor to Himself and W. E. DOUBLEDAY, of same place.—*Improved Composition for Lining Lead Pipes, and for other Purposes*.—Patent issued August 18, 1863; antedated May 12, 1862.—This composition is to preserve the pipe or vessel from the action of the water, and consists of: beeswax two pounds, rosin five pounds, carbon (coke or anthracite) half a pound, silicic acid (sand) half a pound. The carbon and silicic acid are reduced to powder and mingled with the rosin and wax which have been previously melted.

Claim.—The composition, for the purposes set forth, composed of the several ingredients herein specified, combined substantially as herein described.

No. 39,616.—HERMAN MILLER, of New York, N. Y., assignor to C. T. REYNOLDS, F. W. DEVOE, and CHARLES PRATT.—*Improvement in Soldering Sheet Metal Cans*.—Patent dated August 18, 1863.—This apparatus consists of a tray containing the melted solder and of the form of the flange or surface to be soldered; it has a guide to determine the depth to which the said flange shall be allowed to descend as it is dipped into the solder.

Claim.—First, the employment for containing the melted solder in which the joint of any vessel is to be soldered by dipping of a solder pan open in the centre and containing the solder in a channel of a form corresponding with that of the joint to be soldered, substantially as and for the purpose herein described.

Second, the construction of the solder pan with a resting place *e*, or its equivalent, for the can or vessel to be soldered, to regulate the depth to which the joint will enter the said pan, substantially as herein described.

No. 39,617.—HENRY F. PHILLIPS, of Auburn, Cayuga county, N. Y., assignor to Messrs. DOWNS & CO., of Seneca Falls, N. Y.—*Improvement in Axle Skeins*.—Patent dated August 18, 1863.—The invention consists in chill-hardening the lower portion or bearing surface of the spindle which rests upon the box.

Claim.—As a new article of manufacture the hollow cast-iron skein or journal A provided with the chilled bearing surfaces *f f* extending part way around the same, substantially as herein set forth.

No. 39,618.—H. F. PHILLIPS, of Ilion, Herkimer county, N. Y., assignor to Messrs. DOWNS & CO., of Seneca Falls, N. Y.—*Improvement in Portable Pumps*.—Patent dated August 18, 1863.—The pump sets in a bucket to whose bottom it is attached; the handle of the pump is capable of being locked down by a catch, so as to form a bail for the bucket.

Claim.—First, the pump B, hand bucket A, handle C c, and catch D, or equivalent, so arranged and combined that the said handle shall serve both for operating the pump and as a bail for the bucket, as shown and described.

Second, in combination with the foregoing the stirrup G, or its equivalent, as herein set forth.

No. 39,619.—S. W. WOOD, of Cornwall, Orange county, N. Y.—*Improvement in Firearms.*—Patent dated August 18, 1863.—In this device there are two pawls, one of which is hinged to and operated by the trigger and raises and sets back the hammer, while the other, which is pivoted to a stationary point, holds the hammer on guard or at half-cock, and also holds it at full cock when the hammer is set back by a direct pull upon it; the prominent feature being the device of two pawls operating conjointly in the same notch on the face of the hammer.

Claim.—The arrangement, herein described, of two pawls operating conjointly in the same notch o on the face of the hammer, the pawl D to discharge the arm by pulling the trigger simply, while the other pawl w holds the hammer on guard at full cock, and is liberated by the prong E of the pawl d hinged to and operated by the trigger E to discharge the piece, substantially as herein set forth.

No. 39,620.—JAMES P. ADAM, of Chester, Ill.—*Improved Mode of Combining Cider Mills, Corn Shellers, and Fodder Cutters.*—Patent issued August 25, 1863; antedated February 9, 1863.—This machine consists of a wheel provided with cutters and a bevelled toothed side with a reversible hopper and feed rollers, all arranged in such a manner that corn may be shelled from the ear, apples cut or ground for manufacturing cider, and straw, hay, stalks, &c., cut for fodder.

Claim.—The wheel F, provided at one side with a bevelled surface, having radial and tangential rows of teeth b b', and at the opposite side with knives or cutters H H, in combination with the reversible hopper G, lever blade or cutter I, and feed rollers J J, operated from the shaft B as shown, all arranged as and for the purposes herein set forth.

No. 39,621.—JOHN J. ALVORD, of Tecumseh, Mich.—*Improved Drain Tile Mould.*—Patent dated August 25, 1863.—By means of this apparatus a number of sizes of continuous drain tile or pipe are produced simultaneously.

Claim.—The sewer and tile head, for the purposes set forth and described.

No. 39,622.—J. H. ANDREWS, of Almont, Mich.—*Improvement in Bee Hives.*—Patent dated August 25, 1863.—A partition plate with holes in it is secured within the hive, on which are laid, side by side, boxes having holes in their bottoms. These boxes having glass covers are divided into compartments provided with comb frames. A bottom board with a cleat is secured to the hive at one end by pins, and at the other by a hook. The lid is attached to a cleat, through which pins are driven into the hive.

Claim.—First, a hive provided with a partition D, having holes d made in it, in combination with the boxes E E, provided with holes e in their bottoms and openings j in their sides, in line with openings i in the sides of the hive, all arranged substantially as and for the purpose set forth.

Second, the manner of securing the back part of the lid or cover K and bottom board B to the hive A as shown and described, to wit: by having said parts provided respectively with cleats o d, having pins b p driven in them which fit into the back of the hive.

No. 39,623.—FRANCIS ARNOLD, of Haddam, Middlesex county, Conn.—*Improved Wringing Machine.*—Patent dated August 25, 1863.—This invention consists in so constructing the roller frame that it is capable of being set at any required angle, and retained in that position so as more conveniently to discharge the expressed water.

Claim.—The vibratory roller frame m, with proper fastenings for holding it in place, substantially in the manner as and for the purpose described.

No. 39,624.—E. T. BAINBRIDGE, of Louisville, Jefferson county, Ky.—*Improvement in Tidal Valves for Draining Land.*—Patent dated August 25, 1863.—The object of this invention is to so construct a valve that water shall be perfectly excluded from entrance upon the land when the tide is flowing and have a free exit when the tide ebbs.

Claim.—The combination of the flume with the valve, constructed, arranged, and operating substantially in the manner described for the purpose set forth.

No. 39,625.—WILLIAM BLAKE, of Boston, Mass.—*Improvement in Retorts for Refining Zinc.*—Patent dated August 25, 1863.—The object of this invention is to prevent the entrance of air into a retort, and thereby oxydization of the zinc, and this is effected by an air trap placed at one or both ends of the furnace.

Claim.—An improved retort, consisting of an ordinary retort A, and a trap or cesspool as specified, or its equivalent, applied either to the entrance or exit passage of the retort, or to each of them, and so as to operate substantially as and for the purpose hereinbefore specified.

No. 39,626.—ISAAC W. BOWERS, of Ovid Centre, Clinton county, Mich.—*Improved Sawing Machine.*—Patent dated August 25, 1863.—The object of this improvement is to provide a machine for sawing out of a log strips of wood for fork handles, and it consists of a horizontal and vertical saw, which are brought to act upon a log, which is hung between two posts of an upright frame—the said frame, through the medium of racks, pinions, belts, &c., being driven back and forth, the log being adjustable vertically by rack and pinions on the posts of the frame.

Claim.—First, the vertical and horizontal saws D F, when used in combination with a reciprocating frame L, having upright frames N N' attached to it in which a log R is suspended, and the frame L, operated through the medium of the racks M M, pinions m m, belts g g', and lever J, all arranged as and for the purpose herein set forth.

Second, suspending the log R, between the upright frame N N', by means of the centre points or pins i', attached to the slides Q Q', which are moved or adjusted through the medium of the racks b', pinions c', arms h', and plates e', substantially as shown and described to admit of the lateral adjustment of the log R.

Third, placing the slides Q Q' on vertically adjustable bars O in the frames N N', the bars O being raised and lowered by means of the racks s and pinions t, as described, when the parts above named are used in combination with the saws D F, and the frames N N' are attached to a reciprocating frame L, all arranged to operate as and for the purpose herein set forth.

Fourth, the pawls S S, attached to the ends of the frame L, when used in connexion with the saws D F and bed-pieces l l, as and for the purpose herein specified.

No. 39,627.—ISAAC W. BOWERS, of Ovid Centre, Clinton county, Mich.—*Improved Washing Machine.*—Patent dated August 25, 1863.—This improvement consists of a suds-box with curved ends; near the bottom of the box are rollers, upon which a rolling and reciprocating frame traverses, it being likewise shod with rollers, under which the clothes are beaten and pressed.

Claim.—The suds-box A provided with rounded ends, and with rollers C, as described, in combination with the rubber D, provided with rollers i, fitted between side strips d d, having rounded ends and also provided with a perforated top board f, all arranged as and for the purpose set forth.

No. 39,628.—E. O. BRINKERHOFF, of New York, N. Y.—*Improved Cracker Cutting Machine.*—Patent dated August 25, 1863.—The sheet of cracker dough is caused to pass along a table, over which is suspended transversely a cross-head vibrating vertically in standards; this is operated by pitmen from a crank attached to a rock-shaft. Within this cross-head, is another fitting loosely, and with springs between the two, and the latter has on its under surface cutters of the shape desired.

Claim.—First, the cross-head H, with cutters G attached, in connexion with the cross-head I, the springs J, and fixed or permanent cross-bar E, all arranged to operate as and for the purpose specified.

Second, the connecting of the rod P to the arm N, through the medium of the tube O and nuts h h, fitted on a screw or rod P, substantially as and for the purpose set forth.

No. 39,629.—IRA D. CARD, of Danville, Contra Costa county, Cal.—*Improvement in Machines for Upsetting Tire.*—Patent dated August 25, 1863.—Upon a beam is a sliding jaw, and at the end a stationary jaw, in which jaws the tire, having been previously heated, is locked. A toggle joint and lever with the extended ends in contact with the sliding head and a fulcrum head at the end of the beam, is then depressed, and the heads being thus caused to approach each other, the tire is upset. Successive movements of the lever, actuating the toggle, produce the effect; the dropping of a wedge behind the fulcrum head taking up the space gained.

Claim.—First, the adjustable fulcrum head G, with the self-acting wedge F, constructed and operating as described.

Second, constructing the jaws H H of the walls of the groove in the manner and for the purpose of operating substantially as described.

No. 39,630.—LEWIS S. CHICHESTER, of New York, N. Y.—*Improvement in Grain Dryers.*—Patent dated August 25, 1863.—The invention consists of an outer cylindrical chamber with funnel-shaped flanges on its inside, and a funnel-shaped bottom and discharge aperture. Inside of this chamber is a suspended rotating chamber with funnel-shaped flanges around it, which flanges or funnels rotate in the spaces intervening between those projecting from the inner side of the outer chamber. The grain coming in at the top is driven centrifugally over the edge of the first rotating funnel, and then falls from the first stationary funnel, on which it dropped, and so through the whole course, being exposed to a blast of air from holes in the central rotating cylinder, which air passes out of holes in the periphery of the outer case.

Claim.—First, a series of centrifugal drying tables in combination with the stationary intervening funnels for receiving the grain as scattered from one table and returning it to the next table below, substantially as specified.

Second, the central hot-air tube *g*, and its openings *i*, in combination with the said centrifugal tables and funnels, for the purposes and as specified.

Third, the escape apertures *l*, for regulating the escape of the heated air and vapors, in combination with said centrifugal tables and funnels as specified.

No. 39,631.—HENRY J. CHILDS, of New York, N. Y.—*Improvement in Truss Pads.*—Patent issued August 25, 1863; antedated June 4, 1863.—The invention consists in the use of brushes for pads, to secure ventilation.

Claim.—Forming the truss pad or pads of brushes for the purposes as set forth.

No. 39,632.—ALBERT G. COLLINS, of Washington, D. C.—*Improvement in Painters' Panels.*—Patent dated August 25, 1863.—The process consists in saturating a piece of pasteboard with a drying oil, then painting it with white lead and covering it with canvas or muslin while it is yet wet and painting the outside again, when it is rubbed to form a surface and dried in the sun.

Claim.—The application of canvas to pasteboard as herein above described for the purpose set forth.

No. 39,633.—GEORGE W. D. CULP and W. J. KEENEY, of Allensville, Switzerland county, Ind.—*Improvement in Harvester Cutter Bar Connexions.*—Patent dated August 25, 1863.—The improvement consists in the method of attachment of the pitman to the cutter bar and to the crank or fly-wheel, by a cone or conoidal journal working in a socket of corresponding shape in the heel of the cutter bar, and at the point of attachment of the pitman to the crank pin; the conical journal is retained in its position by a bolt or by a shoulder which works against a retaining plate. The point of attachment to the crank pin is a rocking box suspended upon centres within a stirrup formed by a bifurcation of the pitman.

Claim.—First, connecting a pitman *B* to a cutter bar *A*, by means of a single conical or conoidal journal *b* passing through a corresponding socket *a* in the heel of the cutter bar, and confined by an adjustable plate *C*, as herein shown and described, so as to employ the entire strength of the projection on the heel of the bar, and admit of tightening up the cone or journal for the whole extent of its length.

Second, constructing the said point, cone, or conoidal journal with a shoulder or collar *k*, to constitute a bearing for the confining plate *I*, substantially as herein described.

Third, connecting the pitman to the crank or fly wheel by means of a rocking box, substantially as set forth.

No. 39,634.—SAMUEL DAVIS, of Providence, R. I.—*Improved Washing Machine.*—Patent dated August 25, 1863.—This is an improvement on the patent No. 34,292 to Samuel L. Davis, February 4, 1862. This device consists of a combination of inner suds reservoir-holders, and centralizers, which hold the inner tub down and retain it in central position in the outer one; also in the lever standards affixed to the outer tub and the lever connexions consisting of a hook and a forked piece of metal provided with a pin extending across it horizontally.

Claim.—The combination of the inner suds reservoir holders *R R*, and centralizers *T T* with the lever standards *p j* applied to the outer suds reservoir, the whole being substantially as and for the purpose or objects hereinbefore specified.

Also, the improved arrangement of the connexion *V W*, of the operative levers *g F*, with respect to them and their fulera *o i*.

No. 39,635.—HENRY G. DAYTON, of Maysville, Ky.—*Improved Distilling Apparatus.*—Patent dated August 25, 1863.—The "doubling" still sets in the boiler, and the steam rising from the latter passes to and fills a steam-heating chamber in the single still. A boiler for heating mash water is located between the furnace and the exit flue.

Claim.—First, the combination of the boiler *B* and double still *K*, both constructed, arranged, and operated in the manner and for the purpose specified.

Second, the single still *L*, constructed substantially as described, and heated by a central steam pipe and surrounding jacket, as specified.

Third, the described combination of the single still *L* with the boiler *B* of the double still *K*, whereby the steam, after heating the double still, may be employed for heating the single still, as explained.

Fourth, the combination of the wash boiler *H* with the furnace *C* and boiler *B*, constructed and arranged substantially as and for the purpose specified.

No. 39,636.—GEORGE H. FELT, of New York, N. Y.—*Improvement in Signal Rockets.*—Patent issued August 25, 1863; antedated July 29, 1863.—The invention consists in the application of a Roman candle within a rocket for discharging colored stars which have cavities at their bases containing charges of powder for expelling them from the case. A *sec* of

hydrogen is introduced to retard the descent of the rocket, which is caused to rotate by the escape of gases by the spiral passages in the bottom of the rocket.

Claim.—First, the combination of the Roman candle with the rocket, substantially as and for the purpose herein specified.

Second, the construction of the stars of the Roman candle with cup-like concavities for the reception of the charges *z* of gunpowder, by which they are to be discharged from the case of the candle, substantially as and for the purpose herein specified.

Third, the combination of a balloon with a rocket, substantially as and for the purpose herein specified.

Fourth, the plug *J* with the central passage *t*, and spiral tubes or passages *u u*, combined as and for the purpose herein specified.

No. 39,637.—GUSTAVUS FINKEN, of New York, N. Y.—*Improved Apparatus for Revivifying Bone Black.*—Patent dated August 25, 1863.—This apparatus consists of a revolving retort with an interior spiral flange by which the bone black is gradually passed from end to end over the fire in the oven; a similar retort above partially dries the washed bone black and discharges it into the hopper which supplies the revivifying retort; from the latter it passes by a stationary head and sleeve connexion to a receptacle or cooler.

Claim.—First, the arrangement of a flange or flanges *b* on the interior surface of a revolving retort in spiral or screw-like form, substantially as and for the purpose herein specified.

Second, the arrangement of the drying retort or cylinder *B* in the same oven with the revivifying retort *A*, in such manner as to be heated by the waste heat from the fire by which the latter retort is heated.

Third, combining the revolving retort *A* with the coolers *K K*, or other receptacles, by means of a stationary head *L*, and one or more pipes *J J*, and sliding connecting sleeves or couplings *f f*, substantially as herein described.

No. 39,638.—JOSEPH FORREST, of New York, N. Y.—*Improvement in Revivifying Bone Black.*—Patent dated August 25, 1863.—The bone black is dried by forcing a current of heated air through it, and at the same time heating the retorts in which it is contained. The retorts are placed at some distance from the fire to avoid burning the bone black, and the pipes, with a blast of air, are conducted over the fire, and the air from thence distributed to the retorts which are open on top.

Claim.—Drying bone black by forcing heated air through it, substantially as described.

Also, in combination with the heated air forced through the bone black, applying heat to the vessel containing it (the bone black) at the same time.

Also, the apparatus described for the purpose specified.

No. 39,639.—WILLIAM FRANK, of St. Louis, Mo.—*Improvement in Ploughs.*—Patent dated August 25, 1863.—The improvement is in the construction and arrangement of the standards, sole, land-side, and mould board of the plough, by which they are connected and braced and attached at two points, and by a guide, to the beam; the object being to make a firm but adjustable connexion with the beam whereby the depth of furrow may be regulated.

Claim.—The standards *C*, brace *D*, lower and top bar *E G*, and guide *H*, all combined and applied to the beam *A*, as shown for the purpose specified.

Also, the securing of the mould board *I* to the standards *C* and bar *E*, by means of the hook *d* and screw bolt *e*, and the swivel screw brace *J*, substantially as and for the purpose specified.

No. 39,640.—ALEXANDER FRIEDMANN and EMILE D'ERLANGER, of Paris, France.—*Improvement in Boiler Furnaces.*—Patent dated August 25, 1863.—The improvement consists of an inclined diaphragm in the fire-box of the furnace, forming a reverberating chamber in which the air is heated and from which it is distributed over the ignited fuel.

Claim.—The application, substantially as herein set forth and shown in the drawing, to the fire-boxes of steam boiler furnaces of an inner mantel in metal, so arranged as to form an inclined diaphragm or reverberating chamber, in and by which are effected the heating of the air required for the combustion of the smoke, and the distribution of this air over the ignited surface of the fuel on the grate.

No. 39,641.—SILAS L. GATES, of Verona, Oneida county, N. Y.—*Improvement in Horse Hay-Forks.*—Patent dated August 25, 1863.—This consists of two pairs of hooks, pivoted like calipers, on a single shaft, and adapted to grasp the hay by means of a rope, which passes over a fixed and a detachable roller attached to a bar, connecting the upper ends of the hooks on each side respectively. The load is dropped by throwing off the detachable hook, when the calipers spread under the pressure of the hay.

Claim.—The two pairs of hooks *A A' A'*, fitted on the rod *B*, as shown, in combination with the fixed roller *D*, loose or detachable roller *F*, rope *E*, hook *H*, and lever *I*, all arranged and combined to form a new and improved horse pitch-fork, substantially as set forth.

No. 39,642.—M. F. GERAGHTY, of Jersey City, N. J.—*Improvement in Revolving Fire-arms*.—Patent dated August 25, 1863.—This consists of a ring revolving upon a central axis, and in the rear of the chambers, by which the cartridge case is locked by the engagement of its flange in the grooved ring, and prevented from moving longitudinally in its chamber.

Claim.—The employment of the locking ring D, constructed, arranged, combined, and operating in conjunction with the rear portion of the cylinder C and the cartridge case E, as herein shown and described.

No. 39,643.—N. S. GILBERT, of Lockport, N. Y.—*Improvement in Closing Fruit Cans*.—Patent dated August 25, 1863.—The neck of the jar has a fillet with a shoulder, and the cap or cover is provided on its inner side with a ring of elastic material which fits against the said shoulder, and tightly closes the joint.

Claim.—The ring of India-rubber or elastic material secured by cement, or otherwise, to the interior of the stopple or cap in the described combination with the tapering neck B and shoulder b, substantially as and for the purposes specified.

No. 39,644.—LYMAN GRAY, of Pittsburg, Pa.—*Improvement in the Manufacture of Bungs*.—Patent dated August 25, 1863.—This machine has a revolving head centre, the tail centre having a longitudinal motion by means of a clutch and lever. The blanks are placed on their edges, one above another, in a guide box, from which they are pushed out, *seriatim*, by the motion of the tail spindle, the next succeeding block resting, during the turning of the preceding one, on the spindle. When one block is turned the lever is moved, which releases the bung and allows the next block to drop down between the centres.

Claim.—The method of centring and turning bungs out of small blocks of wood, in the manner as herein set forth.

Also, the guide box M, with its opening P, in combination with the spindle R, for the purpose hereinbefore stated.

Also, the lever L, combined with the sliding spindle R, by means of the clutch G, in the manner as herein shown and set forth.

No. 39,645.—HENRY GROSS, of Tiffin, Seneca county, Ohio.—*Improvement in Revolving Fire-arms*.—Patent dated August 25, 1863.—The device consists of a tubular recoil plate around the axial pin, and its shank fitting within a tubular recess in the cylinder.

Claim.—The cylinder C, in combination with the tubular recoil plate B, when the said cylinder is so constructed as to shield the end of the recoil plate, substantially as and for the purposes specified.

No. 39,646.—HENRY GROSS, of Tiffin, Seneca county, Ohio.—*Improvement in Breech-loading Fire-arm*.—Patent dated August 25, 1863.—The improvement consists in the construction and arrangement of the swinging breech-piece, which is pivoted and vibrates in the rear of the barrel so as to open the breech for loading and drive the charge home in closing, being operated by the lever-guard and locked by a bolt.

Claim.—First, the adaptation of a swinging breech-piece which has a conical or curved protuberance on its front end, and a lever-guard formed on its under side, to so operate that it will swing unchangingly on its axis within a given space, to a certain extent, and will then move forward so as to close the breech of the barrel with the protuberance and the metal around it, substantially in the manner described.

Second, the segment breech-piece D, formed on the lever-guard G, and having a curved protuberance on its front end, when the curved surfaces *d d'* are formed on the segment D and the solid metallic portion B of the stock, so as to be in the relation shown to the axis of the gun-barrel, and so that they, as the lever-guard G is drawn back to its place, will cause the breech-piece protuberance F to be forced in nearly a straight line and firmly locked in its seats *ff'* without the aid of an auxiliary curved wedge, or other auxiliary appliance, substantially as herein described.

Third, the combination of the slot *e*, pin *g*, segment D, lever-guard G, curved protuberance F, curve seat *ff'*, and curved surface *d d'*, all applied and operating substantially as and for the purpose set forth.

Fourth, the arrangement of the one spring latch J, with respect to the lever-guard G and the spring bolt N, so that the one action of the hand to operate the guard will release both the guard and the bolt, substantially as described.

No. 39,647.—GERHARD HAGENMEYER, of Big River, Mendocino county, Cal.—*Improved Head Blocks for Saw-Mills*.—Patent dated August 25, 1863.—By lifting the curved lever the threaded journal block is disengaged from the screw, and the head rendered free to move. By depressing the lever the action of the screw is brought into requisition, and the required adjustment made by its means.

Claim.—The arrangement and combination of the journals H and B, working in connexion with the parts D E F and G, and operating in the manner described and set forth.

No. 39,648.—A. B. HAMAKER, of Salunga, Lancaster county, Pa.—*Improvement in Regulator for Grinding Mills*.—Patent issued August 25, 1863; antedated August 14, 1863.—This is an automatic device for regulating the speed of the stones, the feed or supply of grain to the same, the space between the stones, and the power by which the stones are driven. The device is somewhat complex, and is described in detail in the claim.

Claim.—First, the governors A' P, provided with slides *e p*, arranged as shown for the purpose of regulating their action, in combination with the sliding sleeve H, with the wheels I I attached, and the friction wheels L U, or equivalent gearing, for the purpose of regulating the space between the millstones, and also for regulating the feeding of the grain to the same, as herein described, either governor, with its concomitant parts, being used separately or both combined.

Second, the fluted cylinder B* and sliding tube A*, placed in the hopper C*, in connexion with the lever W, or its equivalent, operated from the governor P, substantially as shown, for the purpose of feeding the grain to or between the stones, as set forth.

Third, the combination of the friction wheel L with the sliding pinion N, arranged respectively with springs M i, and provided with inclined surfaces *j k* to operate, in connexion with the wheels I I' on the sleeve H, as and for the purpose set forth.

No. 39,649.—THOMAS HANVEY, of Elma, Erie county, N. Y.—*Improved Stave Machine*.—Patent dated August 25, 1863.—This machine cuts the stave from the log or block of wood; the cut is made transversely to the grain after steaming the blocks; the staves are then passed sidewise through the rollers and compressed to the shape desired.

Claim.—The combination of the box A and knife K as arranged in the frame B with the rollers R R, whereby the staves are passed directly from the slicing machine to the pressing and forming rollers, thus securing greater perfection in the shape of the stave and greater compactness in the material than can otherwise be obtained.

No. 39,650.—A. H. HART, of Stockbridge, Calumet county, Wis.—*Improvement in Churns*.—Patent dated August 25, 1863.—A sliding gate, to which a vertical motion is imparted by a vibrating lever, projects within the cover of the churn; on the two faces of the slide are oblique grooves, in which studs traverse, attached to pendulous dasher shafts. The vertical motion of the slide draws these dashers from side to side and agitates the contents of the churn.

Claim.—The slide *g* provided with the oblique grooves *i i* and operated by the lever *h*, in combination with the dashers E E, the whole constructed, arranged, and operating in the manner and for the purposes herein set forth.

No. 39,651.—HENRY HISE, of Ottawa, La Salle county, Ill.—*Harness and Trace Buckles*.—Patent dated August 25, 1863.—The buckle consists of a frame and cross-bar, on which latter the arm carrying the tongue is pivoted; the doubled strap is passed around the cross-bar and is riveted to the arm, which is acted on by a spring to keep the tongue in the slot.

Claim.—The combination and arrangement of the arm C, provided with the rivet-hole *r*, the tongue *e*, and spring E, with the frame A, the slot *a*, the cross-bar B, stop *b*, and the lever D, when all are arranged and operate as and for the purposes herein shown and described.

No. 39,652.—STEPHEN BRIGGS HOLDEN, of Meadville, Crawford county, Pa.—*Improvement in Railroad Car Seats*.—Patent dated August 25, 1863.—The seat of the car rests upon four supports, which are pivoted to the frame and the seat; to the frame are attached two springs, which rest against the support, balancing each other but "giving" to any jar or sudden motion such as the stopping or starting of the cars.

Claim.—The car seat supported on the supports D D D in combination with the spring E E, when the same are constructed as described, or any other construction, substantially the same, and which will produce the same results.

No. 39,653.—GARDNER HOWLAND, of Brunswick, Rensselaer county, N. Y.—*Improvement in Recovering Waste Alkalies*.—Patent dated August 25, 1863.—The invention consists in treating the spent alkaline solution with hydrate of lime and using the supernatant alkaline liquid either alone or with the addition of fresh alkali to produce the necessary strength.

Claim.—The use of the supernatant alkaline liquor, resulting from the treatment of alkaline lyes with lime, after such lyes have been used in the reduction of crude vegetable fibre.

No. 39,654.—GILBERT HUBBARD, of Sandisfield, Berkshire county, Mass.—*Improvement in Measure Faucets*.—Patent dated August 25, 1863.—The fluid passes from the barrel through a chamber of a definite capacity, which is provided with a rotating sliding piston and valve, the revolutions being registered outside by an arrangement of wheel and index.

Claim.—The chamber A communicating with the tubes B C and provided with the rotating sliding piston E and valve I, all arranged to operate as and for the purpose herein set forth.

Also, the wheels F G in combination with the rotating sliding piston E and valve I placed within the chamber A, the wheel F being provided with a single tooth *e*, which engages with the wheel G, and the latter provided with an index *g*, which comes in contact with a stop *h* at the side of the chamber A, all being arranged substantially as and for the purpose specified.

No. 39,655.—WILLIAM L. HUBBELL, of Brooklyn, N. Y.—*Improvement in Hay Loaders*.—Patent dated August 25, 1863.—This machine is to be attached behind the wagon and is supported upon a caster wheel and two ordinary wheels. The hay is swept in from each side by diagonal rakes, where it is arrested by a transverse rake and then elevated and discharged into the wagon-bed by a revolving rake and endless apron. A vibrating arc-shape rake with swinging prongs assists in gathering the hay towards the centre of the track.

Claim.—First, the diagonal rakes *n* and *o*, fitted as specified, in combination with the rake *i* and elevating apron *e*, as set forth.

Second, the vibrating rake or sweep *r* fitted with swinging prongs, substantially as specified, in combination with the diagonal rakes *n* and *o* to gather the hay towards the centre, as set forth.

No. 39,656.—ALONZO W. INGALLS, of Buchanan, Berrien county, Mich.—*Improved Washing Machine*.—Patent dated August 25, 1863.—The machine has a plane wash-board and a vibrating brush, whose rock-shaft is supported by springs in the standards; the clothes are retained by a spring-holder, which abuts against the upper end of the wash-board.

Claim.—The combination of the vibratory brush *a a*, plane wash-board *b b*, and springs *k k* for holding the brush away from the wash-board, substantially as and for the purpose herein specified.

Also, the clothes holder *d d*, with its springs *e e*, in combination with the wash-board and rubber or brush, as herein set forth.

No. 39,657.—WELCOME JENCKES, of Manchester, Hillsboro county, N. H.—*Improvement in Ring Spinning Frame*.—Patent dated August 25, 1863.—The rings are set in holes larger than themselves, and are adjusted therein by set screws which bear upon their peripheries being adjusted as desired.

Claim.—Providing for the adjustment of the rings in the rail of a ring spinning frame by making the holes in the rail for the reception of the said rings larger than the exteriors of the portions of the rings which are received within them, and applying adjusting screws in combination with the holes and rings, substantially as and for the purpose herein specified.

No. 39,658.—R. H. JEWETT, of Versailles, Brown county, Ill.—*Improved Stitch for Sewing Machines*.—Patent issued August 25, 1863; antedated March 1, 1863.—The claim and illustration will explain the peculiarity of this stitch.

Claim.—The stitch produced with two threads, by passing one thread through the cloth or other material to be sewed from one side thereof in a series of loops and enchainning the other thread on the opposite side of the said material in a series of loops, in such manner that each of the latter passes through one of the protruding loops of the first thread and receives the succeeding loop of its own series, as herein specified.

No. 39,659.—OLIVER S. JUDD, of New Britain, Hartford county, Conn.—*Improved Snap Hooks*.—Patent dated August 25, 1863.—The pivot of the hinge fits in an open eye in the heel of the loop, and the spring is located inside the hook so as to keep the latch-piece closed.

Claim.—First, casting or forming the open eye for the joint pivot in combination with the loop *B* and hook *A*, substantially in the manner and for the purpose described.

Second, the employment of the spring *E* in combination with the hook *A* and latch *C*, when fitted into properly formed recess inside of said hook and latch, in the manner and for the purpose substantially as described.

No. 39,660.—WALTER M. LEE, of Rosendale, Fond du Lac county, Wis.—*Improvement in Beehives*.—Patent dated August 25, 1863.—The sharp edge on the under side of the upper bar of the comb frame is braced by angular pieces which form a guide for the comb. The bottom board is detached from the hive and supported by wedges and buttons.

Claim.—First, the combination of the comb guides as braces *a*, with the sharp edge on the under side of the comb-bar *A'*, substantially in the manner and for the purposes set forth.

Second, the arrangement, in combination with the hive, of the bottom board *D* riding on wedges *P*, and supported by buttons behind, substantially in the manner and for the purposes specified.

No. 39,661.—C. F. LICHTNER, of Chicago, Ill.—*Improved Collapsible Boat*.—Patent dated August 25, 1863.—The improvement consists of a keel with a stern and stern post which are rigid; on the keel is a folding floor, and the side streaks are expanded by a transverse frame consisting of two ribs, a seat, and a support for the latter.

Claim.—First, providing the inner keel *B* with the adjustable or folding wings *b b*, arranged and operating substantially as and for the purposes herein delineated and described.

Second, the combination of the flexible covering *H*, the keel *A*, the longitudinal ribs *a*, and transverse ribs *C* with the folding wings *b b*, arranged and operating substantially as and for the purposes herein specified and shown.

Third, the combination and arrangement of the folding wings *b b* with the inner keel *B*, the transverse ribs *C*, the standard *D*, cross-bar *E*, and seat *F*, constructed and operating substantially as and for the purposes herein shown and set forth.

No. 39,662.—H. D. LOCKWOOD, of Charlestown, Mass.—*Improvement in Elastic Syringes*.—Patent dated August 25, 1863.—The improvement is in the method of connecting the suction and force tubes to the bulb, so that the joints will not wear loose by the alternate contraction and expansion of the bulb; the device is explained in the claim.

Claim.—The metallic sockets *B B* fitted in the elastic bulb *A*, and secured therein by subjecting the bulb and sockets to a high heat during the process of vulcanizing or otherwise, in connexion with the chambers *c*, tubular screens *b*, and tubes *C*, all arranged substantially as shown, to form joints or connexions between the suction and force tubes *D* and bulb *A* of an elastic syringe.

No. 39,663.—GEORGE A. MANSFIELD, of Melrose, Middlesex county, Mass.—*Improvement in Chairs for Invalids*.—Patent issued August 25, 1863; antedated December 21, 1861.—The improvement consists of a vertical central rib or pad on the cushioned back of the chair to support the spine.

Claim.—The dorsal supporter *a*, constructed with or applied to the back of a chair, substantially as described, and specifically for the objects and purposes set forth.

No. 39,664.—LORENZO MATT, of Boston, Mass.—*Improvement in Piano-Fortes*.—Patent dated August 25, 1863.—The sounding board is only partially attached to the case, and the free end supported on springs.

Claim.—A sounding board partially insulated from the case and supported by one or more springs arranged under its free end, the whole being substantially as hereinbefore specified.

No. 39,665.—FREDERICK J. MERYMAN, of Boston, Mass.—*Improvement in Water-proof Mittens for Divers*.—Patent dated August 25, 1863.—The water-proof mitten has an extended sleeve which clasps the wrist so tightly as to exclude water.

Claim.—The improved manufacture of water-proof mitten, as made with the water-proof and elastic sleeve or wrist extension *C*, to so close on and fit to the arm of the diver as to prevent water from gaining access to the interior of the said mitten or glove while being worn and submerged.

No. 39,666.—B. D. MORRELL, of Lisbon, Grafton county, N. H.—*Improved Clothes-Wringer*.—Patent issued August 25, 1863; antedated December 19, 1862.—This is a device for locking the wringer to the side of the tub, and consists of a projection to pass on the outside of the latter, and a screw clamp on the inside of the same, which passes through a piece projecting from the frame and guided by dowel pins.

Claim.—In combination with the frame of the clothes-wringer the plates *L*, with pins *q q* passing through and capable of moving freely in the projections *k* of the frame, the said plates being arranged in respect to the projections *n* and set screw *M*, and operating substantially as and for the purpose herein set forth.

No. 39,667.—SARAH MOSSMAN, of Cleveland, Ohio.—*Improvement in Military Caps*.—Patent issued August 25, 1863; antedated July 20, 1862.—The water-proof cover and cape are attached as a permanent fixture to the cap, being buttoned together over the top of the latter; when not in use, the cape is folded away inside, and the cover being unbuttoned is rolled up as a band around the cap.

Claim.—First, making the cover in two parts so as to be buttoned over the cap, or folded up so as to form a band around the cap, as above described.

Second, the combination of the cape with the cover and cap, as set forth.

No. 39,668.—ROBERT C. NICHOLS, of Roxbury, Mass.—*Improvement in Coal Sifters*.—Patent dated August 25, 1863.—The matter to be sifted is placed in a pan which is pivoted so as to be vibrated and jarred in a barrel. The wire-work cover of the pan is then fastened down, and the pan reversed and jarred which discharges the ashes into the barrel, retaining the cinders in the pan. The journals are flattened to hold the pan quietly in position.

Claim.—The combination of a sifter or screen *g* and pan *h*, when arranged and made to operate together in the manner and for the purpose substantially as described.

Also, making the journals *d* with the flat surfaces as set forth, for the purpose of keeping the pan in position, and imparting the jarring motion to the sieve, as above specified.

No. 39,669.—SAMUEL C. NORCROSS, of Norway, Oxford county, Me.—*Improved Auger Stock*.—Patent dated August 25, 1863.—The shank of the auger stock has a groove and a notch into and against which the tool is fitted and retained by a sliding key.

Claim.—An improved auger stock, having its aperture for the handle *A*, its body *B*, its groove *C*, and ferule or ring *E*, its key *D*, and its projection and notch or holder *G*, its oblique socket *I*, constructed and arranged in relation to each other, and so as to operate together as set forth.

No. 39,670.—NORMAN NORTH, of Middletown, Conn.—*Improvement in Snap Hooks*.—Patent dated August 25, 1863.—A portion of the loop is hinged so as to open inwardly on the pressure of the bit ring, and is restored to its position by a spring located in a recess on the outside of the heel of the hook.

Claim.—As an improved article of manufacture the arrangement of the spring *d*, fitted and secured in a recess in the outside of the heel of the hook *a*, for the purpose of operating the latch *b*, substantially in the manner and for the purpose described.

No. 39,671.—HASSALL NUTT, of Brooklyn, N. Y.—*Improvement in Oil Press Mats.*—Patent dated August 25, 1863.—The device consists of screw clamps with movable frames and a central clamp to hold the rods which form the guides for the strands composing the mat in such a manner that they can be gradually compressed.

Claim.—The employment or use in the manufacture of oil press mats of the movable central clamp A, screw clamps C, frames B and rods *a*, all combined and operating in the manner and for the purpose substantially as herein shown and described.

No. 39,672.—HENRY L. ORDWAY, of Ipswich, Mass.—*Improvement in Tree Protectors.*—Patent dated August 25, 1863.—The invention consists of a conical disk with a ring or collar, so as to form an acute angle, in attempting to cross which, from the ring to the disk, the insects will lose their hold and fall; the collar is attached to the tree by a flexible cloth and strings.

Claim.—First, providing the disk C with the ring or collar B B', substantially as set forth and for the purpose described.

Second, a flexible cloth or bag, in combination with a tree protector consisting of a disk C, and ring or collar B B', substantially as and for the purpose described.

No. 39,673.—EDWARD OUDRY, of Pittsburg, Pa.—*Improvement in Apparatus for Cooling the Teeth.*—Patent dated August 25, 1863.—The invention consists of mouth-pieces to be applied to the teeth or other part of the body, and connected by double channelled flexible pipes with a refrigerating chamber and pump, so that a continuous current of cold air may be applied to the part; there is a partition in each mouth-piece communicating by its appropriate tube with the chamber in which the liquid or gas to be cooled is exposed in a thin stream offering a large surface to the influence of the ice or freezing mixture, the temperature being read upon the thermometer located between the chamber and the mouth-pieces.

Claim.—First, the arrangement of one or more mouth-pieces H H', at the ends of double channelled flexible pipes F F', in combination with a refrigerating chamber and pump, constructed and operating substantially as and for the purpose specified.

Second, the arrangement of a partition *i* in each mouth-piece, in combination with two channels *h h*, pipes F F', and refrigerating chamber B, all constructed and operating in the manner and for the purpose substantially as shown and described.

Third, the flat tube D D', in combination with the refrigerator chamber B, pump C, or its equivalent pipes F F' and mouth-pieces H H', all as and for the purpose set forth.

Fourth, the thermometer G, applied in combination with the mouth-pieces H H', pipes F F', and pump C, or its equivalent, in the manner and for the purpose described.

No. 39,674.—CHARLES OYSTON, of Little Falls, Herkimer county, N. Y.—*Improvement in Nozzles.*—Patent dated August 25, 1863.—This device, to be placed on the end of the discharge-pipe, is so arranged as at will to be brought into play to divide up and scatter the issuing stream of water by the interposition of wedge-shaped arms, or by the withdrawal of the same to allow the current free and unbroken passage.

Claim.—The arrangement of a series of divergers B, or their equivalents, connected to each other and to the nozzle A by suitable mechanism, substantially in the manner and for the purpose specified.

No. 39,675.—J. B. RIPSOM, of East Kendall, Orleans county, N. Y.—*Improved Hub Machine.*—Patent dated August 25, 1863.—This machine is designed for boring and centring the hubs for the insertion of the box after the wheel has been secured to the hub. One end of the hub rests against a block which forms the base of the apparatus; on the opposite side is a ring to which are jointed diverging adjustable bars which brace against the rim of the wheel. The bars are attached by adjustable hook connexions to the block, which on being tightened, clamp the wheel firmly and evenly on the shaft.

Claim.—Clamping and sustaining the wheel in place, by means of the adjustable bars E, connected with the ring D, or its equivalent, the adjustable connexions G, and the block C, arranged, combined, and operating substantially as herein set forth.

Also, in combination with the connexions G, arranged as described, and the block C, the projections *k k*, provided with notches *p p*, and shoulders *q q*, and the cross-heads *o o*, of the screw shanks, for the purpose of retaining said connexions in place, at any inclination, substantially as herein specified.

Also, the combination of the ring D, independent centre H, and adjusting screws *r r r*, or equivalent, relatively to the shaft B, and the wheel, for the purpose of perfectly centring the latter, substantially as herein described.

Also, in combination with the screw shaft B, provided with the cutters K L, and the centre H, the removable nut *r*, for the purpose of easily removing the cutters from the bore, substantially as herein set forth.

Also, the special arrangement and combination of the whole machine, as herein set forth.

No. 39,676.—WILLIAM RANDOLPH, of Bloomington, Ill.—*Improvement in the Adjustment of Fishing Nets.*—Patent dated August 25, 1863.—The invention relates to devices for securing and sustaining guide nets employed to conduct fish into a contracted space. It consists of a tripod or anchoring stake to which the cord carrying the line of floats is attached; the floats are provided with winches for winding up the ropes which extend to the bottom of the wall net and sustain the anchors.

Claim.—First, the standard C, constructed and applied as herein shown and described, for securing the net in position.

Second, the combination of the anchors D, chains or cords E, buoys F, and winches G, arranged and operating substantially as set forth.

No. 39,677.—ANDREW J. RITTER, of Rahway, Union county, N. J.—*Improvement in Carriage Seats.*—Patent issued August 25, 1863; antedated June 2, 1862.—The front part of the seat rail is pivoted to the side portion of the rail, and, when raised, forms a brace to an extra seat board, to which it is attached, and which is supported by legs on its under side.

Claim.—First, dividing and joining the seat rail A, and converting the front part of the seat rail A into a movable brace for the purpose of supporting and working the seat board C, as herein set forth.

Second, the combination of the movable front rail A with the fall or seat board C and the supporting legs I I, attached to the under side of the fall or seat board C, as and for the purpose herein set forth and described.

No. 39,678.—DWIGHT RUSSELL, of Milford, Worcester county, Mass.—*Improvement in Powder Injectors.*—Patent dated August 25, 1863.—Explained by the claim.

Claim.—The new or improved powder injector, as made of an elastic bulb, a flexible probe of the kind described, and a jet and powder-holding thimble or cap, or its equivalent, the whole being substantially as hereinbefore specified.

No. 39,679.—A. V. RYDER, of New York, N. Y.—*Improved Combination of Bureau and Trunk.*—Patent dated August 25, 1863.—The portion containing the drawers is slipped vertically into the trunk or box, and is raised therefrom and supported by the engagement of gravitating catches on the sides of the trunk; the bureau is replaced in the trunk by raising the handles, which disengages the catches.

Claim.—A trunk and bureau combined and arranged with catches, substantially as shown, so that when the bureau is elevated or raised from the trunk the former will be supported on the latter by the automatic action of the catches, and the catches be capable of being drawn in or freed from the trunk as the bureau is grasped to be lowered into the former, as herein described.

No. 39,680.—GELSTON SANFORD, of Great Britain, temporarily in New York, N. Y., and JAMES E. MALLORY, of New York, N. Y.—*Improvement in Machine for Breaking and Cleaning Flax, &c.*—Patent dated August 25, 1863.—The invention consists in the positive and relative motions of the rollers which are described in the claim, also in the method of grooving the rollers.

Claim.—Making the peripheries of the second pair of rollers travel faster than the first pair, when both pairs of rollers have a reciprocating rotary motion on their axis, substantially as and for the purpose set forth.

Also, imparting to one or both of the rollers of a pair a longitudinal reciprocating motion, substantially as described, in combination with a reciprocating rotary motion, substantially as such as described and for the purpose set forth.

Also, the combination of a pair of toothed rollers having a reciprocating rotary motion and a longitudinal reciprocating motion, substantially as described, with a pair of fluted rollers having a reciprocating rotary motion, substantially as described.

Also, making the circumferential grooves of the pair of toothed rollers of greater depth than the longitudinal grooves, substantially as and for the purpose specified.

No. 39,681.—BENJAMIN SAUNDERS, of Nashua, N. H.—*Improvement in Bobbins or Spools.*—Patent dated August 25, 1863.—The object is to save the yarn usually left entangled on the bobbin in "doffing" by providing a groove and a gauge guide for directing the yarn into the groove.

Claim.—The improved bobbin or spool as provided with or having combined with it either a yarn hitching groove *a*, or the same and a gauge guide *b*, the whole being substantially as and for the purpose described.

No. 39,682.—JOHN P. SCHENKL, of Boston, Mass.—*Improvement in Combined Time and Percussion Fuze for Shells.*—Patent dated August 25, 1863.—This is an improvement on the inventor's former patent of July 15, 1862, No. 35,897. It consists in the arrangement of the wrench pin on the head of the rotator which is held in position by means of a tape or band which also affords a means of withdrawing it previous to inserting the shell in the cannon. The purpose of the pin is mainly to plug the outlet or flame passage leading to the interior of

the fuze. The notch in the head of the rotator affords the means of tearing away the tape. The helical range of holes in the fuze case connects with a corresponding chamber to secure ignition of the main charge.

Claim.—The combination of the band or tape *f*2 with the wrench pin *E* and the rotator *C*, and to operate in the manner therewith and for the purpose or purposes substantially as hereinbefore specified.

Also, the combination and arrangement of the notch or recess *t*2 with the rotator *C* and the tape or band *f*2, applied to it and the wrench pin *E*, as specified.

Also, the rotator as made with the outlet *m*, arranged so as to open out of its side or sides in manner and for the purpose described.

Also, the fuze case as not only constructed with a helical range of holes, but with a powder chamber arranged either on the outer surface of such fuze case or in a groove thereof, and with respect to the range of holes and for the purpose of igniting the main or bursting charge of a shell, as specified.

No. 39,683.—THOMAS SHARP, of Chicago, Ill.—*Improved Mode of Unloading Canal Boats.*—Patent dated August 25, 1863.—The boat is constructed with a movable end and a swinging door, and is floated into a lock, where, on the withdrawal of the water, it is allowed to settle into the inclined bed of a truck which is supported on rails, and the load is discharged by removing the door.

Claim.—First, the arrangement of the movable end *a*, and swinging bulkhead *b*, in combination with the boat *A*, constructed and operating in the manner and for the purpose substantially as described.

Second, the truck *B*, with an inclined platform *D*, in combination with the boat *A*, when said truck is placed within the lock of a canal upon suitable guide rails connected with an inclined plane, so that when the water is drawn from the lock the boat shall rest on the truck and be placed in a convenient position for unloading.

No. 39,684.—MATTHIAS W. SINDING, of Lindehamer, Norway.—*Improvement in Treating Pyritous and other Sulphur Ores.*—Patent issued August 25, 1863.—English patent October 13, 1855.—The blast of gas from the generator is conducted through the pyrites, carrying off the sulphur therefrom to a chamber where it is precipitated. To produce sulphuretted hydrogen gas, the hydrogenic result from the generator is brought in contact with the vapor of sulphur, decomposing the carburetted hydrogen, or brought in contact with a stream of sulphur. To extract copper from the pyrites the ore in the form of sulphide is roasted to form a sulphate, which is lixiviated and precipitated by sulphuretted hydrogen gas as a sulphide and the sulphide smelted.

Claim.—The process herein described for treating pyritous ore so as to obtain as useful products sulphur, sulphuretted hydrogen, and copper.

No. 39,685.—JOSEPH SINGER, of Chicago, Ill.—*Improvement in the Manufacture of Beer from Malt and Indian Meal.*—Patent dated August 25, 1863.—Equal quantities (say 100 bushels) of coarsely ground barley, malt, and finely ground Indian meal are mashed with 900 gallons of water at 150° Fahrenheit, then stirred awhile and allowed to steep for two hours. The residue of meal is again elutriated, the supernatant results mixed, and the work proceeded with as in ordinary brewing.

Claim.—The within described process of making beer from ground corn and barley malt mixed together in one tub in the relative proportions and at the temperatures described.

No. 39,686.—N. E. SMITH, of Springdale, Cedar county, Iowa.—*Improvement in Cultivators.*—Patent dated August 25, 1863.—The pole is pivoted to the front bar, the hind end which carries the driver's seat resting upon the rear bar; the object of the device is to facilitate turning.

Claim.—The draught pole *B*, pivoted to the front bar *A* of the machine as shown at *a*, with its back end resting on the back bar *A'*, and having the driver's seat *D* attached to it, substantially as and for the purpose herein set forth.

No. 39,687.—MOSES STODDARD, of Buffalo, N. Y.—*Improvement in Mounting Ordnance.*—Patent dated August 25, 1863.—The pillow-blocks on which the trunnions of the gun are mounted have an oscillating adjustment in a plane at right angles to the bore so as to admit of the ranging of the sights of the gun in a vertical plane by means of elevating screws.

Claim.—First, levelling the gun with reference to ranging its sights in a vertical plane, without regard to the position of the carriage, substantially as herein described.

Second, the combination and arrangement of appropriate mechanism, with a gun and gun carriage, by which the gun may be elevated, leveled, and moved right or left by one person while in the act of sighting, substantially as herein described.

No. 39,688.—GEORGE STUMP, of New York, N. Y.—*Improvement in Condensers.*—Patent dated August 25, 1863.—The receiving and discharging chambers of the condenser are secured between two sheets in which tubes are secured which connect the two chambers. The

whole arrangement is submerged in a tank. The object is to allow expansion and contraction without starting the joints.

Claim.—Having the chambers *A B* made separate and independent of each other and of the tube sheets *C*, as and for the purposes herein shown and described.

No. 39,689.—ELI TANNER, of Bowmansville, Erie county, N. Y.—*Improvement in Portable Observatories or Signal Towers.*—Patent issued August 25, 1863; antedated July 10, 1862.—The apparatus consists of a base with an upright and braces, with windlasses, ropes, and pulleys for the projection vertically of extension sections, which are contained within each other and slide out telescopically under the action of the windlasses. The parts are so constructed as to be readily taken apart and packed for transportation, and at the summit of the extension shaft is a cross-head and platform. The outer section of the shaft consists of four pieces occupying the corners viewed as a transverse section; the middle one is cross-shaped, contained between and guided by the outer section, while the inner one is a plain shaft embraced by the four members of the cross.

Claim.—The method of combining the base, the braces, and the extension shaft, so as to be separate, or readily separable, for the purpose of readily putting up and taking down and packing for transportation, substantially as described.

Also, the method of arranging and combining the parallel timbers composing the successive sections of the extension shaft, substantially as herein set forth.

Also, the arrangement and combination of the single rope *m* and the sheaves in the upper and lower ends of the sections *E G H* for the purpose of raising and sustaining said sections in succession, substantially as herein specified.

Also, the combination and arrangement of the cross-head *P*, rope *i*, and windlasses *M M*, or their equivalents, substantially as and for the purposes herein specified.

No. 39,690.—JAMES TOMLINSON, of Racine, Wis.—*Improvement in Wind Wheels.*—Patent dated August 25, 1863.—The invention consists in the application of a movable shield connected to the vane by rods, and so operated by the vane as to protect certain of the wings of the wheel from the direct action of the wind, and thus regulate the speed.

Claim.—The arrangement of the shield *D* in combination with the wheel *A*, weighted lever *E*, and vane *F*, constructed and operating as and for the purpose shown and described.

No. 39,691.—JOHN F. WARD, of Phillipsburg, Warren county, N. J.—*Improvement in Pipe Coupling.*—Patent issued August 25, 1863; antedated July 15, 1863.—The end of one pipe has annular flanges around it, and is introduced into the spherical enlargement of the succeeding pipe where molten lead is run around it. The shape of the adjacent parts admits of considerable deflection from the right line in laying the pipe on an irregular surface.

Claim.—The end of the pipe *A'* with its hands *i* and recesses *p p*, or their equivalents, and packing *B*, when applied to the spherical interior of the socket *a* of an adjacent pipe *A*, substantially as and for the purposes herein set forth.

No. 39,692.—J. D. WEAVER, of Penfield, Monroe county, N. Y.—*Improvement in Whiffletrees.*—Patent dated August 25, 1863.—These whiffletrees are made without clips specially for use in orchards to avoid barking the trees; a clasp behind holds the tug, which is passed around the end of the tree, through the clasp, and the cock-eye fastened on a hook.

Claim.—The construction of whiffletrees and the attachment of the tugs *g* thereto, substantially in the manner and for the purposes herein set forth.

No. 39,693.—HERMANN WENDT, of Elizabeth, Union county, N. J.—*Improvement in Tailors' Shears.*—Patent dated August 25, 1863.—The pivot is placed in line with the cutting edge of the lower blade, and to secure the requisite strength a shoulder is made on the blade below and a corresponding protuberance above, the effect being to give a "draw" cut.

Claim.—Tailors' shears, the lower blade *A* of which is formed with a shoulder or recess *b*, as and for the purpose shown and described.

No. 39,694.—PHILIP WERUM, of Berlin, Holmes county, Ohio.—*Improvement in Making Barrels.*—Patent dated August 25, 1863.—The wood is sawed into bolts radially from sap to sap through the centre and then into staves. A frame holds the stave while it is jointed, and an expanding drum forms a core for the barrel while it is being turned off.

Claim.—First, cutting the staves from the bolts prepared, as herein described, by sawing first into plank, whose thickness shall equal the width of the stave, and then cutting them in the opposite direction of the grain, as set forth.

Second, the clamp frame (Fig. 1) for holding the stave in the required position while joining and bevelling the edges, as specified.

Third, the expanding drum, centring and holding the barrel while being turned in the lathe and cutting the chine, as herein set forth.

No. 39,695.—HORACE WING, of Buffalo, N. Y.—*Improvement in Machines for Splitting Leather.*—Patent dated August 25, 1863.—The roller over the knife has two adjustments, one

vertical by means of cams which work simultaneously on each end of the roller shaft to depress it or otherwise, and the other transversely to the length of the knife by slipping the housing or standards in the said direction.

Claim.—First, the employment for adjusting the gauge-roller D at a proper distance from the plane of the edge of the splitting knife of a pair of eccentrics or cams F F attached to the same shaft and arranged to operate one upon each of the fournal boxes of the rollers, substantially in the manner and for the purpose herein specified.

Second, making the standards or housings E E, which contain the roller journal boxes adjustable to bring the roller more or less over the edge of the knife, substantially as and for the purpose herein specified.

No. 39,696.—LOUIS WIRTHLIN, of St. Louis, Mo.—*Improved Barrel Dressing Machine.*—Patent dated August 25, 1863.—This machine is designed for turning howelling and crozing casks or kegs. A circular bilge ring and adjustable clamping levers are arranged at the end of a hollow spindle; in this clamp and ring the cask is rotated. The howelling and crozing knives are supported upon a travelling bed, which is mounted upon a slide rest. A lever carrying a plane-stock and bit trims the barrel edges, and the shavings and chips are blown out of the cask as the work proceeds.

Claim.—First, the adjustable clamping levers g g' and bilge ring F in combination with the spindle B, substantially as and for the purposes described.

Second, the longitudinally adjustable rod D, cross-head D', arms D2 D2' E E, rock shaft E', and hand lever E2, combined with the hollow spindle B and adjustable clamping levers, substantially as and for the purposes described.

Third, the adjustable blocks i i applied to the clamps g' g' g', substantially as described.

Fourth, the combination of howelling knife n2 with a pivoted plate H' and a slide H, substantially as described.

Fifth, the combination of crozing knives p p' with a transversely sliding block J and lever handle T and slide H, substantially as described.

Sixth, the combination of sliding bed H, pivoted slide rest G', and false bed G2, all operating substantially as described.

Seventh, combining with the sliding bed H and howelling knife n2 a blast-pipe S', arranged and operating substantially as and for the purposes described.

Eighth, the gauge block r in combination with the crozing knives p p' and the sliding bed H, substantially as described.

Ninth, in a machine for howelling kegs, &c., making the howelling knife both longitudinally and transversely adjustable, substantially as and for the purposes described.

No. 39,697.—NATHANIEL L. BRADLEY, of West Meridian, New Haven county, Conn., assignor to Himself, WALTER HUBBARD, and WILLIAM L. BRADLEY.—*Improved Call Bell.*—Patent dated August 25, 1863.—This invention consists in a clapper suspended beneath a bell, and actuated by a piston which traverses a piston guide passing through the central axis of the bell, the upper part of the guide by contact with the piston head preventing the clapper being retained in contact with the bell.

Claim.—The combination of the bell with a clapper suspended in an ornamental stand (without a cup beneath the bell) and with a piston extending upward through the bell; the said combination being and operating substantially as set forth.

Also, the combination of the piston of the striking mechanism with the striking instrument, by means of a connexion permitting play and with a piston guide, in such manner that the upper end of the said guide forms the stop for the piston, and prevents the striking instrument from being held in contact with the bell of the piston; the said combination being and operating substantially as described.

Also, the combination of a heavy clapper suspended in the centre of the bell, with the piston extending upward through the bell; the combination being and operating substantially as set forth.

No. 39,698.—WILLIAM OTIS DAVIS, of Pittsburg, Pa., assignor to JAMES B. LYON and WILLIAM O. DAVIS, of same place.—*Improvement in Glass Presses.*—Patent dated August 25, 1863.—The objects to be attained are perfect perpendicularity of stroke of the piston, and relieving the bed of the weight of the piston. The first is secured by locating the rock shaft, to which the connecting rods are attached, below the bed, and to attain a great length of rod and diminish the angle of deflection and consequent side strain on the piston; the latter object is attained by a counter balance weight which supports the piston when at rest.

Claim.—Placing the fulcrum of the lever below the bed plate of the press when power is applied to the piston rod, at or near its upper extremity, for the purpose of diminishing the angle of deflection from the perpendicular of the connecting rods, and thus preventing any material lateral strain on the piston rod, and enabling the length of stroke of the piston rod and plunger to be increased, without interfering with the perpendicularity of this motion.

The arrangement of a counter balance consisting of a weight placed under the bed plate of the press, and connected by chains and pulleys with the moving parts of the press, so as to raise them when the pressure on the lever is withdrawn.

No. 39,699.—CHAUNCEY H. GUARD, of Troy, N. Y., assignor to DAVID A. BURR, of Washington, D. C.—*Improvement in Body Loop for Carriages.*—Patent issued August 25, 1863: antedated August 19, 1863.—This improved device is for the purpose of attaching the body-loop to the spring bar of the carriage by means of a clamping socket on the loop, and a compressing clamp below it, between which the spring bar is clamped by a screw-bolt.

Claim.—The use of a metallic bi-angulate clamping socket C in combination with a body-loop B, a metallic compressing clamp D, and a screw-bolt E, when arranged substantially in the manner herein set forth.

Also, the arrangement of the bevelled faces of the lower edges of the sides a a of the clamping socket C, in combination with the bevelled edges of the embracing flanges b b of the clamp D, when said socket C and clamp D are combined with a screw-bolt E, substantially in the manner and for the purpose herein set forth.

No. 39,700.—H. B. MORRISON, of Leroy, Genesee county, N. Y., assignor to C. H. MORRISON, of same place.—*Attaching revolving Tips to Hose Nozzles.*—Patent dated August 25, 1863.—The tip is secured to the nozzle by means of a screw ring whose exterior thread engages a screw in the tip, and whose interior edge abuts against a raised flange on the nozzle. The object being to make a water-tight connexion and admit of free revolution.

Claim.—The securing of the tip C to the nozzle A by means of a ring B, cut or divided at any point or formed of two more parts, and fitted in a recess c in the end of a nozzle A, and having a screw thread cut on its outer side, upon which the inner or lower end of the tip C is screwed, substantially as herein set forth.

No. 39,701.—ABBY H. PRICE, of New York, N. Y., assignor to the MAGIC RUFFLE COMPANY, of same place.—*Improvement in Machine-made Ruffles.*—Patent dated August 25, 1863.—The strip for the ruffle is delivered by a folder under the separator, where it is gathered by the feeder; above it is a narrower strip of folded muslin, to which the former is stitched.

Claim.—The within-described puff ruffle as a new article of manufacture, the same having two equal parts A A' folded together, as described, and held in a gathered condition by a single series of machine stitches, substantially in the manner and for the purpose herein set forth.

No. 39,702.—GEORGE H. REAY, of New York, N. Y., assignor to LOUIS NEGHAUR, of Brooklyn, N. Y.—*Envelope Machine.*—Patent dated August 25, 1863.—The invention consists of a movable slide placed under the lifter or lifters in such a manner that a fresh supply of blanks can be introduced under the lifters when they begin to rise, without stopping the machine; also, of an arrangement of the lifter and table which supports the gum box, and under which the blanks are conveyed to the creasing box, so that the table itself pulls off the blanks from the lifters, and retains them in a correct position for the plungers to act upon them; also, in the mechanism employed to impart the desired motion to the gum box, in relation to the lifters, to counterbalance the conveyors, to crease, fold, and press the envelopes, and deliver them from the machine.

Claim.—First, the employment of the slide E in combination with the rising and falling lifters F, constructed and operating in the manner and for the purpose substantially as herein specified.

Second, the arrangement of the table C over the conveyor H, substantially in the manner herein described, so that the blanks are held even and in place by the table while being carried by the conveyor to the creasing box.

Third, the slotted lifters F, in combination with the bar c*, in the table C, as and for the purpose herein specified.

Fourth, feeding the blanks under the table which supports the gum box, instead of over it.

Fifth, the weights c2 on the front edge of the table, in combination with the conveyor H, applied and operating substantially as and for the purpose set forth.

Sixth, the balance weight h3* in combination with the conveyor H, applied and operating in the manner and for the purpose herein specified.

Seventh, arranging the fingers K in such relation to the plunger J that they hold the flaps of the envelopes which have been creased by being passed through the box I, until the plunger descends again and completes the envelope, by pressing, as set forth.

Eighth, the arrangement of hinge joints k3 in the shanks of the folding fingers K, in the manner and for the purpose substantially as described.

Ninth, the cam m and roller m*, or its equivalent, in combination with the plunger J, constructed and operating substantially as and for the purpose specified.

Tenth, passing the plunger J below the lower creasing edge i* of the box I, in the manner specified, so as to push the finished envelope clear off the box, and leaving the creased envelope below the lower edge of the box, to prevent the same from going back with the plunger.

Eleventh, the ribs or ledges j" on the face of the plunger, as and for the purpose described.

No. 39,703.—SAMUEL ROCKAFELLOW, of Muscatine, Iowa, assignor to Himself and JOSHUA W. HOOPS, of same place.—*Improvement in Cultivators.*—Patent dated August 25, 1863.—This machine is mounted upon wheels, and strides over the row to be cultivated, the lateral deflection of the ploughs being regulated by foot levers and cords connecting them with

the tongue, which is pivoted to the rear cross-bar, and has a lateral movement under a staple. The ploughs are raised as required by grasping a bow or curved handle which is connected to levers from which the plough beams are suspended by rods. The plough beams are pivoted at their rear ends, and their forward ends move in slots in the standards.

Claim.—First, the combination of the cords *c c* with the draught pole *E*, pivoted at its rear end to the cross-bar *A'*, and the foot levers *I I*, arranged, constructed and operating as and for the purposes herein delineated and set forth.

Second, the combination of the levers *F* and the rods *H* with the curved handle *G*, when constructed, arranged and operating as herein set forth and described.

Third, the combination and arrangement of the beams *D D*, adjustable at their front ends, with the rods *H*, the levers *F*, and curved handle *G*, as and for the purposes herein set forth and shown.

No. 39,704.—JOHN L. ROWE, of New York, N. Y., assignor to FRANKLIN C. BROWNELL, of Brooklyn, N. Y.—*Pencil and Sponge Holder for Cleaning Slates, &c.*—Patent dated August 25, 1863.—The pencil is clamped in the case of the sliding ring; the other end forms a cup in which a piece of sponge is placed.

Claim.—The clamping slate-pencil holder in combination with the cup at the upper end, receiving a piece of sponge or similar material, the whole forming a new article of manufacture, as specified.

No. 39,705.—JOSEPH F. SARGENT, of Boston, Mass., assignor to Himself and ELMER TOWNSEND, of same place.—*Improvement in Eyeletting Machines.*—Patent dated August 25, 1863.—In this machine the eyelets are fed by the positive motion of forceps or nippers, in contradistinction to the method of feeding by gravitation or by pushing them seriatim. They are delivered from the rotating hopper into the chute or eyelet passage leading to the setting tool, which chute is adjustable for varied sizes of eyelets. The punch bed, against which the punches cut the holes for the insertion of the eyelets, is made of a sectional piston and a cylinder. At the foot of the chute the eyelet is grasped by two spring fingers on the end of a horizontal shaft, which moves in bearings extending from the hopper frame; a spreader is arranged to open the fingers during their retrograde movement.

Claim.—First, the employment of nippers, forceps or fingers to grasp or surround each eyelet successively, and to convey it from the end of the chute to the place where it is set or riveted, in contradistinction to entering each eyelet with a pointed feeder, or to pushing it from behind.

Second, the rotating hopper arranged to operate on the eyelets, substantially as described.

Third, making the hopper adjustable to different heights of eyelets.

Fourth, the chute adjustable to different diameters of eyelets, as set forth.

Fifth, the combination of an adjustable hopper with an adjustable chute, constructed substantially as specified.

Sixth, constructing the punch bed of a cylinder, and adjustable piston.

Seventh, making the piston in sections, substantially as described.

Eighth, the mechanism for imparting motion to the fingers or forceps, arranged and operated substantially as set forth.

No. 39,706.—A. F. SAUNDERS, of Chelsea, Suffolk county, Mass., assignor to Himself and C. B. BASFORD, of Malden, Mass.—*Improved Clothes-Horse.*—Patent dated August 25, 1863.—The frame is supported upon expanding legs, and from these legs and the vertical end-pieces the arms carrying the rounds are sustained, being pivoted thereto, and supported by links. One side is capable of being opened at a time, and the whole of being closed up.

Claim.—The arrangement of hanging frames, lever arms and supporting legs, operating together substantially as described and for the purposes specified.

No. 39,707.—C. E. SNEIDER, of Baltimore, Md., assignor to Himself and THOMAS POULTNEY, of same place.—*Improvement in Breech-loading Fire-arms.*—Patent dated August 25, 1863.—This improvement consists of a method of raising and opening the breech, and of drawing down and projecting towards the rear the barrel of the gun so as to close the breech firmly. At the rear of the barrel is a hinged section connected to the breech-piece; these admit of the upright deflection of the rear of the barrel which has below it two lugs; one is engaged by the pivoted guard lever to raise and lower the barrel, and the other is pushed to the rear to close the joint by a wedge on the upper side of the guard lever.

Claim.—First, the recess *m*, in the lever *F*, and wedge *H*, attached to the same, in combination with the hook-shaped lug *e*, and shoulder *h*, when arranged to operate in the manner specified.

Second, the lever *F*, having an eccentric or cam *h*, formed on one end, and attached to the barrel by a lug *d*, and pin *g*, in combination with the pin *i*, when arranged to operate in the manner specified.

Third, the wedge *H*, and hook-shaped lug *e j*, in combination with the hinged cap *a*, and breech-piece *I*, when arranged in the manner described.

No. 39,708.—AUGUSTUS WALKER, of Buffalo, N. Y.—*Improvement in the Construction of Ships-of-war.*—Patent issued August 25, 1863; antedated May 23, 1863.—The improvements are in the construction and adaptation of the vessel, including the truss framing, upright and inverted arch supports and prow; the ventilating tubes, extending from the exterior upwards and downwards to the interior of the vessel; the pilot-house, which is raised and lowered for use and for safety and the disposition of and method of manipulating the anchors.

Claim.—First, the combination of the central longitudinal truss framing or arch and double concave bottom, constructed substantially as herein described.

Second, the doubly-arched prow or run *D3*, constructed and supported as described.

Third, the ventilating tubes *I' I''*, closable by the stanchions *J J*, substantially as described.

Fourth, the casing *H*, constructed with a circular arch *h*, for sustaining the turret *G*, substantially as specified.

Fifth, in connexion with a vessel of the above construction, the sliding pilot-houses *K K*, elevated and sustained in any way, substantially as described.

Sixth, the described position and means of working the anchors.

No. 39,709.—BENJAMIN T. BABBITT, of New York, N. Y.—*Improvement in Condensers.*—Patent dated September 1, 1863.—This invention consists in a peculiar construction of the condenser with two chambers in obliquely opposite corners, and connected by L-shaped tubes by which arrangement the longitudinal expansion and contraction of the tubes is permitted without starting their joints.

Claim.—The arrangement of the two chambers *D D'*, in opposite corners of the casing *A B C*, and of the two series of bent or elbow pipes connecting the said chambers in the other opposite corners, substantially as and for the purpose herein described.

No. 39,710.—GOTLIEB BASTIAN and BERNHARD SEIGNITZ, of New York, N. Y.—*Improvement in Inhalers.*—Patent dated September 1, 1863.—This improvement in inhalers consists in the introduction of a ball valve in the lower part of the main tube which fits into the upper part of the medicine chamber, and a valve on the side of the said tube operated by a thumb-piece and spring for the introduction of air at the will of the operator.

Claim.—First, the arrangement of the globe valve *D*, in the bottom of the tube *A*, and between the medicine chamber *C* and mouth-piece *B*, in the manner and for the purpose substantially as herein specified.

Second, the spring lever valve *E*, in combination with the tube *A*, and medicine chamber *C*, as and for the purpose set forth.

No. 39,711.—L. D. BENSON, L. C. BENSON and A. M. BENSON, of North Jackson, Susquehanna county, Pa.—*Improved State Dressing Machine.*—Patent dated September 1, 1863.—The invention consists in an arrangement of two stationary cutters, with their appropriate pressure rollers in hinged frames, the spoke piece being driven endways by a feed bar through the interval between the rollers and cutters.

Claim.—The placing of the cutters *O*, and pressure rollers *N*, in adjustable frames *M*, when said frames are used in combination with the feed bars *G G*, operated substantially in the manner as and for the purpose herein set forth.

No. 39,712.—CHARLES BLOOD, of Malta, Saratoga county, N. Y.—*Improvement in Potato Diggers.*—Issued September 1, 1863; antedated August 25, 1862.—This machine consists of a horizontal share passing beneath the potatoes and lifting them to a place, from whence they are taken by an endless apron and discharged down a grating which trails beneath the machine; the said grating being agitated to cause the dirt to fall through.

Claim.—The arrangement of a fixed horizontal share *E*, together with an endless apron or elevator *G*, and riddle *L*, behind the truck wheels *B B*, said truck wheels also communicating the necessary movements to the elevator and riddle, all as and for the purpose herein specified.

Also, the combination of the elevator roller *g*, having transverse or alternately acting cam grooves *h h* in the ends thereof, with the arms *d d*, projecting from the riddle *L*, as and for the purpose herein set forth.

No. 39,713.—DANIEL BOWKER, of Boston, Mass.—*Improved Inner Soles for Boots and Shoes.*—Patent dated September 1, 1863.—The invention consists in applying to the under part of the inner sole a flat steel spring to preserve the elasticity, and add to the strength of the sole.

As an improved article of manufacture the inner sole of boots and shoes, constructed in manner and for the purpose as above described.

No. 39,714.—JOHN CADY, of Staffordville, Tolland county, Conn.—*Improvement in Pickers for Looms.*—Patent dated September 1, 1863.—This improved shuttle-driving device

consists of a clamp suitably connected with the picker staff by the stirrup clasp and which holds the pads of leather which receive the concussion of the shuttle and propel it.

Claim.—The clasp B, clamp C, and leathers D, in combination with the staff A, for the purpose as described.

No. 39,715.—FRANCIS A. CALVERT, of Lowell, Mass.—*Improvement in Steam-Engines.*—Patent dated September 1, 1863.—This improvement consists of an auxiliary piston which acts as a movable lower end or bottom of the cylinder, and which follows up the motion of the main piston for a portion of its stroke, and then stopping allows the steam to act by expansion; also of appliances for allowing the steam to act as a cushion for the piston, and then forcing the cushioned steam into the steam chest at the termination of the stroke with the vapor chamber, and the necessary arrangement of valves and rods, and induction and eduction openings represented.

Claim.—The combination of the auxiliary piston and its operative mechanism with the primary piston and the cylinder made as described, and provided with a steam chest, a valve, and a valve apparatus, to operate substantially as and for the purpose specified.

Also, in combination with the steam chest and the cylinder, made with eduction or exhaust openings arranged in it, as described, a means substantially as explained, for cushioning the piston and introducing the over-pressed cushioning steam into the steam chest.

Also, the combination of the vapor chamber or hot well I, the cylinder, its steam chest, valve, and valve apparatus, the primary and auxiliary pistons, and the mechanism for elevating and depressing the auxiliary piston, the whole being constructed and arranged substantially in the manner and so as to operate together, as specified.

Also, the combination of one or more induction passages and their valve or valves with the cylinder, the main and auxiliary pistons, and as applied to the head of the cylinder and to that of the auxiliary piston, substantially as and for the purpose or purposes above specified.

No. 39,716.—JOHN CAMPBELL, of St. Louis, Mo.—*Improvement in Conveyer Belting.*—Patent dated September 1, 1863.—In this conveyer belting the warp, except the selvage edge, is made of a single yarn of hemp, and the selvage edge and the filling is made of two-yarn spun yarn, so as to proportion the strength of the material to the amount of wear it has to undergo.

Claim.—The use of the hemp belting before described, made substantially as herein represented and set forth, as a new article of manufacture, for the purpose specified.

No. 39,717.—EDWARD CLARK, of New York, N. Y.—*Improved Device for Repairing Boiler Tubes.*—Patent dated September 1, 1863.—The object of this invention is to expand the ends of the tubes where they join the tube-sheet so as to make a perfect joint and close a leak; and this is done by inserting a spring gland or collar of a conical interior shape, and within it a frustum of a cone fitting the aforesaid, and then by means of a bolt head, bolt and tightening nut, to slip the conical faces on each other and expand the tube.

Claim.—The spring gland C, and thimble D, constructed and applied in combination with each other and with the tube or flue A, substantially as herein specified.

No. 39,718.—JAMES O. CLAY, of Hudson, St. Croix county, Wis.—*Improvement in Weather Strips.*—Patent dated September 1, 1863.—The strip consists of two parts, one attached to the door, and the other lying when the door is open on the sill outside the carpet strip, held in its place by a projection on each end within a small socket at the foot of the door frame; to this lower piece is attached at one end a ring or tablet which, as the door is closed, is struck by the upper strip attached to the door and tipped up to a position with its lower edge in close contact with the sill and its upper edge underneath the upper strip; the eccentricity of the inner side of the socket serving to bind firmly the lower strip of the sill.

Claim.—First, the construction of boxes C, with their cam-shaped eye or socket a, in combination with the flat projecting ends x x, of the adjusting strip B, to operate substantially in the manner and for the purposes described.

Second, the construction of the eye of the boxes C, with the one eccentrically curved edge to serve as a cam wedge to hold the edge of the weather strip close down upon the sill, in the manner and for the purpose described.

Third, the arrangement of the adjusting strip B, angularly in relation to the door jambs, sill, and carpet strip, for the purpose of causing the joints between the overlapping strips, and between the adjusting strip and sill, to be firmly and tightly closed, in the manner substantially as described.

Fourth, the use and arrangement of the ring or disk-formed tappet, in the manner and for the purpose set forth.

No. 39,719.—ISAAC H. COLLIER, of Poughkeepsie, Dutchess county, N. Y.—*Improvement in Harvesters.*—Patent dated September 1, 1863.—The improvement consists in the method of attaching the knife rod to the head, which is accomplished by giving the shank a double dovetail form and countersinking it into a similarly shaped groove or recess in the lower edge or working surface of the head, where it is secured by rivets.

Claim.—The manner of attaching the head A to the knife-rod B, by means of the double dovetails a a, and rivets b b, or their equivalents, substantially as described.

No. 39,720.—JOHN B. DOUGHERTY, of Rochester, N. Y.—*Improvement in Barrel Hoops.*—Patent dated September 1, 1863.—The hoops for the future hoop are made while it is in the block, it is then cut out and steamed and bent on a former.

Claim.—The process of producing barrel hoops by cutting them from a block in which the hoops are already formed, so as to secure greater accuracy in the shape and size of the hoops, as well as greater strength.

Second, the method of forming the splint thus produced into a hoop, by winding it after being steamed on to a proper former.

No. 39,721.—NELSON CROSS, of New York, N. Y.—*Improvement in Tents.*—Patent dated September 1, 1863.—This consists of a frame work of pieces like the letter X, pivoted at the intersections and jointed at their connexions, above and below, and made extensible, covering a polygonal surface; the upper connexions have rafter slats which converge to a common centre forming a conical roof frame. The whole fabric is collapsed for transportation without detaching any part.

Claim.—The construction of an adjustable wall tent frame with more or less angular sides, conical roof, and eaves brackets wholly composed of straight pieces of wood, the body of which is joined together in a lattice form and made capable of extension for occupancy, or depression for transportation, without altering or disturbing the fastening, whilst it also affords, between the diamond openings of the frame, when extended, an ample and convenient entrance way.

Also, the combination of the several parts of the frame and the form and mode of attaching and distending the cover, as heretofore described, as and for the purposes aforesaid.

No. 39,722.—WILLIAM H. DOLE and D. R. FRASER, of Chicago, Ill.—*Improvement in Grain Dryers.*—Patent dated September 1, 1863.—The dryer consists of two inclined, concentric, perforated, sheet-metal cylinders having longitudinal radial flanges or wings on the inner periphery of the outer and the outer periphery of the inner cylinder, respectively. These revolve together, causing the grain to follow a serpentine track around the edges of the wings and falling alternately against one or the other of the cylinders. A current of heated air from a furnace permeates every part, and scoops on the upper ends of the outer cylinder feed in the grain from the chamber at the end of the receiving spout.

Claim.—First, the inner and outer cylinders E and F, in combination with the radial flanges a and b, arranged within the space between said cylinders, and operating substantially as herein described.

Second, a drying cylinder so constructed that while the grain is kept near its circumference the grain is tossed back and forth outside of the centre of the machine toward and from the centre in a waved line, as indicated by the arrows 2 2, and at the same time subjected to heated air, substantially as described.

Third, the combination of the scoop extensions a' a' and flat flanges b b, the scoop portions working in the chamber between the ends of the cylinders E F, substantially in the manner and for the purpose described.

No. 39,723.—GEORGE DRAPER, of Milford, Worcester county, Mass.—*Improvement in Stop Motion for Looms.*—Patent dated September 1, 1863.—This device is intended to stop the motion of a loom whenever a shuttle fails to pass properly into the shuttle box, and consists of a frog movable within a recess in the body of the actuator, said recess having stopping lips which arrest the frog under the action of the dagger, the frog falling as the dagger retreats.

Claim.—The application and construction of the frog and its supports in such manner as not only to cause the frog to rise but to be stopped in its rise under impact or operation of the dagger, the whole being substantially as and for the purpose as hereinbefore described.

No. 39,724.—G. A. ERICKSON, Sweed Bend, Webster county, Iowa.—*Improvement in Cultivators.*—Patent dated September 1, 1863.—The cultivator has two rows of shares and is supported on wheels. In the rear portion of the hinder bar is a reciprocating rod with harrow teeth, which is driven by a pinion and link from teeth on the driving wheel.

Claim.—The described combination of a vibrating harrow E with a cultivator, the whole being constructed and arranged to operate in the manner and for the purpose herein specified.

No. 39,725.—JONATHAN S. FANCHER, of Newark, N. J.—*Improvement in Gas Burners.*—Patent issued September 1, 1863; antedated October 11, 1862.—The improvement consists of two plates of any required form, between which the gas from the ordinary burners passes, assuming, as it is emitted from between their edges, and there ignited, a fan-like or other form, a temper screw regulating the distance between the plates and allowing them to be opened for cleansing.

Claim.—The expanding of the gas as it issues from other gas burners or from any orifice through which the gas is emitted before it comes in contact with the atmosphere, so as to be ignited by means of two fans or planes, represented in the drawings by figures 3 and 4; these planes may be of any shape or form.

Also, the application of the principle of regulating the flame by means of the screw, represented in the drawings by figure 5, with which the fans or planes are separated or brought together, thus adjusting the light as may be desired.

Also, the use of the screw for opening the fans for the purpose of cleaning the burner.

No. 39,726.—VINCENT FOUNTAIN, Jr., of Factoryville, Richmond county, N. Y.—*Improved Step-Ladder*.—Patent dated September 1, 1863.—The piece which forms the prop is fastened by a bolt to a cleat behind the main portion, and being raised up forms an extension, the upper step or platform folding back out of the way of the upper section.

Claim.—First, the converting the step-ladder which is used as a prop into a continuous and extension ladder, as described, by turning the same upward vertically upon the pin or bolt, as described.

Second, the manner of constructing the platform *c' c'* with a leaf and hinge, so as to be used as a platform for the step-ladder or turned over out of the way to permit the extension part B to be brought into its proper position for forming an extension ladder.

No. 39,727.—H. R. GILLINGHAM, of Jersey City, N. J.—*Improvement in Smoke-Stacks*.—Patent dated September 1, 1863.—By this invention provision is made for entirely closing the exit for the products of combustion and the escape steam by the chimney and by throwing the steam back to cool the tubes and deaden the fire. This is accomplished by modifying the length of the inner chimney by rods attached to arms on a rock-shaft under the control of the engineer.

Claim.—First, the locomotive, providing for the checking or extinguishing of fire by the exhaust steam by discharging it backward through the furnace, substantially in the manner herein set forth.

Second, the lever J, link bar K, and stop *b*, or their respective equivalents, arranged as described, on one or more sides of the duplicate movable internal pipes E and I, of a smoke-stack, for the purpose herein set forth.

Third, in the stacks of locomotives, the use of the shields *m m*, arranged as described, relatively to the holes M M, for the purpose herein set forth.

No. 39,728.—A. G. GRAY, of London, England.—*Improvement in Pumps*.—Patent issued September 1, 1863; antedated March 11, 1862.—The vertical reciprocating motion of the piston is obtained by suspending its rod from the end of one arm of a rock shaft, another arm on said shaft being vibrated by the engagement of a roller on its end with cams on the periphery of a drum rotated by any prime motor; the tendency of the piston to be drawn down into the pump is counterbalanced by a weight.

Claim.—First, the combination of the peculiarly constructed driving cam with the right angular lever arms *s* arranged and operating a pump, substantially as described.

Second, the use of a weight, or its equivalent, either adjustable or not, so arranged in regard to and operating with the lever arm *s* as to counteract the tendency of the piston rod to be drawn back by the formation of a vacuum in the pump, substantially as described.

No. 39,729.—WELLINGTON GREENE, of Kinzua, Warren county, Pa.—*Improvement in Beehives*.—Patent dated September 1, 1863.—The hive has a perforated bottom and is provided with two alighting boards, one leading to the main chamber and the other directly to the honey boxes, which have perforated sides connecting them. The drawers are supported by dovetailed cleats entering corresponding mortises in the sides of the boxes, and the entrances are provided with perforated slides.

Claim.—A house or structure A provided with drawers D fitted within it, as shown, and provided with a perforated bottom *b*, alighting boards B B', and perforated sides C C', all arranged and combined to form a new and improved beehouse or beehive, substantially as set forth.

No. 39,730.—JAMES S. HARRIS, of Poultney, Rutland county, Vt.—*Improved Mop-Head*.—Patent issued September 1, 1863; antedated December 17, 1862.—A follower slides vertically within the frame and is forcibly held down upon the mop-cloth by means of levers which engage teeth on the top of the follower.

Claim.—The arrangement of the levers C C in connexion with the pressure plate B and of the frame A, operating in the manner and for the purpose specified.

No. 39,731.—S. A. HEBARD, of North Stamford, Fairfield county, Conn.—*Improvement in Cider Mills*.—Patent dated September 1, 1863.—The grinding cylinder operates against an adjustable blade to reduce the fruit to pulp, which is carried along between the pressure rollers on an apron, the latter afterwards passes over a roller of small diameter which causes the waste pulp to break and fall off; the apron is cleaned by a brush cylinder.

Claim.—First, the combination of the grinding or reducing cylinder with the adjustable blade or bar when constructed to operate substantially as and for the purpose set forth.

Second, the combination of the roller *g* with the brush cylinder, when the said roller and brush cylinder are arranged relatively to each other and operate substantially as described.

No. 39,732.—B. F. HISERT, of Norton Hill, Greene county, N. Y.—*Improvement in Horse Hay Forks*.—Patent dated September 1, 1863.—The tines are attached to the heads by means of the prolongation of the heel of the tine around the head and by screw-bolts carrying sockets which embrace the tine and pass through the head.

Claim.—The securing of the tines E to the head A of the fork by having the inner ends or parts of the tines curved so as to extend wholly or partially around the head, and having eyes or sockets *a'* fitted on the tines and secured to the head by bolts F either attached to or formed with the eyes or sockets or made separately therefrom and passing through the eyes or sockets and through the head A and the tines, substantially as described.

No. 39,733.—MARK W. HOUSE, of Cleveland, Ohio.—*Improvement in Remedial Applications of Electricity*.—Patent dated September 1, 1863.—By this apparatus a primary and induced current may be worked over the same conductors at the same time, or two induced currents of different intensities worked at the same time in the same or opposite directions with or without a primary current; a primary uninterrupted may be combined with an induced interrupted current, the poles or directions changed by means of a switch placed within the circuit.

Claim.—First, the arrangement of two helices of the same or different intensities upon the same stand, and so connecting them that a primary interrupted or uninterrupted current and an induced current may be given at the same time, as specified.

Second, closing the circuit of the induced current, in the manner substantially as specified and shown at Q Q' while the primary current is being used, for the purpose of increasing the intensity of the primary or giving the reflex action of the induced to that of the primary current.

Third, the pole changers when placed in the circuit at any point between the helix and the electrodes, and operating as and for the purpose specified.

Fourth, the current directors for the purpose of conveniently localizing the currents, substantially as and for the purpose herein set forth.

No. 39,734.—N. H. HOWARD, of Beloit, Wis.—*Improvement in Tug Buckles*.—Patent dated September 1, 1863.—The object of the improvement is to save the face of the strap entire without holes for the tongue of a buckle, and it is avoided by making swells in the tug by the interposition of wedges between the layers of the same, which are made to engage with a transverse bar of the buckle, the tug strap being pressed up by a lever from below.

Claim.—The lever, as above specified, as applied to and in combination with the roller or bar and the rise and swell in the tug, as above represented.

No. 39,735.—BENJAMIN KENOYER, of Edina, Knox county, Mo.—*Improvement in Grinding Mills*.—Patent dated September 1, 1863.—The stones are driven in contrary directions, the shaft of the upper one passing through the sleeve-shaft which runs the lower one. Each stone is attached to its shaft by a socket driver with an arm bolted to the stone, a rubber pad intervening between the stone and the arm.

Claim.—Connecting the drivers P R to the stones O Q, by providing the former with arms *g l*, with India-rubber strips *j n* interposed between them and the stones, and having screws *k m* pass through the stones, rubber strips, and arms, substantially as herein described.

No. 39,736.—LA ROY N. LESLIE and THURSTON RICHARDSON, of Leominster, Worcester county, Mass.—*Improvement in Attaching Breeching to Thills of Vehicles*.—Patent issued September 1, 1863; antedated November 19, 1862.—This consists of a hook attached to each thill with a vertical pivoted lever arm, which, being withdrawn for the insertion of the strap, springs back to retain it in position as long as the tension is towards the rear, but giving way to a forward pull and releasing the breeching strap when the traces are unhitched by accident or otherwise.

Claim.—First, constructing a breeching hook with a spring lever placed in or at its opening and turning upon a pivot or fulcrum, so as to operate substantially as herein above described.

Also, constructing the spring lever with right-angular arms, working close or nearly close up to the bow of the breeching hook, substantially as described and for the purposes specified.

No. 39,737.—WILLIAM S. MALLORY, of Batavia, N. Y.—*Improvement in Window Fasteners*.—Patent dated September 1, 1863.—The device consists of a cam-shaped bolt in the lower stile of the window sash, which bolt is operated by a lever and knobs, and engages with a staple in the window casing.

Claim.—The described arrangement of the lever *b*, fulcrum *o*, knobs *d* and *e*, in combination with the cam-shaped hook or fastener, all arranged substantially in the manner and for the purpose set forth.

No. 39,738.—GEORGE MEADER, of Ottawa, La Salle county, Ill.—*Improved Duck's-Foot Propeller*.—Patent dated September 1, 1863.—This arrangement is for the purpose of revers-

ing the action of the propeller. A rod on the other side of the reciprocating bar actuates the stops so as to arrest the motion of the paddles on one side or the other according to the direction required.

Claim.—The combination of the movable stops C C, the slots *ff* in the paddles, the rod D, and the spring *e*, or its equivalent, substantially as herein specified.

No. 39,739.—AMOS MILLER and JOSEPH R. STAUFFER, of Pennsville, Fayette county, Pa.—*Improvement in Mash Tubs.*—Patent dated September 1, 1863.—The steam is distributed through the mash underneath the revolving rake, by means of perforated copper pipes consisting of four branching arms from a common centre, or from a ring-shaped tube.

Claim.—The arrangement of a perforated pipe F, with four arms *b*, in the bottom of a mash tub, constructed and operating in the manner and for the purpose shown and described.

No. 39,740.—JOHN P. MILLER, of Boston, Mass.—*Improvement in Arithmetical Calculators.*—Patent dated September 1, 1863.—This systematic frame is furnished with bars and pins, and is intended for instructing the young in the relative values of units, tens, &c., by the requisite aggregation of the lower denomination to represent one of the higher, &c.

Claim.—An instructing apparatus or frame made with registering and denoting bars and boxes, in the manner and for the purpose substantially as herein set forth.

No. 39,741.—HENRY MITCHELL, of Racine, Wis.—*Improvement in Ploughs.*—Patent dated September 1, 1863.—The improvement consists in the method of attaching and locking together the parts of the plough. A bar which is curved to the shape of the mould-board and flattened to fit the landside; a brace from the landside to the lug connecting the mould-board and share; the rear handle and the standard being bolted to the beam and landside, and the off handle to the mould-board and braced from the beam.

Claim.—The combination of the curved bar D, constructed as shown, and the brace *f*, with the landside C, formed as shown, standard B, share D', mould-board E, handles F F, and beam A, all in the manner herein described.

No. 39,742.—R. D. NESMITH, of Franklin, Merrimack county, N. H.—*Improvement in Machines for Burring and Picking Wool, Cotton, &c.*—Patent dated September 1, 1863.—It consists of a stationary guard and a revolving guard arranged above the feed-rolls of a picker or burring machine, for the purpose of throwing back on to the feed-apron the small pieces and lumps which pass the feed-rolls without being reduced to fibre.

Claim.—The revolving guard applied to operate in combination with the stationary guard and in relation to the main cylinder, in the manner and for the purpose substantially as herein specified.

No. 39,743.—JOHN S. PADON, of Lebanon, St. Clair county, Ill.—*Improvement in Gang Ploughs.*—Patent issued September 1, 1863; antedated March 1, 1863.—The plough beams are pivoted in frames which rest, at their front and rear, upon the main frame which is supported on wheels. The ploughs are adjusted by means of a series of bolt holes, through one of which their pivoting bolt is placed, and, by means of a hand-lever, at the front of the machine.

Claim.—First, the combination of the movable frames, consisting of the sills R R, with the main frame, when they are arranged on said frame, as described, and when said frame is mounted on truck wheels, as described.

Second, the combination of the movable and adjustable plough beams D with the sills R, when said beams are made to operate in connexion with said sills, substantially as described.

No. 39,744.—LEWIS P. PEASE, of McCordsville, Hancock county, Ind.—*Improvement in Stump Extractors.*—Patent dated September 1, 1863.—The sweep in this machine operates through gearing upon a toggle joint lever, to rotate a windlass upon which is wound the chain for raising the stump. The machine is lowered to the ground when in operation, and raised by levers, rods, &c., on to the wheels for transportation.

Claim.—First, transmitting motion from the sweep H to the windlass shaft K through the medium of a crank F and toggle H, combined and operating in the manner and for the purposes set forth.

Second, the combination of the toggle H, arm X, feed-hand I, ratchet wheels J O, windlass shaft K, and dental pawl N, constructed, arranged, and operating in the manner and for the purposes set forth.

Third, the rear axle Q, hinged at its upper edge to the main frame, in the described combination, with rods S, bell-crank levers R, and bolster T, for raising the machine upon its wheels.

Fourth, the combination of the pulley V and cord U with the axle Q and rods S, for elevating the machine by a partial revolution of the sweep.

No. 39,745.—HARMAN PENNEPACKER, of Kimberton, Chester county, Pa.—*Improvement in Hoisting Apparatus.*—Patent dated September 1, 1863.—This is a truck on wheels

in which standards pass down on to the axles on each side of each wheel, and the hoisting chain is wound around a central shaft by the operation of gearing and a winch.

Claim.—The arrangement of the standards *a a*, in the truck frame A, forming bearings on the outside of the hub of the wheels B B, in combination with the shaft *e* and gear *f g h i*, all constructed and operating in the manner and for the purpose herein shown and described.

No. 39,746.—JONATHAN P. PERRY, of Foxborough, Norfolk county, Mass.—*Improved Composition for Explosive Shells.*—Patent issued September 1, 1863; antedated September 19, 1862.—The inner aperture of the shell has a bursting charge, and the outer chamber has a liquid charge of bursting inflammable material composed of sulphur, alcohol, and turpentine; the latter composition may have cotton added to it to keep the sulphur in a dispersed condition, and also balls to add to its destructive effect.

Claim.—A liquid shell mixture as made of powdered sulphur and an explosive liquid or composition of alcohol and turpentine.

Also, the combination, as described, of cotton or a like material, or a series of bullets or balls, with the sulphur, when combined with an explosive liquid (composed of alcohol and spirits of turpentine) and used in a shell provided with a bursting charge, as explained.

No. 39,747.—S. A. and W. H. POST, of Durham, Greene county, N. Y.—*Improvement in Machine for Planing Shavings for Upholsterers.*—Patent dated September 1, 1863.—This is for the purpose of making narrow shavings, and consists of a reciprocating plane stock furnished with sectional cutter bits and a plane bit which act on the lower surface of the wood which is held by the clamp and stop.

Claim.—The combination of the toothed cutter C with the planer F, the above parts being fitted in a sliding or reciprocating bed B, and used in connexion with a stop I and lever or clamp K, or their equivalents, all arranged substantially as and for the purpose specified.

No. 39,748.—JACOB PRICE, Jr., of Petaluma, Sonoma county, Cal.—*Improvement in Baling Presses.*—Patent dated September 1, 1863.—The improvements consist in the shape of the upper part of the press box which is narrowed by the inclination inwards of the sides, the object being to discharge the bale readily; in the catches for fastening the doors of the press box open or shut; in the arrangement of the levers, chains, and pulleys for bringing a gradually cumulative strain upon the follower as it approaches the end of its stroke.

Claim.—First, the combination and arrangement of the levers N N, chains L' L' P P, pulleys M M, and shaft R, provided with the heads Q Q, substantially as and for the purpose herein set forth.

Second, the inclined surfaces *a* b**, at the inner sides of the doors D D and sides of the press box A, as and for the purpose specified.

Third, the fastenings formed of the spring-catch E for holding the doors D in an open state, and the fastenings formed of the curved bars E' and lever G for securing said doors in a closed state, as described.

No. 39,749.—J. H. RAUCH, of Ida, Monroe county, Mich.—*Improved Cross-cut Sawing Machine.*—Patent dated September 1, 1863.—This consists of two frames, standing one on each side of a log and supporting the respective ends of a cross-cut saw, the usual cross handle of the same resting in sockets and being capable of reversal as the saw approaches the ground. The saw is operated by one individual by means of a pivoted lever, the other end being furnished with a spring to assist in the return motion.

Claim.—The two frames A A', one A provided with a bent lever B having its inner part of tubular form and slotted longitudinally, and the other one A' provided with an adjustable spring C, and each frame provided with a spring F and guides E E, in combination with the saw D, provided at its ends with a reversible rod *h* and bar *i*, all arranged for joint operation as and for the purpose specified.

No. 39,750.—JOHN S. REID, of Muncie, Delaware county, Ind.—*Improvement in Heaters.*—Patent dated September 1, 1863.—This consists of two chambers and connecting pipes set obliquely in the chimney above the fireplace, the lower chamber communicating by inlet pipes with the open air and the upper chamber by outlet pipes with the interior of the room to establish and heat a current of vital air from the exterior to the chamber.

Claim.—The combination of the oblique pipes C, connecting chambers D D', and nozzles E E', when the said parts are constructed, arranged, and connected as herein described, to constitute a new and complete article of manufacture, adapted and employed for use within and obliquely across the chimney B, as specified.

No. 39,751.—DAVID RING, of Damariscotta, Lincoln county, Maine.—*Improvement in Crutches.*—Patent dated September 1, 1863.—The invention consists in the application to a common crutch of a support hook for the seat connected by a rod to a spring. The object is to support the person partially by the seat and relieve the arm-pits.

Claim.—The combination of the rest hook, rod, spring and tube, after the manner and for the purpose herein specified.

No. 39,752.—JULIUS FERDINAND ROCHOW, of Brooklyn, N. Y.—*Improved Steering Apparatus*.—Patent dated September 1, 1863.—The invention consists in the arrangement of a differential gear on the shaft of the steering apparatus, to prevent the transmission of the blows of the rudder back to the helmsman, and also to give the latter more power over the rudder; springs of rubber are arranged in the interior of the drum to ease the strain on the rope, and springs are attached to the blocks which transmit the motion for the same purpose.

Claim.—First, the arrangement in combination with a steering apparatus of a differential gear substantially such as herein described, to operate in combination with the steering wheel and tiller or rudder, in the manner and for the purposes set forth.

Second, the arrangement of a spring or springs in the interior of the drum, substantially as specified, in combination with the internal gear and with the tiller or rudder constructed and operating in the manner and for the purposes as described.

Third, the arrangement of the adjustable spring block H, in combination with the drum A, rope G, and tiller I, constructed and operating as and for the purpose set forth.

No. 39,753.—REUBEN ROLPH, of Coventry, N. Y.—*Improvement in Whiffletrees*.—Patent issued September 1, 1863; antedated October 26, 1861.—This is a device for detaching the traces from the whiffletree instantaneously, and consists of a pivoted bar or rod fitted in each end of the whiffletree and secured in position by cams attached to a rod fitted in bearings at the rear of the whiffletree and operated by straps.

Claim.—The pivoted bars or rods E E, in connexion with the shaft E, provided with the cams A A, the above parts being applied to the whiffletree B, and arranged with suitable springs, substantially as shown for the purpose set forth.

Further, the employment or use of the straps G H, when attached to the whiffletree B, and arranged relatively with the crank i of the shaft F, as shown, for the purpose specified.

No. 39,754.—JOSEPH W. ROSS, of Boston, Mass.—*Improvement in Ink Wells*.—Patent dated September 1, 1863.—The ink well is set in a hole provided with an annular socket; a disk with a central dipping hole is screwed down above the two, engaging with a thread in the socket and a flange around the upper edge of the well; a float of cork with a covering of rubber floats on the top of the ink as a guide to the pen in dipping and to reduce the evaporating surface.

Claim.—First, forming a "float" for liquids by combining cork or other buoyant material with a protective covering of rubber or gutta-percha, substantially as described.

Second, the combination of the screw socket d, tube or well i, and top plate k, arranged together substantially as described and for the purposes specified.

No. 39,755.—ANTON SCHWITTER, of New York, N. Y.—*Improvement in Engine Turning Machines*.—Patent dated September 1, 1863.—This consists of a series of movable blocks or guides, which are adjusted in the circumference of the rosette by means of set screws, so that by being combined in various ways different lines and ornaments can be produced.

Claim.—The employment or use of adjustable blocks or guides i i', in combination with the rosette E of an engine turning machine, constructed and operating substantially as and for the purpose set forth.

No. 39,756.—HERRMANN SÜLARBAUM, of New York, N. Y.—*Improvement in Oscillating Steam Engines*.—Patent dated September 1, 1863.—This invention consists in the mode of distributing steam to and from the two opposite sides of the piston by the steam and exhaust pipes running close up to the cylinder, and connecting tightly with the same on two steel-lined surfaces, which are at right angles to the axis of oscillation, the steam not passing through the latter.

Claim.—The peculiar arrangement for distributing steam to and from the opposite sides of the piston H in double-acting, oscillating high-pressure steam engines, which is effected on two straight and steel-lined surfaces D and E, which are at right angles, both in the horizontal and in the vertical planes to the axis of oscillation B, and are opposite each other; with two steam conducting head-pieces M and N on the ends of the steam and exhaust pipes I and K, those head-pieces being pressed against the cylinder A by means of the screws O; the changes of steam to be made by the movement of the cylinder A alone, without any movement of the steam conducting head-pieces D E I K, and without any steam passing through the axis of oscillation or trunnions B of cylinder A, all in the manner heretofore described.

No. 39,757.—ANDREW SHOGREN, Mission, La Salle county, Ill.—*Improvement in Machine for Cutting and Punching Iron*.—Patent dated September 1, 1863.—This consists of a stationary and a movable jaw, furnished with the requisite corresponding parts for punching or cutting. The upper jaw is vibrated by means of a link connexion with a lever.

Claim.—First, the prime lever C, when constructed with two parallel bars, so as to be open nearly its entire length and hinged at the outer end to a bed similarly constructed.

Second, the combination of the bed B, prime lever C, hand lever D, and its connecting bars H H, with the standard A and shears F, or punch G, all being substantially as set forth and specified.

No. 39,758.—EDWIN A. SKEELE, St. Louis, Mo.—*Improvement in Burial Cases*.—Patent dated September 1, 1863.—The improvement consists in the arrangement of a reservoir to contain deodorizing and disinfecting agents, in combination with an escape passage by which the gases resulting from decomposition are deodorized before escaping from the casket. The auxiliary receptacle is used to contain and disseminate a more energetic deodorizing composition in the cases of a fleshy body, warm weather, or other emergencies.

Claim.—First, the within described arrangement and combination of the reservoir m k, escape passage p, and perforated screw A A, the same being constructed and arranged relatively, substantially as herein described for the purposes set forth.

Second, in combination with the said devices m k p A A, the receptacle d, constructed and arranged substantially as and for the purposes specified.

No. 39,759.—HALCYON SKINNER, West Farms, West Chester county, N. Y., assignor to ALEXANDER SMITH, of same place.—*Improvement in Power Looms for Weaving Tufted Pile Fabrics*.—Patent dated September 1, 1863.—The first part of the improvement relates to the method of mounting the warps in the loom and to the operation of the harness; the second, to the mechanism for transferring one by one the frames which carry the spools on which the tufting yarns are wound of the various colors required for each range of tufts; the third, to the combing operation which holds the warps apart during the insertion of the tufting yarns, and after they are cut off, and then rising through the warp, combs the tufts out and keeps them from getting tangled; the fourth, to the mechanism for cutting off the tufts; the fifth, to the method employed for preventing the chafing of the warps in beating up the tufts.

Claim.—The manner of mounting and operating the several warps, relatively to each other, and to the introduction of the tufts, and the series of wefts, substantially as described and for the purpose set forth.

Also, the improved arrangement herein described for transferring the spool frames which carry the tufting yarns, as distinguished from the arrangement described in the before recited patents, for effecting the transfer.

Also, the mechanism herein described for performing the combing operation on the tufts.

Also, the said combing mechanism in combination with the mechanism for holding the tufting warps in the same plane during the tufting operation, as described.

Also, the mechanism, substantially as herein described, for cutting off the tufts by means of a single pair of shears, as distinguished from a pair of shears for each tuft, as described in the before recited letters patent.

Also, the manner in which the plate which beats up the tufts is prevented from chafing the warp threads, substantially as described.

No. 39,760.—H. B. SMITH, of Eureka, Woodford county, Ill.—*Improvement in Cultivators*.—Patent dated September 1, 1863.—There are in this machine two forward ploughs, which have a vertical and a lateral adjustment, and a central rake share and two rear ploughs, which have a vertical adjustment. The shares are attached by joints to standards depending from a frame on wheels and are controlled by handles connected to them by chains.

Claim.—First, the pivoting of the plough handles N N, to rods M, fitted vertically and loosely in shafts L, which are allowed to turn in their bearings in pendants g', attached to a shaft f, which is also allowed to turn in its bearings, all being arranged as shown to admit of the adjustment of the ploughs O, as and for the purpose set forth.

Second, the ploughs J, and rake share E, attached to separate or independent shafts H H C, which are fitted loosely between pendants d, connected to a shaft B, that turns loosely in its bearings in the frame A of the machine, as and for the purpose set forth.

Third, in combination with the ploughs O O J J and rake share E, arranged as shown, the adjusting chains F G K and A' P, applied in the manner as and for the purpose specified.

No. 39,761.—NATHANIEL S. TALMADGE, of Fond du Lac, Wis.—*Improvement in Ploughs*.—Patent issued September 1, 1863; antedated October 24, 1862.—The improvement consists in the mode of attaching the ploughs proper to the beam and bracing the several parts. Each plough is attached by two braces: one pointing forward forms the sheth or standard, and the other backward, crossing the former, forms the brace; the latter sends a brace to the lower edge of the mould board, while the upper end receives one from the beam.

Claim.—The arrangement of the braces a a' c c', the braces e e', the rib marked r, and the landside, constructed as described and for the purposes substantially as set forth.

No. 39,762.—GEORGE W. TILESTON, of New Haven, Conn.—*Improved Window Spring and Fastener*.—Patent dated September 1, 1863.—This consists of a cam lever hung in the sash stile so as to press against the window jamb by the weight of the sash. The face of the cam is padded, the pad being retained by lips which are hammered down on to it. A swinging hook moved by a spring engages with a notch in a plate on the jamb to lock the sash.

Claim.—The lever B and latch E, when the same are pivoted together and combined with the spring S, substantially in the manner and for the purpose specified.

Also, the manner described of attaching the pad c to the lever.

No. 39,763.—JONAS TRAMBLIE, of Janesville, Rock county, Wis.—*Improved Shoemaker's Bench*.—Patent dated September 1, 1863.—This bench is provided with a crimping jack at one end, on which is pivoted the crimp, so as to be vibrated to expose either side. In front is the pegging jack with an extension rest for the toe to admit of adjustment to any required angle.

Claim.—First, the substantial construction of the bench, when combined with the pegging and crimping jacks, as shown and described.

Second, the pegging jack, when constructed substantially as set forth, having an adjustable standard G operated upon to give it any desired angle by the thumb-screw a, or any desired extension by means of the screw or standard G, combined with the friction spring k and conical joint shown at Fig. 1, and the friction journal caps L, when arranged substantially as herein set forth and described.

Third, the crimping jack, when arranged to revolve in the various ways, and in the manner herein described and set forth.

No. 39,764.—S. W. TYLER, of Greenwich, Washington county, N. Y.—*Improvement in Flax Harvesters*.—Patent issued September 1, 1863; antedated September 22, 1862.—This machine, as it is drawn along, pulls up the flax by the roots and deposits it systematically upon a platform from whence it is raked off by hand. The flax is drawn by reciprocating jaws arranged on a revolving frame, a ratchet pulley being arranged to continue the motion of the jaws to the end of their throw after the machine is stopped.

Claim.—First, the employment or use of reciprocating jaws applied to a rotating shaft, and arranged to open and close at proper intervals, so as to grasp the standing flax and eradicate it or pull it up from the earth and deposit it in layers at the back of the machine, substantially as set forth.

Second, the employment or use of the reciprocating jaws in combination with a depositing platform or receptacle, when arranged on a mounted frame and operated automatically, so as to grasp and pull up the standing flax and discharge the same at the proper time upon the platform or receptacle, and irrespective of any pulling or eradicating movement which may be given the jaws, so long as the latter are made to pull up and discharge the flax automatically, or by the draught movement of the machine.

Third, in combination with the reciprocating jaws, guards, or fingers, arranged either separately from the jaws, or combined therewith in such a manner as to divide or separate the standing flax into masses or parcels to be grasped by the jaws, substantially as described.

Fourth, the employment or use of the supporting bars U, when placed in relation with the reciprocating jaws and fingers to support the pulled flax and keep it in proper position until it is discharged from the jaws.

Fifth, the combination and arrangement of the slides I K N and elastic levers O, operated through the medium of the cam V and spring S, or their equivalents, as set forth.

Sixth, the ratchet pinion H', constructed substantially as shown, when used in connexion with the reciprocating jaws, applied to a rotating shaft for the purpose of allowing the jaws to complete their throw, when the draught movement of the machine is stopped.

Seventh, providing the reciprocating jaws with cushions or elastic coverings d' at their face sides, substantially as and for the purpose set forth.

Eighth, the wheel D attached to the bar e of frame E, or other suitable support, when said wheel is arranged relatively with the fingers or guards H and jaws J L, for the purpose specified; also, combining the slides g and I with feathered guides e, substantially as described.

No. 39,765.—NATHANIEL WATERMAN, of Boston, Mass.—*Improved Ruffle Iron*.—Patent dated September 1, 1863.—The upper part consists of two fluting or puffing irons, and the foot forms a smoothing iron, the whole to be heated by being placed upon the stove.

Claim.—The improved ruffle iron, made substantially as described.

No. 39,766.—ASAHEL WHEELER, of Newton, Middlesex county, Mass.—*Improved Baby-tender*.—Patent dated September 1, 1863.—This consists of a rounded trough or shell for the baby to lie in, with straps for securing it to the arm of the nurse when it is carried.

Claim.—The elongated and concave shield or supporter, provided with straps for securing it to the arm, substantially as herein described and for the purpose specified.

No. 39,767.—ISRAEL F. BROWN, of New London, Conn., assignor to MARY JANE BROWN, F. H. SUMMERS, JEREMIAH JOHNSON, of Brooklyn, N. Y., and THEODORE BOURNE, of New London, Conn.—*Improvement in Cotton Gins*.—Patent dated September 1, 1863.—The invention consists in making the plates, which, fastened to the central axis, form the doffer of plates of metal.

Claim.—Constructing the doffer of plates of metal, or equivalent material, arranged and operating substantially in the manner set forth.

No. 39,768.—JOSEPH W. FOWLE, of Boston, Mass., assignor to WILLIAM H. OSGOOD, of same place.—*Improved Machine for Stamping and Drilling*.—Patent issued September 1,

1863; antedated July 15, 1863.—The invention consists in the construction of a double clamp or gripe, which takes hold of the stamp or drill rod, and lifting it to a certain height, releases its hold and lets the stamp drop; and in the mode of turning the stamp rod around on its axis, and of stopping and starting the working of the stamps and parts pertaining to it.

Claim.—First, to construct a clamp, consisting of the two clamp levers G G', which interlock each other; the fork k k', fitted into G G', the wedges m m', for adjustment, as above explained and exemplified by Figs. 3, 4, 5, and 6.

Second, to use a stamp or drill rod N, in combination with the clamp levers G G', smooth, or cut with annular or spiral grooves.

Third, to give a turning motion to the stamp or drill rod, in combination with collar P, friction pawl Q, spring O, connecting rod T, and swivel pin W.

Fourth, to stop and start the working of the stamp or drill rod and parts connected with it, by means of clasps A' A'', levers U U, spindle V, crank w, pitman z, stud y, pin z, and hand lever B', as specified above.

No. 39,769.—CHARLES D. GIBSON, assignor to CHARLES S. S. LENOX, of New York, N. Y.—*Improvement in Car Springs*.—Patent dated September 1, 1863.—The metallic plate springs have central elastic bearings, and are also united at their ends by elastic auxiliary springs contained in pivoted bearings.

Claim.—First, combining any suitable elastic packings or auxiliary springs C C, with the ends of rectilinear or curved metallic springs, A' A, substantially in the manner and for the purpose herein set forth.

Second, combining the retaining caps B B, with the ends of metallic spring plates, by means of hinged or pivoted joints, substantially in the manner and for the purpose herein described.

Third, pivoting or hinging the central bearings of metallic plate springs, substantially in the manner and for the purpose herein set forth.

Fourth, the use and combination of an auxiliary bearing spring F, of india-rubber (or its equivalent,) with a metallic plate spring, when arranged substantially in the manner and for the purpose herein set forth.

No. 39,770.—EDWARD HALLEY, of Branford, New Haven county, Conn., assignor to PATRICK KENNEDY, of same place.—*Improved Door Lock and Latch*.—Patent dated September 1, 1863.—This lock is susceptible of a change from a right to a left hand, or *vice versa*, without detaching any part. It is accomplished by drawing out the latch-bolt, turning it half round, and allowing it to slip back under the impulse of a spring. This movement is independent of that due to the handle, as the latch is journaled in lugs on the bolt, and is capable of rotation when partially withdrawn, so that its square is clear of the orifice in the face plate of the lock.

Claim.—The combination of the horseshoe and latch-bolt when the same are constructed in the manner described, so as to allow a partial withdrawal of the latch-bolt, independent of the horseshoe, for the purpose specified.

No. 39,771.—CHARLES W. HARRIS, of Pittsburgh, Pa., assignor to JAMES MASLIN COOPER, of same place.—*Improvement in Revolving Fire-arms*.—Patent dated September 1, 1863.—The invention is described in detail in the claim.

Claim.—The use, in combination with the positive locking bolt, in revolving fire-arms susceptible of operation by the trigger, of a vibrating pawl at the forward end of the trigger, for the purpose of operating the locking bolt, so that, as the trigger is released after the pistol has been fired and is regaining its position for repeated action, the extremity of the vibrating pawl will recede, passing under the locking bolt, and thereby engaging it again, so that, when the trigger is pulled, in firing the pistol, it will immediately draw down the head of the locking bolt, out of its recess in the charge cylinder, and so hold it until the hammer is at half-cock, when the vibrating pawl releases the bolt, and allows it to react against the face of the charge cylinder, ready to drop into the notch in the cylinder, as soon as the cylinder is sufficiently turned, substantially as hereinbefore described.

Also, the use of a "cut-off" consisting of a spring bolt, or other suitable device, which may be operated from outside of the lock frame, for holding the cock pawl of the trigger off from the toe of the hammer, so that it cannot engage the cock-notch in the hammer; and thus, at will, preventing the hammer being raised by the trigger, whenever it is desired to have the pistol operate exclusively as a hammer cocking arm.

Also, lowering the toe of the hammer, so that, when in position in the lock frame, before the piece is fired, the toe of the hammer will not be in contact with the rear end of the trigger, and thereby giving a slight play to the hammer and permitting of its being raised slightly without drawing back the trigger; in order that the trigger may regain its proper position after firing, even though the hammer should have been prevented from falling completely, by a piece of escaped cap or other obstruction, substantially as hereinbefore described.

No. 39,772.—JOHN W. HOARD and GEORGE B. WIGGINS, of Providence, R. I., assignor to PHINEAS D. WESSON, of same place.—*Improvement in Steam Traps*.—Patent dated September 1, 1863.—The central pipe is filled with water and rests upon a diaphragm; the presence of steam in the outer pipe around the water pipe so warms the latter that the diaphragm expands and closes the valve against its seat; the water of condensation as it accumulates reduces the temperature of the diaphragm, and consequently opens the valve and allows the water to pass off.

Claim.—The combination and arrangement of a closed tube *f* within the steam pipe, with a diaphragm *l* and a valve *m*, substantially as herein described for the purpose specified.

No. 39,773.—JOHN W. KINGSBURY, of New Bedford, Bristol county, Mass., assignor to Himself and L. M. KOLLOCK, of same place.—*Improvement in Rolls for Horseshoe Blanks*.—Patent dated September 1, 1863.—The face of the shoe is formed by the detachable collar which projects into the groove of the roller below; the groove for the nail head in the shoe is made by dies fitted into the said collar and having a bearing at their base upon the roll itself.

Claim.—The dies *C C*, fitted to taper dovetail grooves in the detachable collar *B*, and conforming to the exterior of that portion of the roll which receives the said collar, and thereby obtaining a bearing directly upon the roll itself, substantially as herein described.

No. 39,774.—B. M. PHENIX, administrator of the estate of R. P. PHENIX, of Black River Falls, Jackson county, Wis.—*Improvement in Smut Machines*.—Patent dated September 1, 1863.—The improvement consists of a series of devices for separating the offal from and cleaning the grain which is passed through a separator from whence the grain and cheat, cockle, &c., are conducted off, the former to a scouring cylinder and case, from whence it is exposed in a spout to a blast of air from a fan which removes the dust.

Claim.—The combination of the grain separator *H*, fans *C S*, suction spouts *k l k' l'*, blast spout *R*, the scouring device and the chess box *M*, all arranged to operate as and for the purpose set forth.

No. 39,775.—ALBERT MARSHALL, of Lawrence, Mass., and A. B. SOUTHWICK, of Ballardvale, Essex county, Mass., assignors to the WHIPPLE FILE MANUFACTURING COMPANY.—*Improved Machine for Stripping File Blanks*.—Patent dated September 1, 1863.—The file and the file blank have each a reciprocating longitudinal motion, but transversely to each other, and both derived from one shaft.

Claim.—The machine, substantially herein described, for stripping file blanks, consisting essentially of the mechanism for holding and vibrating the file blank, or its equivalent, in combination with the mechanism for holding and vibrating the files *g*, or its equivalent, operating in the manner substantially as herein set forth.

No. 39,776.—WILLIAM K. PLATT, of Philadelphia, Pa., assignor to Himself and GEORGE S. HARWOOD and GEORGE H. QUINCY, of Boston, Mass.—*Improvement in Carding Engines*.—Patent dated September 1, 1863.—An electrical conductor with a row of points is placed in front of or near to the rubbers of a finisher card, so as to remove the accumulation of electricity from the wool, which may interfere with the process of delivery of the perfect sliver.

Claim.—The combination of the electrical attraction bar and its conductor, or the equivalent or equivalents thereof, with a carding engine, the same being substantially as and for the purpose specified.

No. 39,777.—RICHARD B. PULLAN, of Cumminsville, Hamilton county, Ohio, assignor to JESSIE D. PULLAN, of same place.—*Improvement in Folding Tent Frames*.—Patent issued September 1, 1863; antedated September 13, 1862.—Sliding on the central vertical tent pole are three rings, which are retained at their respective places by enlargements of the pole. The lower ring is the central point of attachment for a series of diverging rods which reach to the eave of the tent, while to the upper rings are attached the cords from which the said rods are suspended, the cords supporting the inner and outer covering of the tent.

Claim.—The arrangement and combination of the ring *a* and bars *g* with the cords *c* and *e*, for stretching and otherwise operating the inner and outer coverings of the tent, as herein described and represented.

No. 39,778.—ANDREW J. ROBERTS, of Boston, Mass., assignor to BENJAMIN F. BROWN, of Dorchester, Mass.—*Improvement in Machines for Making Horseshoes*.—Patent dated September 1, 1863.—The improvement consists in the arrangement of horizontal sliding formers or benders provided with pressure rollers, and used in conjunction with a stationary mould-block of the shape of the shoe to bend the bar around the block and narrow the points. Secondly, in a drop weight guided by vertical bars and actuating the formers and form the "calks" by a lip on its lower surface. Thirdly, in grooving the shoe by punches held against the under surface of the shoe by the formers and driven by the drop weight. Fourthly, in the device for detaching the drop weight on its attaining the requisite height, the devices being again placed in order by the downward passage of the weight.

Claim.—Firstly, operating the various mechanical devices employed in machines for making horse-shoes by means of the vertical or up-and-down movement of a heavy drop hammer.

Secondly, bending the "points" of the shoe to form the "calks," by means of the lip projection *g'*, upon the under surface of the drop weight, arranged and operating substantially as set forth.

Thirdly, the arrangement of the vertical cam lever *n*, sliding plate *s* and arms *p p*, attached to the arms *d d*, of the formers *e e*, in combination with the drop-weight, the whole operating together in the manner described and for the purposes set forth.

Fourthly, in the use of the bevelled piece *q'*, attached to the sliding formers and benders *e e*, and bevelled piece *p'*, upon *o' o'* rest, the two being so arranged with regard to each other as to raise or lower the said punches, substantially in the manner and for the purpose described.

Fifthly, disconnecting the devices employed for raising the drop-weight, by means of the vertical rod *A*, spring-lever catch *y'*, and vertical swinging lever *w'*, that forms the bearing for one end of the driving shaft, arranged and operating as set forth.

Sixthly, the means described for re-converting the devices employed for the raising of weight after the same has fallen, the same consisting of the vertical rod *C*, and angular swinging arm or lever *D*, turning upon a fulcrum, arranged and operating substantially as herein above described.

Seventhly, the combination of the two part drawing shaft *m'*, attached together, as described, with the swinging lever *n*, and spring catch *o'*, operating substantially as and for the purposes specified.

Eighthly, the arrangement of the two plates or bars *l* and *m*, for holding the metallic bar in proper position while being bent around the mould block, substantially as described.

No. 39,779.—THOMAS ROBJOHN, of New York, N. Y., assignor to E. C. WOOSTER, of same place.—*Improvement in Band Ruffles*.—Patent dated September 1, 1863.—Explained by the claim.

Claim.—The new article of manufacture herein described, consisting of a band ruffle composed of a single strip of plaited or gathered muslin, or other material, which is made to produce both the ruffle and the band, by stitching through the parts or gathers with two rows of stitching, one of which is also made to secure the edge of the material which is turned in to give a finish to the band.

No. 39,780.—HENRY R. RUSSELL, of New Market, Frederick county, Md., assignor to Himself and ISAAC S. RUSSELL, of same place.—*Improvement in Harresters*.—Patent dated September 1, 1863.—The outer or grain wheel of the machine is attached to a vertically slotted plate by a bolt and nut; this plate is hinged by two arms to a casting secured to the framing of a platform.

Claim.—First, the application to harvesting machines of an outer supporting wheel *B* connected by the frame of the machine by means of hinged plates *d d* and a plate *b'*, operating substantially as and for the purposes described.

Second, attaching the wheel *B* to a vertically slotted and hinged plate *b'* whereby the adjustment of the frame of the machine and the vibrating motion of the axle of wheel *B* is obtained, substantially as described.

No. 39,781.—TIMOTHY SMITH, of Charlestown, Mass., and A. B. SOUTHWICK, of Ballardvale, Essex county, Mass., assignors to the WHIPPLE FILE MANUFACTURING COMPANY.—*Improved Machine for Cutting Rasps*.—Patent dated September 1, 1863.—The blank is attached to the top of a rod which has an intermittent vertical motion by means of the engagement of a wheel with inclines and straight sections to its worm. The vibrating punch is mounted in a carriage and fed across the face of the blank; the blows are given by means of a spring and the intermittent engagement of the tripping wheel.

Claim.—The worm wheel *M*, with its horizontal thread *x*, and inclines *i*, in combination with the pins *b*, or their equivalents, upon the rod *c*, for the purpose described.

Also, constructing the worm wheel *M* in segments, as set forth, for the purpose described.

No. 39,782.—TIMOTHY SMITH, of Charlestown, Mass., and JAMES A. STAFFORD, of Boston, Mass., assignors to THE WHIPPLE FILE MANUFACTURING COMPANY.—*Improved Machine for Grinding Half-round Files*.—Patent dated September 1, 1863.—Each rounded side has an arc of about 120°, and three of such are secured to a mandrel which is hung upon centres revolved and traversed past the face of a revolving grindstone. The carriage on which the mandrel is mounted slides upon ways corresponding to the shape of the file so as to operate on the taper ends of the files.

Claim.—The method herein described of grinding blanks for "half-round" files, by revolving and traversing them in contact with a revolving grindstone, substantially as set forth.

Also, the method of vibrating the flanks to form the taper, by means of the groove *m*, and pins *k* and *l*, as described.

Also, the combination of the carriage *E*, the table *F*, and screw *p*, arranged and operating as described.

No. 39,783.—THOMAS SYMONDS, of Cumberland, Me., assignor to Himself and ROSEA KENDALL, of same place.—*Improvement in Water Wheels*.—Patent dated September 1, 1863.—The buckets are constructed with a deep direct acting surface and with a shallow twisted and nearly horizontal reacting surface of considerable length. The hub is of a bell or trumpet mouthed shape, and the water is admitted by a scroll case of the depth of the direct acting portion of the buckets.

Claim.—First, the buckets D, constructed in the form herein described, for the purpose set forth.

Second, the combination and arrangement of the buckets D, gradually enlarging hub C, and stationary scroll case or apron E, the whole constructed and operating in the manner and for the purpose specified.

No. 39,784.—THOMAS WORSLEY and GEORGE W. DORSEY, assignors to THOMAS WORSLEY, of Philadelphia, Pa.—*Improved Die for Forming Bars of Soap*.—Patent issued September 1, 1863; antedated April 11, 1862.—Soap ground to a pulpy mass is forced through this die, and the invention consists in forming in the die a recess communicating with a vessel containing fluid which surrounds the soap as it is forced through the die and serves as a lubricant, so that the surface of the bars of soap are preserved smooth and even.

Claim.—The recess *a* formed in the die B, and communicating with a vessel containing water or other suitable fluid, substantially as and for the purpose herein set forth.

No. 39,785.—GEORGE P. KIMBALL, of San Francisco, Cal., assignor to Himself and W. H. KNIGHT, of same place.—*Improvement in Carriage Couplings*.—Patent dated September 1, 1863.—This consists of a circular flange above the axle, a cap connected with the coupling arch by a pin, a clevis holding the parts rigid in their relative connexions, and a king bolt.

Claim.—The combination of the axle D with the flange *b*, pin A, cap C, clevis E, and king bolt F, when constructed and arranged substantially in the manner and for the purpose herein described.

No. 39,786.—LOOMIS G. MARSHALL, of Philadelphia, Pa., assignor to Himself and ANDREW COCHRANE, of same place.—*Improvement in Furnaces for Desulphurizing Ores*.—Patent dated September 1, 1863.—In a square furnace are a number of vertical tubes for ore; these are surrounded by fuel and closed above and below by sliding plates which open for filling in ore and discharging it below. The parallel plates form guides for the slides and the other arrangements are to promote draught.

Claim.—The arrangement of vertical tubes and slides in a square furnace, in combination with the parallel plates C and the triangular-shaped chimney K, with its regulating damper J, arranged and combined as herein described.

No. 39,787.—THOMAS K. ANDERSON, of Hornellsville, N. Y.—*Improved Mode of Removing Obstacles under Water*.—Patent issued September 8, 1863; antedated October 26, 1862.—The inventor employs a mortar tapered toward its rear end, with a short charge chamber in front, and a contracted fuze chamber communicating therewith from the rear. A longitudinal rib, formed with a number of holes, affords means for attaching the suspension cords, by which the mortar is lowered to any depth and at any inclination, so that its muzzle will be presented to the object to be dislodged.

Claim.—The application of a cannon or mortar, constructed in such a manner that it may be suspended, and the muzzle brought to bear upon an object, at any angle or in any position, under water, in the manner described and for the purpose herein specified.

No. 39,788.—PETER ANDREW, of Cincinnati, Ohio.—*Improvement in the Construction of War Vessels*.—Patent dated September 8, 1863.—The gun deck in this vessel is surrounded by strong bulwarks, forming an angle at the longitudinal centre of the vessel, near the bow, and diverging toward the stern. The portholes are protected in front by a projecting shield. A central longitudinal beam of peculiar construction, extending from stem to stern, and from the upper deck to the bottom of the ship, affords great strength to the hull. The lock pieces *g g* prevent the longitudinal displacement of any part of the prow at the time of collision.

Claim.—First, constructing the gun deck of oblique plank, in combination with the gun battery to be used thereon, substantially as and for the purpose set forth.

Second, constructing portholes with projecting sides, substantially as and for the purpose described.

Third, also the combination of beam *c* with the deck plank, when the same are locked together and braced, substantially in the manner and for the purpose set forth herein.

Fourth, the lock pieces *g g*, in combination with the rampart or the beak of the vessel, substantially in the manner and for the purpose set forth.

No. 39,789.—JOHN W. BARTLETT, of Harmer, and A. MORRIS, of Marietta, Washington county, Ohio.—*Self-cleaning Chuck*.—Patent dated September 8, 1863.—The object of this self-cleaning chuck, for turning buckets, &c., is to carry away the dust from the turner and keep the chuck free from chips, &c. This is accomplished by compelling a draught of air through the chuck by means of revolving fans and suitable openings.

Claim.—The fans D D D, openings *c c c*, or their equivalent, in combination with the chuck *a*, in the manner and for the purposes set forth.

No. 39,790.—ABRAM BEEKMAN, of New York, N. Y.—*Improvement in Scroll Saws*.—Patent dated September 8, 1863.—This invention consists in attaching the ends of the saw to rocking arms, which are connected to the ends of an oscillating frame, so as to secure the vertical and feed motion of the saw in a simple and economical manner.

Claim.—The oscillating beam or frame C, in combination with the rockers D G, saw J attached thereto, as shown, and the bars E H, the latter being connected to the rockers and to the fixtures F I, and all arranged substantially as and for the purpose herein set forth.

No. 39,791.—J. D. BILLINGS and F. S. TYLER, of Rutland, Vt.—*Improvement in Car Springs*.—Patent dated September 8, 1863.—The invention consists in the method of using the torsion of springs by means of a block descending upon the points of cams firmly attached to the ends of said springs, the weight of the cams being suitably superimposed upon the block.

Claim.—The torsion springs C, in connexion with the arms or levers D and block E, arranged to operate in the manner as and for the purpose herein set forth.

No. 39,792.—C. D. BLINN, of Port Huron, St. Clair county, Mich.—*Improved Mode of Cleaning Lamp Chimneys*.—Patent dated September 8, 1863.—This invention consists of two bent rods, armed at one end with fibrous material, and expansible, to fill the enlargement of the tube by vibration on a centre pin or axis.

Claim.—A cleaner for lamp chimneys, composed of two rods A A, connected by a fulcrum pin *a*, and provided at one end with cotton or woollen twist, or other fibrous material, substantially as set forth.

No. 39,793.—CORNELIUS BOLLINGER, of Harrisburg, Pa.—*Improvement in Grinding Mills*.—Patent dated September 8, 1863.—The object is to prevent the heating of the bearing and the spindle, and their consequent expansion, and the improvement consists of a number of longitudinal openings in the upper bearing of the spindle, which openings lead from a case below the bed-stone, in which is a revolving fan attached to the spindle, so as to cause a blast of air to circulate in contact with the parts liable to be heated. The vertical position of the spindle is adjusted and maintained by means of key-bolts, whose inclined faces pass through the metal box and abut upon the sides of the spindle, and are tightened by nuts beneath.

Claim.—First, the fan E attached to the spindle D, and revolving within the casing F, in combination with the longitudinal apertures *e*, in the upper bearings *f*, of the spindle, when the former is used to force a current or currents of air through the apertures *e* of the bearing, in the manner and for the purpose substantially as described.

Second, the keys *c*, terminating at the bottom in rounded screw-threaded shanks *d*, having nuts *g* fitted upon them, in combination with the lugs *b* and followers *e*, when arranged to operate in the manner specified.

No. 39,794.—ROBERT BOYLE, of Detroit, Mich.—*Improvement in Temperature Alarms*.—Patent dated September 8, 1863.—This invention consists of an oscillating index operated by a piston in a tube of mercury, and vibrating between two stops which are adjustable upon a graduated arm, in combination with an electro-magnetic hammer operating on an alarm bell, so that when the piston, in rising or falling by the variations of temperature, brings the index in contact with one of the stops, the circuit of the alarm is closed and the alarm sounded.

Claim.—The combination of the gate G, graduated arc E, and electric alarm H with the index D, float C, and mercury tube B, in the manner herein shown and described.

No. 39,795.—JOHN BROUGHTON, of Chicago, Ill.—*Improvement in Faucets*.—Patent dated September 8, 1863.—This is an arrangement of the valve, which consists of a cylindrical hollow chamber rotating in a casing or shell of similar shape, and packed at each end by elastic washers under a pressure of a screw cap; the said valve rotating upon a seat, upon the impulse of a handle communicating through a slot in the casing, which seat has orifices corresponding to similar ones in the base of the cylindrical valve, and by severing the connexion with which the passage of the fluid is stopped.

Claim.—The arrangement of the cylindrical barrel F, working in the interior of the shell C, in combination with elastic washers *b c*, screw cap D, and handle G, or its equivalent, all constructed and operating in the manner and for the purpose substantially as herein shown and described.

No. 39,796.—U. F. CONE, of La Crosse, Wis.—*Improved Door Bell*.—Patent dated September 8, 1863.—The bell is struck by the rotation of the handle; the cam in the centre attached to the shaft of the handle is rotated, and vibrating the frog, rocks the bent arm which carries the hammer; when the spur of the cam is released from the frog, the spring on the hammer shaft, in restoring it into position, carries it by its momentum beyond its former location and produces the percussion on the bell. The back lash is limited by the ribs *h h'*.

Claim.—First, the frog G in combination with the arms of the hammers D D', and with the cam E, constructed and operating in the manner and for the purpose substantially as herein shown and described.

Second, the ribs *k k'*, in combination with the springs *d d'* and arms *b b'* of the hammer *D D'*, constructed and operating in the manner and for the purpose set forth.

No. 39,797.—WILLIAM and JAMES DAVIS, of Jefferson county, Iowa.—*Improved Mode of Keeping Sweet Potatoes*.—Patent dated September 8, 1863.—The interstices around the tubers are filled with calcined or burnt sand.

Claim.—Packing or filling the interstices between and around the potatoes with calcined or burnt sand, and excluding air or moisture from the potatoes, by the means and in the manner above substantially described.

No. 39,798.—LEVI S. DEMING, of Newington, Hartford county, Conn.—*Improvement in Automatic Gates*.—Patent issued September 8, 1863; antedated April 18, 1863.—A tension is brought upon the gates by means of weights and ropes attached to the heel-post projection; there are central latches in the track for fastening the doors as they close from either direction, and for fastening them open.

Claim.—In combination the gates *c* with the angle hinges, Figure 2, double latch, Figure 3, side latches *q*, axles *j*, boxes *i*, connexions *m*, weights *n*, arranged and operating, without ground frame work, substantially as described.

No. 39,799.—FRANK DOUGLAS, of Norwich, Conn.—*Improvement in Governors for Steam Engines*.—Patent dated September 8, 1863.—The governor balls, as they rise or fall, operate a clutch block and cause it to operate one or the other of two clutch collars, which are connected, one to gearing operating the screw rod in one direction, and the other directly to the screw rod turning it in the other direction. The screw rod lifts or depresses the two rods; one of them is concentrically attached by a strap to the main shaft, and at the other end to the centre of vibration or lower end of the link sliding in the box on the valve rod; the other is the eccentric rod of the engine, and, being thereby raised or depressed, slides the link in the box, and brings the latter nearer to or further from the centre of vibration, and consequently changes the length of its stroke.

Claim.—First, the screw-arbor *g*, movable clutch collars *K* and *M*, and clutch block *i*, when used in combination with the box *O* and bevel gears *N P* and *R*, the whole combined to operate as described, so that the clutch collars *K* and *M* may be caused to run up and down out of clutch, and allow the clutch block *i* to remain at any point indicated by the regulator balls.

Second, the guide socket *f*, when used to form a guide for the spindle *F* and screw-arbor *g*, as described.

Third, the manner of suspending the link *V*, as herein specified.

No. 39,800.—FRANK DOUGLAS, of Norwich, Conn.—*Improvement in Skate Fastenings*.—Patent dated September 8, 1863.—This is a heel screw attachment for the skate, in which the head of the screw is embraced by a dovetailed flange washer, while the thread passes through a nut on the tread of the skate.

Claim.—First, the flange washer *B* with projections *c c* to receive a flat or dovetail head or screw *D*, when firmly attached to a skate runner, as herein described.

Second, the screw *D*, with a flat or dovetail head, when used in combination with the flange washer *B* and nut *F*, for the purpose herein specified.

No. 39,801.—JOSEPH DUFFY, of Paterson, N. J.—*Improvement in Submarine Ordnance*.—Patent dated September 8, 1863.—This gun moves on ways in the hold of the vessel below the water-line, and, on being run out, opens a sliding and a hinged valve which closes the openings in the stuffing box through which the gun issues; contact of the muzzle of the gun with the enemy's vessel discharges the gun, which recoils, the valves closing the water-way, through the stuffing box. The charge is introduced at the breech by a tube and driven home by a plunger, a check block descending behind the charge.

Claim.—First, the arrangement of a sliding gun *A* projecting from the bow or side of a vessel *C* below the water-line, in combination with a hammer *g* and nose *s*, or their equivalents, constructed and operating in the manner and for the purpose substantially as herein shown and described.

Second, having the stuffing box *D* provided at front and rear with valves *f g*, constructed and operating with the gun *A*, in the manner herein shown and described.

Third, the charge introducer *E*, composed of a tube *h* and a screw-plunger *j*, made and operating in the manner herein shown and described.

No. 39,802.—HORACE L. DUNCKLEE, of Boston, Mass.—*Improvement in Army Cooking Stores*.—Patent dated September 8, 1863.—The stove has a cylindrical lower portion with a stiffening band at the bottom, and a cast-iron top with an annular flange which fits within the upper edge of the cylinder.

Claim.—the combination of a sheet-iron cylindrical or equivalently-shaped body *A*, strengthened and stiffened by a band or hoop *a*, riveted or otherwise secured to the bottom

thereof with a cast-iron top *B* provided with a flange *b*, projecting downward and fitting into the top of said cylindrical body so as to form the sole connexion between the body and top, substantially as and for the purpose herein set forth.

No. 39,803.—DAVID S. ESTEN, of Hinsdale, Berkshire county, Mass.—*Improvement in Device for Stopping the Shuttle in Power Looms*.—Patent dated September 8, 1863.—The shuttle comes in contact with the picker staff, which, by a rod and strap connexion, rotates a cylinder against the impulse of a spiral spring. This gradually checks the shuttle, and then returns it to the point at which it first received it.

Claim.—The spring *b*, applied to act on the picker staff through the medium of the two toothed cylinders *E F*, strap *e*, and hooked rod *g*, the whole applied and arranged to operate substantially as and for the purpose herein specified.

No. 39,804.—FRANKLIN EWER, of Mendon Centre, Monroe county, N. Y.—*Improvement in Harvesters*.—Patent issued September 8, 1863; antedated January 3, 1863.—The finger beam is connected with the frame of the machine by double-jointed coupling bars and braces, and is raised by a chain connecting it with a crank. The knives are enclosed between bars with roughened surfaces to prevent the accumulation of matter that tends to choke.

Claim.—Connecting the finger-beam with the frame by means of the oblique coupling and brace bars *E G* and *F*, jointed both to the said finger beam and frame, thereby allowing a free movement of the former, and, at the same time, so connected together and braced as to resist any strain, the whole arranged, combined, and operating substantially as herein set forth.

Also, in combination with the frame and finger beam, the chain *L*, or its equivalent, the crank *g*, rod *p*, and pendulum weight *N*, arranged substantially as and for the purpose specified.

Also, the cutter bars *P P*, rasped, roughened, or provided with points on their outer surfaces, and having secured between them the knives *i i*, the latter projecting in the rear thereof, as well as in front, and forming the guide in the guard fingers while the cutter bars slide free from contact, and clear the fingers from choking, substantially as herein set forth.

No. 39,805.—WILLIAM H. FAIRBANK, of Broad Creek Neck, Talbot county, Md.—*Improvement in Mode of Raising Sunken Vessels*.—Patent dated September 8, 1863.—The improvement consists of a pair of buoys or camels of sufficient buoyant power, and furnished with derricks, chains, and mechanical appliances to grapple and lift to the water's surface the ship on each side of which they are operating.

Claim.—The combination of the screws, jacks, and chains, or their equivalents, when used in connexion with a pair of floats or buoys of similar size, form, and construction; the chains passing down through tubes centrally situated along the length of each buoy or float, when each of the tubes is so formed with one curved or oblique side as to prevent the chains from binding in the tubes when the sunken object to which the chains are applied approaches towards the surface, thus continuing the strain or pressure centrally on the decks of the buoys or floats, and nearly in a vertical direction, from the commencement of the lifting until the object is raised to the surface of the water, substantially as represented and described in the accompanying drawings and specifications.

No. 39,806.—S. M. GARVER, of Monticello, Pratt county, Ill.—*Improvement in Rotating Harrow*.—Patent dated September 8, 1863.—This is a circular harrow which is free to turn on a pivot, and is suspended by levers and rods beneath the frame of a carriage.

Claim.—The relative arrangement of a harrow *a*, suspenders *e*, adjustable lever *f*, and adjustable hand-lever *k*, in the manner and for the purposes set forth.

No. 39,807.—ROLLIN GERMAIN, of Buffalo, N. Y.—*Improved Paddle Wheels*.—Patent issued September 8, 1863; antedated June 30, 1863.—The wings of the rotating paddles are of different shape so as to rotate as they meet the obstruction of the water, and slipping upon their shafts to assume a position at right angles to the plane of the revolution of the wheel. This change of position is due to the action of the water, and opposed to the centrifugal and gravitating force which restores the paddles by bringing them in contact with the inclined planes on the outer rim of the wheel.

Claim.—Supporting and operating the paddle upon a shaft *I*, whether said shaft is stationary or revolving, so that the paddle may be left free to be moved outwardly towards the periphery of the wheel and edgewise to its line of motion, by centrifugal force, or to be moved transversely to the rim of the wheel by the action of the water, as the wheel revolves substantially as described.

Also, the circular inclined planes *K*, double or single, for the purposes and substantially as described.

Also, the circular inclined planes *K*, in combination with the paddle, for the purposes and substantially as herein set forth. The friction rollers *I*, in combination with the paddle for the purposes and substantially as herein set forth.

Also, holding the paddle stationary in a position parallel with the direction of the vessel when desired, by means of the hook M, chain M', or by other means, substantially the same, for the purposes set forth.

Also, so hanging the paddle upon its shaft, that an outward movement will be communicated to the paddle by centrifugal power, and an inward movement by the action of the water thereon, for the purposes and substantially as set forth.

No. 39,808.—C. L. GILPATRICK, of Lewiston, Me.—*Improvement in Butter Workers*.—Patent dated September 8, 1863.—The improvement consists of a box with a perforated bottom in which the butter is drained, and one with a zinc bottom surrounded by water, in which the butter is worked by a rocker.

Claim.—The combination of the worker C, and box f, with the box A, provided with the zinc lining and water chamber F, all constructed and arranged in the manner and for the purpose set forth.

No. 39,809.—GIDEON HAMILTON, of New York, N. Y.—*Improvement in Umbrellas*.—Patent issued September 8, 1863; antedated December 18, 1861.—A receptacle for drip for the umbrella is placed on the end of the stick; this has a concave perforated top, and above it is a leader to collect the drip from the cloth covering and direct it into the concave cup of the receptacle.

Claim.—First, an umbrella furnished with a receptacle for water draining therefrom as described.

Second, the combination and arrangement of the receptacle A, leader B, concave top C with its holes, and the ring D, as and for the purposes described.

No. 39,810.—LYMAN P. HARRIS, of Mansfield, Richland county, O.—*Improvement in Sirup Evaporators*.—Patent dated September 8, 1863.—The pan has low corrugations over which the juice circulates, the partitions arresting the surface scum, and the juice flowing in an indirect course towards the sides of the pan below the surface of the scum, under gates through strainers or along the sides of the pan; the boiling surface being corrugated while the scum surface is level.

Claim.—First, the construction of sirup and sugar evaporators, substantially as and for the purposes described.

Second, the combination of a corrugated and a plane surface in the one pan bottom, substantially as described.

No. 39,811.—LUTHER W. HARWOOD, of Troy, N. Y.—*Improvement in Grates for Stoves*.—Patent dated September 8, 1863.—This grate consists of two portions, side by side, and supported together by a compound journal, one of the grates being furnished with an arm fitting against the other grate to make them mutually supporting; when the grates are reciprocated endwise, the followers attached by rods and pivoted to vibrating levers prevent the clogging of the spaces between the ends of the frames; an inclined projection or guide is arranged on the under side of each end of that half grate which is elevated when the grate is tilted, and a guide also on the under side and inner ends of the followers opposite to the depressed grate.

Claim.—First, two sub-grates B C, mounted side by side on shanks which are fast on the sub-grates, and so shaped and arranged together in sockets or bearings, that the said sub-grates can be reciprocated along each other on their respective shanks, and also rocked or tilted together like one grate on the said combined shanks, as an axis common to both sub-grates, substantially as herein set forth.

Second, in combination with two reciprocating and rocking sub-grates, mounted together on divided journals common to both sub-grates, substantially as herein described, a supporting arm or arms G, arranged on the under side of and carried by the said combined sub-grates, substantially as herein set forth.

Third, the combination of a pair of levers H H, two sets of followers or drivers f f f f, and two connecting rods K K, with two sliding and turning sub-grates B C, mounted together on divided journals common to both of the said sub-grates, substantially as herein set forth.

Fourth, in combination with two sliding and turning sub-grates B C mounted together on divided journals common to both sub-grates, and provided with drivers or followers f f f f, substantially as herein described, the inclined guides m n arranged on the under side of and carried by the said combined sub-grates and followers, substantially as herein set forth.

No. 39,812.—NAPOLEON HAYMAN, of New York, N. Y.—*Improved Hydrant*.—Patent dated September 8, 1863.—This consists of a service and a discharge pipe uniting in a vertical chamber which is occupied by a slide, the latter having two apertures; by the lower one the water-main is connected with the discharge-pipe, and by the upper aperture the upper end of the discharge-pipe is connected to the waste-pipe, while the water-main connection is cut off.

Claim.—The slide B, fitted within the box A, and provided with the opening a and recess b, in combination with the service or discharge-pipe D, supply-pipe E, and waste-pipe F, arranged respectively in relation with the opening a and recess b, in the slide B, to operate as and for the purpose herein set forth.

No. 39,813.—REUBEN G. HOLMES, of Worcester, Mass.—*Improved Clothes Wringer*.—Patent issued September 8, 1863; antedated January 21, 1863.—The pressure upon the journals of the upper roller is given by means of posts connected to the ends of the upper spring piece which is borne down by the central screw which has its lower attachment in the centre of another spring piece whose ends rest on the under side of the upper frame bar of the machine.

Claim.—The combination of the two springs as shown by I I, as fully set forth in this specification.

No. 39,814.—REUBEN G. HOLMES, of Worcester, Mass.—*Improved Clothes Wringing Machine*.—Patent issued September 8, 1863; antedated April 20, 1863.—The improvement consists of two bars forming an elliptic spring bearing on the under side of the upper bar of the frame and upon the upper side and middle of the bar in which the upper roller is journaled.

Claim.—The arrangement of the springs K and L, so arranged as to bear upon the centre of the bar I, thereby producing a greater and more equal pressure.

No. 39,815.—HUGH HUSTON, of Cannonsburg, Washington county, Pa.—*Improved Pegging Awl Holder and Extractor*.—Patent dated September 8, 1863.—The socket gripping this awl is surrounded by a sleeve which is projected by a spiral spring within the handle; as the awl is driven into the sole of the boot this spring is driven back, and assists in withdrawing the awl.

Claim.—First, the awl extractor c, its extensions c1 c2, its pin h, and its mode of fastening K K1 K2, as and for the purposes specified.

Second, the flange f3, as and for the purposes specified.

Third, the ferule with its slot i and pin hole K2, as and for the purposes specified.

Fourth, the awl-holder f f1 f2, the awl g, the spiral spring d, in combination as and for purposes specified.

No. 39,816.—R. H. JEWETT, of Mount Sterling, Brown county, Ill.—*Improvement in Means for Defending Harbors and River Channels*.—Patent issued September 8, 1863; antedated April 29, 1863.—These vessels have ports by which water is admitted to sink them, and pipes by which the water may be removed to render them buoyant; a parapet for guns or sharpshooters, and additional floating vessels chained to the larger to obstruct the intervening passages.

Claim.—First, the employment as a harbor defence of one or more vessels A, each having ports b b, a hatch c fitted with pipes d e, and a superstructure B, the whole combined substantially as herein specified.

Second, the employment, in combination with the above-described vessel or vessels, of floats C C, applied and secured substantially as herein specified.

No. 39,817.—LUTHER A. JOHNSON, of San Francisco, Cal.—*Lathe for Turning Billiard Balls*.—Patent dated September 8, 1863.—The ivory is centred between a revolving concave chuck and a revolving centre, which consists of a piece of elastic substance against the ivory backed by a rod retained by a socket on the tail screw. The tool has a forward motion by a screw feeder, and likewise a revolving motion, having the point immediately under the centre of the ball as its centre of rotation.

Claim.—First, the rotating centre formed of the rod I, provided with a collar b, and fitted in a socket H on the arbor E, and also provided with a socket or cap d to receive a piece of India-rubber e, or other suitable yielding material, in combination with the concave chuck G attached to the mandrel C, all arranged substantially as and for the purpose specified.

Second, the tool-rest, composed of the adjustable plate l, turning plate p, and slide u, all arranged to operate in connexion with the chuck and rotary centre, for the purpose set forth.

No. 39,818.—CASPER KROGH, of Kroghville, Jefferson county, Wis.—*Improvement in Dry Docks*.—Patent dated September 8, 1863.—This consists of camels or floating caissons, to be filled with air, on which vessels may be built, or by which they may be lifted out of the water. The detail of the devices may be found in the claim.

Claim.—First, the combination and arrangement of the air-distributor C, the flexible pipes c c, the tubes d d, with the air-tight chambers or compartments D B, constructed and operating substantially as and for purposes herein delineated and set forth.

Second, the combination and arrangement of the stationary uprights D D, the tubes d and c, and scale board z, substantially as and for the purposes specified.

Third, the combination of the hinged standards or uprights D D, the hinged valve rods m m', the jointed tubes d and e, arranged and operating substantially as and for the purposes described and shown in Figure 2.

Fourth, constructing said lifters or docks B B with the partitions, and providing them with the outlets, valves, and valve rods, and tubes d and e, substantially as described.

No. 39,819.—HENRY KURTH, of East New York, N. Y.—*Improvement in Tobacco Smoking Pipe*.—Patent dated September 8, 1863.—The smoke passes up through its appropriate passage into a chamber which has a lower reservoir behind the smoke passage for the collection of moisture.

Claim.—A smoking pipe which has its shank B made with a smoke passage *a*, and a moisture cavity *b*, arranged in respect to each other and to the bowl and stem C, in the manner herein shown and described.

No. 39,820.—FREDERICK LUNKENHEIMER, of Cincinnati, Ohio.—*Improvement in Gas-Burners.*—Patent dated September 8, 1863.—A tubular valve is provided in the interior of the burner which encloses and shuts down upon the flanged base of a conical centre so as by the turning of the screw to close or open the orifice and regulate the flow of gas.

Claim.—The conical adjustable valve *g g*, figure 2, in combination with the caps or hoods C, with the screw *i*, the openings F F F, the tubes H H and G G, for the purpose of regulating the flow of the gas, substantially as set forth and described.

No. 39,821.—GEORGE LUTZ, of Lancaster, Fairfield county, Ohio.—*Improved Water Indicator for Steam Boilers.*—Patent dated September 8, 1863.—The index-finger shaft has a pinion gearing into a ratchet on a rod which passes downwards to the arm of a rock shaft, which latter on its other end has a float rod attached.

Claim.—The combination and arrangement of the pinion, ratchet, rock shaft, and float, substantially as set forth, for the purpose specified.

No. 39,822.—WILLIAM H. MALLORY, of Watertown, Litchfield county, Conn.—*Improvement in Hats.*—Patent dated September 8, 1863.—The brim of the flexible hat is maintained in shape by steel springs in the body or folds of the material.

Claim.—A hat constructed of flexible material with a brim extended and held in shape by means of covered flat steel springs applied in perpendicular positions, all as herein described and for the purposes specified.

No. 39,823.—EDWARD MAYNARD, of Washington, D. C.—*Improvement in Metallic Cartridges.*—Patent dated September 8, 1863.—The cap is attached to the cartridge case by means of a cord or arm so as to be ready for use, but not subjecting the cartridge to accidental explosion by being closely attached thereto.

Claim.—Combining any suitable detonating compound, with a metallic or otherwise solid and durable cartridge, by means of an arm, cord, or thong, substantially in the manner and for the purpose herein set forth.

No. 39,824.—B. B. MERENESS, of Georgetown, Madison county, N. Y.—*Improved Machine for Handling Hides.*—Patent dated September 6, 1863.—This consists of a box in which revolves a perforated cylinder on horizontal journals; the cylinder has a door for the filling or withdrawal of the hides and an inner wheel which may be rotated in the same direction as the cylinder or otherwise. Between the heads of the inner wheel are paddles constructed as detailed in the claim.

Claim.—First, the combination of the outer perforated cylinder, with the perforated paddles of the inner cylinder, substantially as described.

Second, giving the surface or edge of the paddles, alternately, a convex and a concave surface, substantially as set forth.

Third, arranging the paddles relatively to each other, substantially as described—that is to say, one diverging from the head in one direction, and one or more diverging from the head in any opposite direction, as set forth.

No. 39,825.—RALPH S. MERSHON, of Philadelphia, Pa., and JEHU HOLLINGSWORTH, of Zanesville, Ohio.—*Improvement in Self-cocking Revolving Fire-arms.*—Patent dated September 8, 1863.—The general scope and detail of this invention are sufficiently described in the claim.

Claim.—First, the application of a reservoir of power to a repeating fire-arm, as described herein, for the purpose of cocking the hammer and by liberating it, rotating and locking the chambered cylinder simultaneously for one or more discharges, without using the hand to cock the arm, as in the ordinary way.

Second, so combining the reservoir of power with the hammer and its independent spring, as herein described, that the action of the reservoir of power can be instantly suspended and the hammer cocked, chambered cylinder liberated, rotated, and locked by hand, as in ordinary hand-cocking revolving fire-arms.

Third, the axis, shaft, or spindle on which is placed the arbor for the coiled spring, the escape wheel, the hammer, the stop-work, and the winding disk, as herein described, in combination with the reservoir of power or coiled spring, acting as a spindle or beater for each piece.

Fourth, the combinations of the reservoir of power with an arbor, escape wheel, hammer, hammer dog, hammer finger, chamber lock, chambered cylinder and trigger, as herein described, so that, when the reservoir of power is wound up, by pulling the trigger the hammer will be liberated and the arm discharged, and then, by simply letting go the trigger, the hammer will be instantly cocked, chambered cylinder liberated, rotated, and locked, ready for another discharge.

Fifth, the combination of the reservoir of power with the stop-work, as herein described, for the purpose of limiting the power and action of the reservoir of power.

Sixth, the combination of the reservoir of power with the winding disk, as herein described, for the purpose of accumulating power by winding up said reservoir of power.

Seventh, the combination of the reservoir of power with the winding disk and bolt, substantially as described, for the purpose of suspending the action of the reservoir of power, so that the arm can be operated by hand.

Eighth, the combination of the trigger, and its two arms or forks, with the escape wheel, and also with the hammer dog, as herein described, so that when the trigger is pulled one of the arms will liberate the hammer dog and hammer, and permit the arm to be discharged; and at the same time its other arm will be entering into a scape-wheel tooth or notch, thus holding at rest the scape-wheel and reservoir of power; the arm or fork which has been holding the scape-wheel and reservoir of power at rest being withdrawn by releasing or letting go the trigger, the reservoir of power and scape-wheel will become free to act, and will, by means of the hammer dog, rotate and cock the hammer, and by it liberate, turn, and lock the chambered cylinder in its place, ready for another discharge.

Ninth, the application of the self-cocking mechanism, herein described, to all chambered cylinders in which metallic cartridges are used.

No. 39,826.—RICHARD MOHLER and JOHN BECKER, of Lancaster county, Pa.—*Improvement in Flour Bolts.*—Patent dated September 8, 1863.—This consists of a series of levers pivoted on a bar lying lengthwise under the bolt, and so arranged that the lighter end of the levers are in contact with a bar of the bolt, and knock from bar to bar as the bolt revolves.

Claim.—The arrangement of a series of levers or beaters F, made adjustable separately or collectively by means of the holes *h*, pins G, rail D, and end supports E, operating substantially in the manner specified, against the under surface of the reel, as shown.

No. 39,827.—JOHN D. PARROT, of Morristown, Morris county, N. J.—*Improvement in Churn Power.*—Patent dated September 8, 1863.—The springs on the shaft are so connected with the gear-wheels and crank-shaft that one or more of the springs may be employed to produce the desired rotation, according to the power required or the length of time involved in accomplishing the work.

Claim.—The arrangement of two or more springs C C' on the same shaft B, in combination with the cog-wheels D D' and pins *a a'*, and with the adjustable pinions G G' on the shaft E, constructed and operating in the manner and for the purpose substantially as shown and described.

No. 39,828.—JOHN GEORGE PERZEL, of New York, N. Y.—*Improved Process of Recovering Wool from Mixed Fabrics.*—Patent issued September 8, 1863; antedated April 3, 1863.—The process consists in destroying the cotton in mixed fabrics by means of chloride of zinc, or analogous chlorides, either alone or with the aid of diluted sulphuric acid.

Claim.—The solution of chloride of zinc, or analogous chlorides, either alone or with the aid of diluted sulphuric acid, in a manner as described and for the purpose set forth.

No. 39,829.—JAMES PLATT, of New York, N. Y.—*Improved Rotary Engine.*—Patent issued September 8, 1863; antedated March 14, 1862.—This engine consists of a stationary steam tube divided by a longitudinal diaphragm into an eduction and an induction passage, and having a stationary head and abutment, around which revolves a shell provided with swinging pistons or valves, operated by the rotation of the shell, all the working parts being enclosed in an exterior shell.

Claim.—First, the shell I, provided with the pistons or valves J J', attached to the shaft F, and encompassing the stationary head C, which is provided with the abutment D, and communicates with the induction and eduction passages *e f* of tube B, substantially as and for the purpose set forth.

Second, in combination with the stationary tube B, head C, and rotary shell I, the stationary shell A, the latter encompassing the shell I and head C, and arranged as shown.

Third, the operating or turning of the valves J J' by means of the arms K and guide or groove M, arranged as shown, when said means are used in connexion with the head C and shell I, and all combined and arranged for joint operation, as set forth.

No. 39,830.—JAMES PLATT, of Utica, N. Y.—*Improvement in Bearings for Vertical Shafting.*—Patent issued September 8, 1863; antedated October 25, 1862.—Near the foot of the shaft is a collar fastened tightly to it, which is supported on a circular series of friction rollers journaled in a box, which is made adjustable on its bed.

Claim.—The friction rollers F, fitted in an annular revolving frame E, in combination with the adjustable box C placed on the framing A, and the collar G placed on the shaft B, all arranged as and for the purpose herein set forth.

No. 39,831.—JAMES PLATT, of Utica, N. Y.—*Improved Water-wheel.*—Patent issued September 8, 1863; antedated April 2, 1863.—The buckets are attached to the ends of vibrating

arms, and are pressed down into and lifted out of the circular water-passage by the engagement of their friction rollers with the inclined tracks affixed to the frame.

Claim.—The buckets D D, of curved form, attached to frames I I, which are connected by joints or hinges d d to the plate B, in combination with the case E and the curved inclined plane K, all arranged for joint operation, as and for the purpose herein set forth.

Also, the combination and arrangement of the buckets D D, frames I I, plate B, case E, curved inclined planes K, pressure plate M, attached to the semicircular plate L and spring N, for the purpose herein specified.

No. 39,832.—JAMES PLATT, of Utica, N. Y.—*Improved Water Wheel.*—Patent issued September 8, 1863; antedated October 17, 1862.—These buckets have an arc-shaped face and shank radial with their point of vibration. They shut back into chambers to admit of their passing the abutment, which motion is caused by the operation of a cam on the outside, which governs the reciprocating rotary motion of the valve shafts, by which the valves are alternately projected into the circular water-race and retracted into their chambers.

Claim.—First, the curved sliding buckets E E connected to shafts D D, and arranged with springs substantially as shown, to operate as and for the purpose specified.

Second, the combination of the cam J and abutment G, when used in connexion with the sliding or yielding buckets E E, arranged as shown and described.

No. 39,833.—JAMES PLATT, of Utica, N. Y.—*Improved Water Wheel.*—Patent issued September 8, 1863; antedated October 25, 1862.—Drop buckets are attached to the arms of the revolving shaft, and are raised over an abutment located between the points of egress of the water and the inlet by the rotation of the arms on which they are placed. The detail of the operation of the buckets is to be found in the claim.

Claim.—First, the employment or use of the drop buckets H, attached to the shafts G G, when used in connexion with the annular water-passage d in the case A, provided with the abutment B, substantially as and for the purpose specified.

Second, the manner of operating the drop buckets H, as herein shown and described, to wit, by means of the bent arms I, fitted on the shafts G G of the buckets, provided with the rollers J at one end; and the stationary cam J, attached to the bottom c of the case A, and the projections K, attached to the under side of the top plate F of the case A.

No. 39,834.—JAMES PLATT, of Utica, N. Y.—*Improved Water Wheel.*—Patent issued September 8, 1863; antedated July 20, 1862.—This consists of a wheel revolving around a central hub and carrying hinged buckets which fold back into recesses as they pass an abutment. The water is admitted behind the bucket through an inclined sector chute and escapes on the other side as the opposite bucket comes into action.

Claim.—The arrangement of the pivoted buckets H H, recesses m m, and segment G, with the wheel C, hubs g, arms f, and inclined sector chute D, all in the manner herein shown and described.

No. 39,835.—WILLIAM R. REECE, of Tremont, Schuylkill county, Pa.—*Improvement in Coal-Breaking Rolls.*—Patent issued September 8, 1863; antedated January 16, 1863.—The sections forming the cylinder are keyed together on a mandrel; each section has the radial holes for the teeth and keyholes transversely therewith.

Claim.—A coal-breaking roll made in sections B, when each section has recesses for the reception of the shanks of the teeth G, and recesses for the reception of keys e, for confining said teeth to the sections, and when the keys of one section are retained in their places by the adjacent section, the whole being arranged substantially as and for the purpose herein set forth.

No. 39,836.—DAVID A. ROSS, of Cincinnati, Ohio.—*Improvement in Fireplaces.*—Patent dated September 8, 1863.—This consists of a vibrating ogee fire back in the fireplace above the grate so as to cause the heated products of combustion to come forward and seek their exit through an orifice provided with a damper in the upper part of said back. The fire back may be pushed against the back of the chimney when required.

Claim.—The rotating or movable back B, in combination with the adjuster E, when constructed and operating substantially as described.

No. 39,837.—G. H. SCHANCK, of Libertyville, Lake county, Ill.—*Improvement in Cultivators.*—Patent issued September 8, 1863; antedated April 2, 1862.—The cultivator standards are attached to a frame on wheels, and are elevated by being lifted by the operator who stands on the foot-board, and are retained thus by the bar whose end rests on the axle, being dropped by the reverse motion and pressed into the ground by the weight of the operator.

Claim.—Extending the hinged frame g back, and locating the driver's seat s thereon, in relation to the foot-board f, handle m, and spring n, as described; whereby the driver can drop the cultivator ploughs with his hands, and at the same time press them into the ground, or regulate their dip with his weight.

No. 39,838.—GILBERT L. SHELDON, of New Marlboro', Berkshire county, Mass.—*Improvement in Trucks for Pulling Stone.*—Patent issued September 8, 1863; antedated July 26, 1863.—The apparatus consists of a high beam on wheels carrying a winch with a large wheel, on which a rope is wound, passing around a smaller pulley attached near the ground and thence to the team; the lifting chain is attached to and winds on the shaft on each side of the large wheel, and the shaft is provided with a ratchet, and the frame with a pawl, to retain the motion gained. When the stone is swung it may be carried off by the truck.

Claim.—The combination of the single bar H, of the frame K K K K K K, and single pulley A, with its accompanying shaft and ratchet a', substantially in the manner and for the purposes described.

Second, the use of the chain B, in combination with the single pulley A, when said chain is attached on each side of the said pulley, substantially as represented and for the purpose described.

No. 39,839.—GEORGE H. SMITH, of Lowell, Mass.—*Improved Last-Holder.*—Patent dated September 8, 1863.—The post on which the heel of the last is set in an inverted position is so pivoted as to be inclined by the raising of a perforated bar, which latter is secured in the required position by a spring bolt. The toe of the last is supported on a holder whose foot vibrates in a socket to correspond with the inclination of the post on which the heel of the last is secured.

Claim.—First, the sliding bolt E, in connexion with the perforated bar D, arranged substantially as shown for holding the last at a greater or less degree of inclination as may be required.

Second, the levers N P, link O, screw-link Q, and nut R, all arranged substantially as shown, for the purpose of securing the last in proper position, as set forth.

No. 39,840.—JACOB J. SMITH, of Philadelphia, Pa.—*Improvement in Army Stretchers.*—Patent dated September 8, 1863.—The side rails of the stretcher are connected and retained at the required distance by means of knee-jointed plates, the required set being retained when bent by a pawl on one plate, which engages a ratchet on the other.

Claim.—The employment of the knee-jointed bars or plates C C, so that they shall operate in combination with the side rails A A, and canvas B, of a stretcher, substantially in the manner described and set forth, for the purpose specified.

Also, in combination with the said knee-jointed bars or plates C C, the employment of the pawls D D and ratchet teeth E E, substantially in the manner described and set forth, for the purposes specified.

No. 39,841.—GEORGE N. STEARNS, of Syracuse, N. Y.—*Improvement in Hollow Augers.*—Patent issued September 8, 1863; antedated January 16, 1863.—The cutter is so located in the snail-shaped holder that it gives the required draw-cut to the material that is presented to it. It embraces the hollow mandrel, which, in turn, encloses the graduated shank, which, by its adjustment, determines the length of the tenon.

Claim.—First, the construction of the body of the auger substantially as described, and combining therewith the adjustable thimble C, the adjustable cutter B, and the adjustable shank a, for the purposes substantially as specified.

Second, confining the cutter within the mortise and sustaining and locating it so as to obtain the longitudinal, vertical, and lateral adjustment and the drawing cut, substantially as and for the purposes described.

No. 39,842.—NATHAN STEDMAN, of Aurora, Dearborn county, Ind.—*Improvement in Pumps.*—Patent dated September 8, 1863.—In this pump the piston rod and piston are hollow, the latter having a cylinder valve and steady pin; the piston works in a cylinder with a water passage around the side, and the suction passage is below the main cylinder, with a double puppet valve connexion with each end of the piston.

Claim.—The hollow piston B, provided with the hollow valve H and tubular rod C, in combination with the water passages D E F and double puppet valve G, all arranged to operate as and for the purpose herein set forth.

No. 39,843.—C. E. STOCKER, of West Meriden, New Haven county, Conn.—*Improvement in Bridle Bits.*—Patent dated September 8, 1863.—The bit ring has a buckle within it for the end of the strap to be attached thereto.

Claim.—As a new article of manufacture, a bit ring A, provided with a tongue a and eye b, as and for the purpose specified.

No. 39,844.—JOHN C. SYMMES, of United States Ordnance.—*Improvement in Gas-Check for Breech-loading Fire-arms.*—Patent issued September 8, 1863; antedated December 25, 1862.—The gas-check is formed of caoutchouc combined with an incombustible powder before vulcanization, and is moulded into a shape resembling a cup or saucer, vulcanized and attached with its base to the breech, acting as a gas check without covering from the fire.

Claim.—First, making the gas-choke of the form and using it in the manner substantially set forth.

Second, making the gas-choke largely fire-proof, substantially as set forth.

No. 39,845.—HENRY TABOR, of Hopkinton, Washington county, R. I.—*Improvement in the Stop Motion for Railway Drawing Heads*.—Patent dated September 8, 1863.—This is a method of releasing the belt-stripper so as to shift the driving belt to a loose pulley when the roving becomes too small or too large. When the roving is diminished to a certain extent the rolls are lowered and bite upon a plate which in moving actuates a lever and releases the belt-stripper. The same effect is produced by the enlarged roving passing through the bugle which is connected by a rod to the said lever.

Claim.—First, the employment in railway drawing heads of the plate O, or its equivalent, standing between the rolls and so connected and arranged that a diminution in the size of the roving will allow the rolls to bite upon and move the same so as to stop the machine, substantially as herein set forth.

Second, connecting both the bugle P and the plate O to the same liberating apparatus L and its connexions in the manner and for the purpose herein set forth.

Third, the arrangement in stop motions for a railway drawing head of the lever N and spring K, so that the latter shall perform the double function of holding the lever L and turning the shaft J, as herein set forth.

No. 39,846.—JAMES TOMLINSON, of Racine, Wis.—*Improvement in Chimney Caps*.—Patent dated September 8, 1863.—This consists of a series of scoop-shaped wings or funnels arranged around the upper end of a chimney and between two conical plates, the smoke having egress through an upper tube.

Claim.—The scoop-shaped wings or funnels C, in connexion with the conical plates B D and tubes A E, all arranged substantially as and for the purpose herein set forth.

No. 39,847.—J. W. TOWN, of South Woodbury, Washington county, Vt.—*Improvement in Last Machines*.—Patent dated September 8, 1863.—This is an improvement in the guide or model wheel of a last machine on which the different sizes of guides are conveniently arranged, so that without changing the cutters or pattern different sizes may be produced.

Claim.—The employment or use of different sizes of guides in a last machine, so that with the same pattern and set of knives lasts of different size can be turned and the proportion maintained perfectly.

Also, the arrangement of guides a of different size on the periphery of a wheel A, substantially as and for the purpose set forth.

No. 39,848.—WILLIAM H. TRISSLER, of Cleveland, Ohio.—*Improved Composition for Polishing Brass*.—Patent dated September 8, 1863.—Burnt clay 1,000 parts, tartaric acid 10 parts, common salt 10 parts, mix for use.

Claim.—The combination of burnt clay, tartaric acid, and common salt, substantially in the manner and for the purposes herein set forth.

No. 39,849.—WINDSOR B. WAIT, of South Reading, Middlesex county, Mass.—*Improved Artisan's Stage*.—Patent dated September 8, 1863.—This consists of a seat and platform to be suspended by pulleys in front of the house for convenience in repairing, &c., the same. The various elevating and traversing mechanism and conveniences are recited in the claims.

Claim.—The stage or chair A, as not only made with the platform a, arranged as described, but with the auxiliary platform or seat c placed above the platform a, and hinged to the body of the frame so as to be capable of being operated as specified.

Also, the stage A, as made with the end boxes or receptacles d d, arranged relatively to its arms and hinged seat as specified.

Also, in combination with the stage A, the windlasses B B, their operative mechanisms and tackles, constructed to operate substantially as described.

Also, in combination with the stage, its windlasses and tackles, an adjustable balancing mechanism arranged and constructed so as to operate substantially as described.

Also, in combination with the stage, its windlasses, their operative mechanisms and tackles, the adjustable bars E E, provided with wheels and handles arranged with respect to them as specified.

No. 39,850.—H. D. WARD, of Pittsfield, Berkshire county, Mass.—*Improvement in Double-barrelled Revolving Fire-arm*.—Patent dated September 8, 1863.—The double-barrelled arm is so constructed that two of the chambers may be discharged, one through each barrel, without rotating the cylinder between the discharges, or for discharging the chambers consecutively through one barrel; in the latter case but one hammer and in the former both are cocked; the change in the operation of the revolving mechanism is accomplished by the single or the double cocking; in the former case the cylinder only rotating the distance between the centres of the consecutive chambers, and when both are cocked rotating double that distance.

Claim.—First, so applying two barrels in combination with one rotating cylinder having a single circle of chambers as to provide either for the discharge of two of the said chambers, one through each barrel, without rotating the cylinder between the discharges or for the discharge of the several chambers successively through one of the said barrels, substantially as herein described.

Second, combining the two hammers with each other and with the dog h, for rotating the cylinder by means of the sleeve f, or its equivalent, having a projection p, the arm I having a projection q, the spring r, and the pin or projection S, the whole arranged to operate substantially as and for the purpose herein specified.

No. 39,851.—NATHANIEL WATERMAN, of Boston, Mass.—*Improvement in Coffee-boilers*.—Patent dated September 8, 1863.—Below the upper or water chamber is a perforated cone projecting into the coffee-holder, which discharges the decoction through its perforated bottom into the reservoir. The coffee-holder has a spiral spring around it, and is hooked on to the upper portion.

Claim.—The improved coffee-decoction apparatus, as made with the foraminous cone H', or its equivalent, arranged and combined with the hot-water receiver D, the coffee-holder F, or the same and its spring expander, substantially as specified.

Also, the arrangement and combination of the helical spring, the sliding latch or latches, and the catch or catches thereof, together and with the expander and water vessel, the same being substantially as specified.

No. 39,852.—WILLIAM WATTS, of Newark, N. J.—*Improvement in Steam Pumps*.—Patent dated September 8, 1863.—This consists of an inclined plane on the roof of the chamber, against which works a wedge, the latter holding the valve to its place. The wedge is operated from the outside by means of a screw bolt and nut, the removal of which and the cap exposes the valve for examination or removal.

Claim.—First, the combination of the projection or bearing P with the wedge W, bolt B, and cap C, substantially in the manner and for the purposes described.

Second, the combination of the said wedge W with the valve V, substantially in the manner and for the purposes described.

No. 39,853.—WILLIAM WEBSTER, of Middletown, Butler county, Ohio.—*Improvement in Closing Fruit Cans*.—Patent dated September 8, 1863.—This consists of a piece of bent spring wire inserted through loops on the edge of the can, and the middle bow resting upon a traverse bar formed of a loop of wire the shape of, and fastened to, the dome-like central projection of the lid.

Claim.—The spring A, formed of tempered wire in the manner described, and applied by one direct operation, substantially as and for the purpose set forth.

Also, the loop-formed traverse bar, or its equivalent, applied and used in the manner and for the purposes specified.

Also, the combination of the traverse bar C and spring A, as and for the purpose described.

No. 39,854.—JOHN D. F. WEMPLE, of Albany, N. Y.—*Improvement in Crutches*.—Patent dated September 8, 1863.—The crutch has an elastic bearing by a tubular spring in its upper half, with a piston pressing on the same. A folding joint in the middle, to enable the crutch to be doubled up, is secured, when straight, by a tubular sleeve. A point to be projected at the end in icy weather is worked by a bayonet joint.

Claim.—First, the spiral springs H H fitted within the tubes G G, and secured at their lower ends to the lower ends of said tubes, in combination with the tubes F F, in which the tubes G are fitted and allowed to slide freely, and to which the upper ends of the springs H are connected by screws o, which pass through the tubes F and through longitudinal slots m in the tubes G, substantially as and for the purpose herein set forth.

Second, constructing the crutch joints C, arranged as shown, or in an equivalent way, to admit of the folding of the crutch when desired, as herein described.

Third, the point or spur D inserted in the lower end of the crutch, when used in combination with the sliding or adjustable tube E, provided with a catch or fastening, substantially as and for the purpose specified.

No. 39,855.—ABRAHAM WHITENACK, of North Salem, Hendricks county, Ind.—*Improvement in Sugar Evaporators*.—Patent dated September 8, 1863.—The pan has three partitions, which are connected by bent tubes, closed by gates. A scraper, occupying the whole width of the section of trough, is used to stir the sirup.

Claim.—The combination with the scraper or movable partition I of the evaporator pans A B and C, curved or bent tubes D E, and gates F and G, when the said parts are all constructed and arranged, and operate in the manner and for the purposes herein specified.

No. 39,856.—ANNA C. WILHELM, of Philadelphia, Pa.—*Burner for Coal-oil Lamps*.—Patent issued September 8, 1863; antedated May 13, 1863.—The improvement consists of a jacket or conical tube, surrounding the wick-tube, to prevent the disturbance of the flame by lateral currents of air. The thin edges of the flame are further protected by horns or projections on the upper end of the tapering jacket.

Claim.—Surrounding the wick-tube B with a tapering jacket A fitting closely around the upper orifice of the said tube, substantially in the manner described and set forth, for the purposes specified.

Also, in combination with the said jacket A the two projecting guards $\alpha 2$ $\alpha 2$, the same being constructed and arranged substantially as set forth, for the purposes specified.

No. 39,857.—SOLOMON D. WOLLISON, of Pittsfield, Berkshire county, Mass.—*Improvement in Elevating or Scaling Ladders*.—Patent issued September 8, 1863; antedated December 25, 1862.—This elevator is on the toggle or lazy-tongs principle. The ends of the bottom and top toggles, respectively, are united to the base-board and elevating platform. The opposite ends move, the upper ones in ways and the lower on a roller; the toggle end resting on the latter is prolonged into a lever, by which power is brought to bear to raise the truss or series of toggles. A screw above the upper toggle, passing to a shaft connecting the next joint below, affords means to the person on the platform of spreading the truss and elevating himself.

Claim.—The manner of attaching the said ladder to the base-board A and platform I, and the manner of applying the power for operating the said elevator—that is to say:

First, uniting one end of the top and bottom toggle to the base-board A and platform I, in the manner described, so as to cause that end of all the toggles to raise and fall on a line drawn through the points so attached.

Second, the arrangement and combination of the wheel L with the lower end of the bottom toggle and the base-board A, as shown and described, to facilitate the rise and fall of the toggle.

Third, the arrangement of the lever O with the bottom toggle, the wheel L, and the axle Q, in the manner substantially as described and shown.

Fourth, the combination of the screws with the upper toggle joint and platform I, in the manner shown and described, to enable a man to raise and lower himself, as set forth.

Fifth, the block D in combination with the springs ϵ and axle of the track-wheel, in the manner described, for the purpose specified.

No. 39,858.—SOLOMON D. WOLLISON, of Pittsfield, Berkshire county, Mass.—*Apparatus for Throwing Projectiles*.—Patent issued September 8, 1863; antedated January 31, 1863.—The torpedo is affixed to the end of an elongating projector, formed on the lattice-truss or lazy-tongs principle, which projector is prolonged by any suitable power to cause the torpedo to move rapidly and shoot in advance of the vessel by which it is carried.

Claim.—The combination of a torpedo, or similar projectile, with the elongating projector, for the purpose of projecting the same as described, for the purpose specified.

No. 39,859.—WILLIAM S. WORTHINGTON, of Newtown, Queens county, N. Y.—*Improvement in Setting Evaporating Kettles*.—Patent dated September 8, 1863.—A series of grates with side fire-doors are placed at distances along the furnace, under the kettles. The first one is supplied with air which takes the whole series in its track, going over the fire-bridges, traversing the intervening space, being deflected by the partitions, and ascending through the bars of the next grate in series.

Claim.—The arrangement of a series of fire grates C1 C2 C3, bridges E E, partitions F F, and intervening passages I1 I2 in relation to each other, and within the arch of a block or train of evaporating kettles, substantially as and for the purpose herein specified.

No. 39,860.—MICHAEL EBLE, of Ellwangen, Kingdom of Wurtemberg, assignor to RUDOLPH ENGLER, of same place.—*Improvement in Horoscopes*.—Patent dated September 8, 1863.—This consists of an L-shaped index provided with a plumb line, and with a dioptr and bracket to intercept the sun's rays, in combination with a T-shaped adjustable scale-board, so that by the combined action of the two the time may be determined by the shadow of the gnome.

Claim.—The arrangement of the oscillating L-shaped index A in combination with the adjustable scale-board B, constructed and operating substantially as and for the purpose herein shown and described.

No. 39,861.—J. P. FERTIG, of St. Louis, Mo., assignor to Himself and J. C. SALZGEBER, of same place.—*Improved Anti-typhus Remedy*.—Patent dated September 8, 1863.—Compounded of julep, ϵ camphora, two ounces; acidum muriaticum, one ounce; ether aceticus, two drachms.

Claim.—The within described composition of matter or remedy, compounded of the ingredients mentioned, in the quantities and proportions named, as a new article of manufacture and trade, for the purposes set forth.

No. 39,862.—BARNETT HANSELL, JOHN McCANN, and SAMUEL McCAMBRIDGE, of Philadelphia, Pa.—*Improvement in Apparatus for Cutting Cloth*.—Patent dated September 8, 1863.—The cloth is unwound from a roller on to a cylinder with an apron extending around the latter and a roller. As it passes to the cylinder, knives, which are adjustable in a bar transversely to its motion, cut it to the required widths; and as it passes over a bar resting on ways it is stopped and cut transversely into lengths, the knife traversing the edge of a guide-bar.

Claim.—First, the construction of the cylinder B, with one or more cutter slots g'' , substantially as described, for the purpose of cutting the cloth into definite and suitable lengths and forms, as above set forth.

Second, combining and arranging the extension bar or bars J, with the cylinder B, for the purpose of varying the circumference of the latter, substantially as described and for the purpose set forth.

Third, constructing the apron F with the slotted cutter bar J, when combined and arranged with the cylinder B, substantially in the manner and for the purpose above set forth.

Fourth, the combination of the knives Q Q with the cylinder B, when arranged and operating substantially as described.

Fifth, the combination and arrangement of the reciprocating roller U with the cylinder B, substantially as and for the purpose above set forth.

Sixth, the arrangement of the support bar T in relation to the knives Q Q and cloth M, substantially as described.

No. 39,863.—T. J. MAGEE, of Cincinnati, Ohio, assignor to Himself and JAMES H. HOOLE, of same place.—*Improved Sofa Bedstead*.—Patent dated September 8, 1863.—The trestles which form the supports for the head and foot respectively are hinged to the back corners of the sofa, and being opened, afford a support to the hinged bottom frame, which is retained by studs and spring on the grooves and on the catches of the trestles.

Claim.—The arrangement of grooved trestles B B' hinged vertically to the sofa back, and folding frame F F' hinged horizontally to said back, in combination with studs I I, grooves D D', springs K K', and catches M M', the whole being combined and operating substantially as set forth.

No. 39,864.—CALEB H. PACKARD, of North Bridgewater, Plymouth county, Mass., assignor to JOHN J. HALEY, CURTIS J. MORSE, and ADDISON BOYDEN, of Boston, Mass.—*Improved Clothes Wringer*.—Patent dated September 8, 1863.—The upper roller journals move in arc-shaped bearings concentric with the axis of the intermediate roller by which it is driven, and which in turn receives its motion from the lower roller by the intervention of another pinion.

Claim.—In combination with a pair of squeezing rolls, one or both of which are hung in yielding bearings, and both driven by cogged gears, the intermediate gears E and F for the purpose of continuing to drive the squeezing rolls, however much they may separate or approach each other, substantially as described.

No. 39,865.—EDWIN L. SIMPSON, of Bridgeport, Conn., assignor to Himself and JARED WILSON POST, of New Haven, Conn.—*Improvement in Water-proof Boots and Shoes*.—Patent issued September 8, 1863; antedated July 15, 1863.—The invention consists in producing a boot or shoe, the uppers of which are of cloth made water-proof by the process described in application for patent for improved water-proof compound, allowed August 11, 1862, and filed in secret archives September 1, 1862.

Claim.—As a new article of manufacture, boots and shoes, when the same are made from the water-proof material, substantially as in the manner herein set forth.

No. 39,866.—JOHN K. STAMAN, of Mifflin, Ashland county, Ohio, assignor to Himself, C. C. STAMAN, and M. H. MANSFIELD, of same place.—*Improvement in Harvester Cutter Sharpener*.—Patent dated September 8, 1863.—This consists of two acute-angled hard steel bars attached by a bolt on the end of a handle. The bars are capable of partial rotation, so as to bring a new set of edges into use. They are passed along the edges of the knives to renew the edge.

Claim.—The concave, acute-angled, reversible bars A and B, arranged and operating as and for the purpose set forth.

No. 39,867.—JOHN TAGGART, of Roxbury, Mass., assignor to Himself and STEPHEN O. THAYER, of same place.—*Improvement in Lithographic Presses*.—Patent dated September 8, 1863.—The bed and stone are stationary; the scraper is hung on journals in a carriage which spans the frame, and at each end is supported on a horizontal rail, the scraper being vertically adjusted by a screw passing through the arch or cross-bar. The pressure is given by means of depressors on arms extending to the scraper. Other adjustments are provided which are detailed in the claims.

Claim.—The improved lithographic press as made not only with the stationary bed B, but with the scraper D, supported by a movable carriage E, and provided with mechanism, substantially as described, or its equivalent, for operating the scraper or depressing it upon and relieving it from the tympan and stone, the whole being as and to operate as specified.

Also, the said mechanism, or combination, for operating the scraper during the reciprocating rectilinear movements of its carriage, the same consisting not only of the channels i and their switches g and gates t , constructed and arranged substantially as described, but of the arms l , the depressors A , and the elevating springs m , arranged as set forth.

Also, the combination of the spring latch f applied to the carriage E, and the movable or spring dog d' , (applied to the tympan shaft,) with the tympan shaft, the scraper, and its carriage, the whole being as and for the purpose set forth.

No. 39,868.—JACOB A. VAN RIPER, of Spring Valley, Rockland, N. Y., for Himself and as administrator of the estate of LEWIS VAN RIPER, deceased.—*Improvement in Machine for Stretching and Folding Mosquito Netting*.—Patent dated September 8, 1863.—A series of oblique rollers, arranged in pairs, are used to stretch the netting as it is fed to the rollers, from which it passes to the bed, which has a reciprocating movement, so as to fold the netting back and forth into a pile suitable for baling.

Claim.—First, the reciprocating platform P, in connexion with the reciprocating plates or feeders K K and rollers L L, all arranged substantially as and for the purpose set forth.

Second, the combination of the oblique rollers B, platform P, plates K, and rollers G, all arranged for joint operation as and for the purpose specified.

No. 39,869.—JOHN H. VICKERS, of Worcester, Mass., assignor to Himself and LUCIUS W. POND, of same place.—*Improvement in Cartridge Case for Revolving Fire-arms*.—Patent dated September 8, 1863.—The chamber has a lining tube in which the cartridge is inserted; the end of the tube abuts against the flange of the cartridge, which contains the fulminate. In loading with loose ammunition, the rear end of the tube is fitted with a nipple tube for a cap to be exploded in the ordinary way.

Claim.—First, the thimble or tube C, constructed substantially as herein described, and applied substantially as herein set forth, in combination with a chamber bored large enough for the passage of the circumferentially projecting flanges of the cartridges from the front ends thereof, and closed or partly closed at their rear ends.

Second, The movable nipples g g, applied in combination with the thimbles or tubes C C, substantially as and for the purpose herein specified.

No. 39,870.—TRUMAN WOLCOTT, of Stowe, Middlesex county, Mass., assignor to Himself and GEORGE T. WOLCOTT, of Marlboro', Mass.—*Lasting Machine*.—Patent dated September 8, 1863.—This machine is designed to adjust the uppers on lasts. The upper is placed on the last, tacked over the end of the toe, and then placed inverted on the upper end of the rod, by which it is drawn down so that the sole is even with the plates of the crimping bars. The ring is then turned to cause the hooks to grasp the shank of the last, the toe being held by the plates and hook. The ring is then rotated, which, by the engagement of the pins in the eccentric slots, drives inward the bars and laps the upper firmly over the edge of the sole, where it is pegged.

Claim.—First, the heel, side, and toe crimping bars d d e f f f, with plates j attached, arranged as shown and operated by the ring G, provided with eccentric slots c, in which pins or friction rollers on the slides F are fitted, substantially as and for the purpose set forth.

Second, the hooks g g, arranged as shown, to operate in connexion with the crimping bars, as and for the purpose set forth.

Third, the elastic plates i i, in connexion with the hooks h, to operate in connexion with the crimping bars as and for the purpose specified.

Fourth, the loaded treadle B, with rod D attached, in combination with the crimping bars, all arranged to operate substantially as and for the purpose specified.

No. 39,871.—FREDERICK ALDRICH, Jr., of Augusta, Mich.—*Improvement in Ladders*.—Patent dated September 15, 1863.—Two arms are attached to the upper ends of the sides of the ladder; a pivot connects them with a support, provided with an adjustable brace. The arms support a platform secured to their upper end. By adjusting the support the platform will be brought in a horizontal position, irrespective of the ground.

Claim.—The arms B, hinged to the sides of the ladder A and support C, in combination with the platform B' and braces D, all constructed and operating in the manner and for the purpose substantially as herein shown and described.

No. 39,872.—EDWIN ALLEN, of Newark, N. J.—*Improvement in Paper Feeders*.—Patent dated September 15, 1863.—The invention consists in the employment for loosening the blank, which is to be fed from those which are below it, of a blade having an edge of peculiar form whereby it is made to take hold of the paper with greater certainty; also in a peculiar mode of applying a blade for the above purpose, whereby it is enabled to adapt itself to the level of the top of the pile and to any inaccuracies in its operating machinery, and always to press uniformly upon the paper; also in a reciprocating and vibrating toothed finger, operating in combination with the before-mentioned devices, to convey the separate blank to the mechanism by which it is to be converted into an envelope, or otherwise manipulated or treated for any other purpose.

Claim.—First, the employment for loosening or detaching a sheet, piece, or blank of paper from a pile, of a blade H, having a toothed edge of the construction herein described with reference to Figures 3, 4, and 5.

Second, the attachment of the loosening and detaching blade H, or any blade for a similar purpose, to a rock-shaft I, which has a reciprocating motion transverse to its axis as well as an oscillating motion upon its axis, by means of a lever H, applied to work loosely upon the said rock-shaft in combination with a spring or springs I, and an arm H² and pin or projection m, rigidly attached to the said rock-shaft, substantially as herein specified.

Third, the reciprocating and vibrating toothed or pointed finger P, applied and operating in combination with the oscillating separator L and the blade H, or other device for loosening the paper from the pile by a similar action, substantially as herein specified.

No. 39,873.—THADDEUS C. BANKS, of New York, N. Y.—*Improvement in Signal Whistles*.—Issued September 15, 1863; antedated April 26, 1861.—The object of this improvement is to provide a whistle which shall be valuable for giving distinct pulsations for signal purposes, and it consists of a mouth-piece, valve, diaphragm, and whistling aperture, the valve being attached to the end of a rod, which passes centrally the length of the barrel and is operated at the end.

Claim.—The trumpet-shaped mouth-piece b, in combination with the barrel a and diaphragm d, to form a signal whistle, as and for the purposes set forth.

Also, the valve i, applied to the said mouth-piece b, and whistle, for the purposes and as specified.

No. 39,874.—WILLIAM N. BATES, of Cedar Rapids, Iowa.—*Improvement in Brooms*.—Issued September 15, 1863; antedated January 10, 1862.—The object of this improvement is to so construct the mechanism of a broom that it may be readily filled by unskilled hands, and this is accomplished by contrivances for grasping the butts of the broom-corn, and flattening it to the usual shape and solidity.

Claim.—A broom made with a screw-rod B, adjustable clasp E, central bar G, bolts b, cap D, ferrule C, bolt k, and handle A, in the manner herein shown and described.

No. 39,875.—ELIJAH BELTS, of Boston, Mass.—*Improved Bracket Brace for Stair Rails*.—Patent dated September 15, 1863.—The invention consists in providing a bracket with a swivel cap for attachment of the hand rail, and being adjustable, it is suited for the varying pitch of the stairs.

Claim.—A stair-rail bracket or brace provided with a swivel, cap, or plate, substantially as herein set forth.

No. 39,876.—DANIEL BOLTON, of Springfield, Ill.—*Improved Railroad Iron Straightener and Curver*.—Patent dated September 15, 1863.—This consists of a bridge frame having blocks on the respective ends of its base, which fit into the concavity on the side of the rail which is laid with its convexity upwards. A central block is then brought down by a lever and screw, so as to press upon the upper side and remove the deflection of the bar; or a straight bar being similarly placed, the block is brought down to give the rail the required curve. In raising depressions between ties, without displacing the rail, links attached to a nut on the screw are passed under the rail, and the nut is raised by the revolution of the screw as before.

Claim.—The combination of the blocks C and D, the boss and links I and K K, with the frame A, constructed and operated substantially as hereinbefore described.

No. 39,877.—ALONZO T. BOON, of Galesburg, Knox county, Ill.—*Improved Knife Sharpener and Scourer*.—Patent dated September 15, 1863.—This invention consists of a pair of elastic rollers rotating in the direction of their impact, with cog wheels on their axes, and driven by a crank; the rollers being set in a frame attached to a bench, and with the addition of a scouring wheel and sharpening jaws.

Claim.—The elastic rollers B B combined with emery or other scouring substances, the concave wheel C, the link E, and the attachment of sharpening bars K K to frame A A, in combination, frame A A, cog wheel D D, crank H, and screw I, as represented in the drawings and as specified.

No. 39,878.—B. W. BOYCE, of Lansing, Michigan.—*Improvement in Door Weather Strips*.—Patent dated September 15, 1863.—This weather strip consists of a single strip, and is projected by a spring recessed within the outer face of the door. It is drawn down tightly to the sill by means of a thumb on the under side of the strip, which comes in contact with a lug on the sill, and the strip is provided with a rubber edging, to close the joint more perfectly.

Claim.—The combination and arrangement of a single vibrating strip A, with a recess a, (cut in the lower portion of a door b,) by means of the staples b b or their equivalents, substantially in the manner and for the purpose herein set forth.

Also, combining with the lower edge of a vibrating strip (A, Fig. 1,) a strip of India-rubber or other equivalent elastically yielding substance, substantially in the manner and for the purpose herein set forth.

Finally, the operating tooth or lug d, when combined with the sill D and vibrating strip A of a door, substantially in the manner and for the purpose herein described.

No. 39,879.—C. H. BRADLEY, of West Chester, Chester county, Pa.—*Improvement in Letter Boxes for Post Offices*.—Issued September 15, 1863; antedated January 11, 1863.—An arrangement of sliding boxes and shelves, with a file to support the letters at the inner

ends of the boxes with the label or number exposed to view from the outside of the glass, and affording the means of identification without painting the glass, and of rearrangement without requiring change of label.

Claim.—The combination with the sliding partitions *c* of the plates *e*, as herein shown and described, so that the letters may be easily removed, the boxes arranged within a small space, the arrangement changed as desired, and so that the alphabetical arrangement of the boxes will be clearly visible from the exterior of the boxes, without lettering or painting on the glass, all as herein set forth.

No. 39,880.—N. B. BROWN, of Antwerp, Jefferson county, N. Y.—*Improved Sawing Machine.*—Patent dated September 15, 1863.—The improvement consists in the arrangement of slides for sustaining and grinding the saw pitman midway of its length and at its rear extremity, in combination with the slotted bar, which, under the impulse of the driving machinery, actuates the saw, the said slotted bar being actuated by a pin upon the face of a driving wheel, giving a reciprocating motion to the saw pitman, which is attached thereto. The intermittent feed motion of the log is attained by a loose clutch-box and pulley on the driving shaft, which is caused by a lever to mesh with one fast to the shaft, thereby giving motion to the gearing which feeds the log; a bar and pulley over the saw working in a slot in a sustaining frame prevents the jumping of the saw.

Claim.—First, the said bar *Q*, provided with the rods *u*, and filled between the plates *88*, which are attached by pivots *r* to the slides *T T* on the uprights *V V*, in connexion with the bar or plate *O*, provided with a slot *o* to receive the wrist-pin *u* of the pulley *N* and the parallel bars *r r*, provided with ways or guides *s*, fitted in plates *t t*, or an equivalent device attached to a shaft *P*, all arranged substantially as and for the purpose specified.

Second, the means employed for giving the feed movement to the log *D*, to wit: the roller *E* and carriage *C*, the log being attached or dogged to the latter, and resting or bearing on the roller which is rotated at the will of the operator through the medium of the levers *L K*, clutch *J*, pulley *H*, band *G*, and gearings *d e*, all arranged substantially as and for the purpose specified.

Third, the sliding bar *I*, with pulley *Z* attached, when used in connexion with the saw *R*, and arranged in relation therewith, as and for the purpose specified.

No. 39,881.—A. C. BROWNELL, of Brooklyn, N. Y.—*Improvement in Copper Boilers.*—Patent dated September 15, 1863.—This improvement consists in so constructing the heater that the two ends or heads are entirely brazed in, as are also the spuds for the couplings of the pipes, the object being to avoid lap joints and the use of soft solder.

Claim.—A copper water-heater constructed in the manner substantially as herein shown and described.

Also, the manner by which I produce or manufacture this heater, with the application of what may be called a double coupling, to wit: the cap *E*, tube *e*, and socket *F*, the use of which enables me to completely braze all the seams or joints of the heater, and also to planish or hammer the same when brazed, thereby perfecting the heater, as set forth.

No. 39,882.—ISAAC C. BRYANT, of Philadelphia, Pa.—*Improvement in Portable Stoves.*—Patent issued September 15, 1863; antedated August 2, 1862.—The invention consists in making portable by reducing the bulk of the stove, making the upper section to slide within the lower, supported when raised by thumb-screws, making the hearth to fold back against the front of the stove, and plates fitting the stove-pipe for attaching it readily to a board or partition for security.

Claim.—The arrangement and combination of a double box stove, with the adjustable thumb-screws at the sides, jointed hearth plate, stove-pipe plates, and jointed legs, substantially as described.

39,883.—WILLIAM W. CARTER, of Bristol, Conn., assignor to B. D. LEWIS, of same place.—*Improvement in Calendar Clocks.*—Patent issued September 15, 1863; antedated September 7, 1862.—The object is to provide a calendar movement on a dial plate complete, so as to be attachable to an ordinary clock; also of cutting and securing a dial plate with a smaller calendar dial. These purposes are accomplished by constructing a dial plate with a calendar movement already attached at its back in such a position as to gear with the motion-wheels of the clock, to which it is to be attached; or, in case of the attachment of a smaller calendar dial plate to be attached to an ordinary clock face, it consists in cutting the said face to admit of the insertion of a smaller plate ready prepared with a calendar movement at the back, and clamping it there by a bead clasp in position for its gearing to mesh with the motion the wheels of the clock.

Claim.—Securing a calendar movement on to a dial plate, in combination with a time or ordinary clock movement, substantially in the manner and for the purpose described.

Also, the clasp *e* for fastening the dial plates *a* and *b* together, as set forth.

No. 39,884.—CYRUS CHAMBERS, Jr., of Philadelphia, Pa.—*Improvement in Dies for Brick and Tile Machines.*—Patent dated September 15, 1863.—The object is to make the angle of the brick as dense as the centre by avoiding the usual opening in which the stream of clay, &c., runs the fastest in the middle, by converging the side of the throat of the die, so as to bring the pressure upon the angles.

Claim.—Imparting to the angles of bricks and tiles greater firmness and solidity, by forcing a larger quantity of clay into them by means of a die with tapering grooves, constructed and operating substantially in the manner described and shown.

No. 39,885.—JAMES CHRISTISON, of New York, N. Y.—*Improvement in Presses.*—Patent dated September 15, 1863.—On the top of a frame is a windlass roller, with tapering ends, which are spirally grooved; a platform below, having pulleys attached, is suspended from these rollers by ropes, which are passed four or five coils over the rollers and through the pulleys, and their ends spliced. Then, as the windlass is rotated, the rope is taken on and payed off continually; and if it be approaching a larger portion of the taper roller, the platform is raised; if otherwise, it is lowered.

Claim.—The use in presses of the tapering windlass *M*, arranged to operate in combination with the rope *W* and block *m*, or their respective equivalents, so that the rope or chain *W* shall be simultaneously wound on and let off in the manner and for the purpose herein set forth.

No. 39,886.—JOHN COCHRANE, of New York, N. Y.—*Improvement in Presses for Bending Metallic Plates.*—Patent issued September 15, 1863; antedated October 28, 1862.—The machine consists of a heavy frame, within which are a platen and cope, the latter consisting of a series of rams with caps, each actuated by pressure on its base in a hydrostatic cylinder, and the parts of the cope consisting of screws with enlarged heads, adjustable vertically in the iron frame of the machine. The enlargement of the heads of the screws forming the cope, and of the rams or their caps, which form the platen, brings them into contact, so as to sustain each other and be mutually sustained by the guide bars by which they are surrounded, and the removal of which admits of the removal of the plate.

Claim.—First, the combination of an adjustable cope with a multipartite or adjustable platen, operated by hydrostatic pressure, in the manner or substantially in the manner described.

Second, the enlargement on the screws of the cope and on the rams below the platen, or of the caps or bearing points which form the platen, so that they may mutually support and sustain each other when acting upon an inclined surface, in the manner or substantially in the manner described.

Third, the combination of the guide bars, or of the columns arranged as guide bars, with the cope screws and the rams below the platen, or the caps upon the rams which form the platen, when these several parts are made to be in contact or partial contact with each other and with the guide bars or columns, for the purpose of mutual support, when acting upon inclined surfaces, in the manner or substantially in the manner described.

Fourth, the gates at either or both ends of the machine, whether arranged to open and close like a portcullis or otherwise, substantially as described.

No. 39,887.—JACOB COMPTON, of Elmira, N. Y.—*Improvement in Felloe-Bending Machine.*—Patent dated September 15, 1863.—The machine consists of a former, laid upon a frame, and it has two working faces, with a roller guide between. The two faces are arcs of circles of the required diameter for the fore and hind wheels, and the reversible former is laid with that side up, to suit the work to be accomplished. To a central shaft in the former is attached a lever, and to that lever a roller. The wood having been keyed to the frame at one end, between the roller and former, the roller, by the impulse of the lever, presses the felloe timber down upon the former, in which condition it is clamped and removed. The lever is jointed to lay it up conveniently out of the way, and facilities provided for the removal of the bent felloe.

Claim.—The reversible former *B*, having two moulds *c d* of different diameters and a central roller guide *b*, in connexion with a removable lever *D*, provided with a pressure roller *C*, and a shaft *E* passing centrally through the former *B*, to receive the lever *D*, substantially as and for the purpose set forth.

Also, constructing the lever *D* with a joint *f*, when said lever is used in connexion with the former *B* and its concomitant parts, for the purpose specified.

Also, the arrangement of the bars *F F'* and *G* with the shaft *E*, to admit of the latter being properly supported or retained in position, and at the same time admit of the bent felloe being readily removed from the mould and machine by the attachment of the bar *F* or *F'*.

No. 39,888.—JOHN COWIE, of Portland, Maine.—*Improved Machine for Rossing Bark.*—Patent dated September 15, 1863.—The machine consists of a stationary knife and adjustable bed plate set relatively to each other as a plane-bit and stock; above these are two rollers, one feeding the bark to the edge of the bit, and the other discharging the bark. These two rollers are journaled on rock shafts, which are prolonged at their front ends with levers, by

the depression of which, through the medium of the treadle, the feed roller presses the bark against the knife, and a thicker ross is shaved off the bark.

Claim.—First, the stationary knife J, in combination with an adjustable toothed feed roller E, arranged with the levers F F and treadle H, to operate as and for the purpose herein set forth.

Second, the adjustable bed plate B C, arranged as shown, in combination with the friction rollers M, discharge roller G, feed roller E, and knife J, all arranged for joint operation as and for the purpose specified.

No. 39,889.—C. P. CROSSMAN, of West Warren, Worcester county, Mass.—*Improved Caster Bottle.*—Patent dated September 15, 1863.—The improvement consists in placing within the caster a stationary shaft and arms, which shall form an obstruction, and tend to pulverize the salt, which is dashed against them in the act of shaking.

Claim.—The application of the obstruction D c, or its equivalent, to a box A, constructed and operating in the manner and for the purpose substantially as set forth.

No. 39,890.—DAVID CUMMINGS, Jr., of New York, N. Y.—*Improvement in Coin and Letter Scales.*—Patent issued September 15, 1863; antedated February 2, 1863.—The coin or letter to be weighed is placed in the spring holder, and the weighted arc moved round on the pivot until the mark of the denomination of the coin or the weight in ounces is directly under the index K on the beam, when an excess or deficiency of weight will be indicated by the tipping of the beam.

Claim.—The pivoted weight F and curved plate J, operated substantially as described and for the purpose set forth.

No. 39,891.—ROBERT B. DAVIDSON, of Greenville, Muhlenberg county, Ky.—*Improvement in Mechanical Movements.*—Patent dated September 15, 1863.—This arrangement of levers, toggles, and other mechanism is designed to change the reciprocating motion of a steam engine to continuous or intermittent rotary motion by impulse upon the pawl, which, by means of its jointed connexions, continues to act tangentially upon the ratchet wheel.

Claim.—A combination of levers B D E F and M and connecting rods G I K L and P, with a chain cord or band O, pawl N, and ratchet wheel S, all as herein described.

No. 39,892.—JOSEPH C. DAY, of Jersey City, N. J.—*Improvement in Sewing Machines.*—Patent issued September 15, 1863; antedated July 17, 1862.—One end of the bar carrying the feed comb comes in contact with an inclined projection on the connecting rod F', by the motion of which latter the bar is lifted and the comb brought in contact with the cloth, when the comb bar is moved longitudinally by a bar connected to a sleeve which slides on a rocking arm. The forked spring I i, which is mounted on the looper carrier, retains the loop in the proper position for the entrance of the looper as the latter passes the path of the needle, and prevents the loop from twisting around the needle.

Claim.—First, obtaining the required uniform vertical and adjustable horizontal movements necessary for an adjustable feeding mechanism from a continuous reciprocating motion, by means of the reciprocating wedge face K, dog K', radial arm L, sleeve M, and adjustable bar N, or equivalent link, substantially as herein described.

Second, the spring I, mounted on the looper carrier F, and arranged to operate with the needle R and looper G, or their equivalents, in the manner and for the purpose herein set forth.

Third, the use of a guide spring H, in combination with a looper driven independently thereof, so that the needle may be more perfectly steadied, substantially as herein specified.

Fourth, so arranging the friction spring Q that it comes in contact with the rim of the spool Y after the needle has left the cloth, and releases the said spool by the return movement or descent of the needle bar, for the purpose herein specified.

No. 39,893.—THOMAS B. DE FOREST, Birmingham, Derby county, Conn.—*Improvement in Attaching Hooks and Eyes to Cards.*—Patent issued September 15, 1863; antedated July 3, 1862.—The hooks are attached along the edge of a card, and the eyes of the hooks pressed into recesses, which prevent them from pulling out.

Claim.—The method of attaching the hooks to the card or paper, substantially as hereinbefore described; that is, by passing the beak and shank astride the card, and pressing the eyes of the hook into recesses, or over ledges, substantially as set forth.

No. 39,894.—SAMUEL L. DENNEY, of Christiana, Lancaster county, Pa.—*Improvement in Snow Ploughs for Railroads.*—Patent issued September 15, 1863; antedated July 18, 1862.—This plough is mounted upon a truck, and has a share or divider in front with an oblique edge to divide the snow as it ascends, crowding it towards the sides, and further packing it by the vertical rollers on the rectangular or box portion of the plough.

Claim.—First, the combination, use, and employment of the vertical cylinders c c, in combination with the divider E, for the purposes and in the manner substantially herein set forth.

Second, constructing the divider E of an equal width, corresponding to that of the cylinders c c at its rear end, extending it forward near to the front end of the incline plane B, in straight lines at its base, slightly curving upward, thereby presenting a sharp oblique edge to divide the snow as it ascends the incline plane B, substantially in the manner and for the purpose herein set forth.

No. 39,895.—BYRON DENSMORE, of Rochester, N. Y.—*Improvement in Steam Boilers.*—Patent issued September 15, 1863; antedated July 15, 1863.—This is a vertical boiler, in which the fireplace is a frustum of a cone, and the heated results pass up to the top of the box and then down the series of tubes in a cylinder which occupies the back of the fire box; thence to a fire jacket or flue which encompasses the boiler except at the fire door. The outer jacket is filled with a non-conductor to prevent radiation, or may, in connexion with stops or guides, be used as an air-heating chamber to supply the furnace.

Claim.—The tube cylinder A, when attached to the side of the fire box, with the tubes therein standing either perpendicularly or inclined, the fire passing up over said cylinder, then down through the tubes, as described.

Also, the arrangement of the fire box and grate in combination with the tube cylinder, as described.

Also, the outside jacket, in combination with the stops R R and the inside jacket E, for the purposes set forth and described.

No. 39,896.—PATRICK S. DEVLAN, of Jersey City, N. J.—*Improvement in Submarine Cables.*—Patent issued September 15, 1863; antedated October 16, 1862.—A coating of insulating and protecting composition is laid over the central wire or wires; this is covered by a plaited cord, this again by a coating of composition, and so on till the cable is completed. The insulating composition consists of fibrous pulp, eight parts; caoutchouc, half a part; rosin, one part.

Claim.—A cable formed in the manner substantially as described, where the composition hereinbefore described is employed as and for the purpose set forth.

No. 39,897.—PATRICK S. DEVLAN, of Jersey City, N. J.—*Improved Composition for Packing Projectiles.*—Patent issued September 15, 1863; antedated October 15, 1862.—This composition is to be used for forming the expansible packing ring which in the act of firing is pressed into the rifle grooves of the piece. It is as follows: Eight pounds paper pulp, moderately dry; five pounds plaster of paris; half a pound of caoutchouc dissolved in resin oil; moulded while soft around the projectile. Analogous materials may be substituted.

Claim.—The within-described "composition packing," produced substantially as hereinbefore set forth.

No. 39,898.—JULIUS C. DICKEY, of Saratoga Springs, N. Y.—*Improvement in Quartz Crushers.*—Patent issued September 15, 1863; antedated July 3, 1862.—The quartz is fed into the revolving drum near its centre, and is there mashed by the swinging hammers against the inside of the circular stamper, which collides with the interior of the drum and reduces the quartz to a sufficient fineness to be driven by the current of air generated through the meshes of the sieve occupying the central exit point from the drum.

Claim.—The combination of one or more of the hammers m m with the stamper l, for the purposes set forth.

No. 39,899.—JULIUS C. DICKEY, of Saratoga Springs, N. Y.—*Improvement in Machinery for Pulverizing and Crushing Quartz.*—Patent issued September 15, 1863; antedated June 29, 1862.—The quartz passes into the drum at a central point, and is beaten violently against the sides and projecting ledges in the drum until it is rendered sufficiently fine to pass the sieve in the exit pipe.

Claim.—Crushing and pulverizing quartz in the revolving drum B B when the quartz passes into said drum through the induction end I, and when the said drum is provided with the screen O, or its equivalent.

No. 39,900.—THOMAS H. DODGE, of Washington, D. C.—*Improvement in Screw Wrenches.*—Patent issued September 15, 1863; antedated April 8, 1863.—The operating screw has a pinion on its end, which is rotated by means of gearing inside the rosette; the latter is secured to the ferrule by screws which penetrate into and traverse a groove in the periphery of the ferrule.

Claim.—First, providing the rear end of the operating screw with a small gear or pinion, in combination with the use of an internal gear on the rosette, substantially as and for the purposes set forth.

Second, confining the rosette to the ferrule, substantially as described, in combination with the use of the flange c, for the purposes stated.

No. 39,901.—GEORGE DOUGLASS, of Scranton, Luzerne county, Pa.—*Improvement in Car Springs*.—Patent dated September 15, 1863.—These rectangular spring plates are contained within a box and separated by ledges; they are collapsed by the pressure of pistons above and below, which bow them towards each other.

Claim.—An improved railroad car spring, formed of one or more series of straight elastic plates, when said elastic plates are compressed from opposite directions, and so confined in a rectangular frame as to leave an intermediate vibrating space between each distinct series controlling the extent of their curvature, all substantially in the manner herein set forth.

No. 39,902.—JEPHTHA DYSON, of Philadelphia, Pa.—*Improvement in Carding Engines*.—Patent issued September 15, 1863; antedated February 21, 1863.—The improvement is designed for stripping the main cylinder of a carding engine while running and for returning the strippings to the main cylinder or transferring the same to the doffers or other cylinders; the stripper being so clothed as to cause it while running at uniform velocity to strip the main cylinder and transfer the strippings without itself becoming clogged. It is clothed with card fillet about one and a half inches in width, with card teeth, fewer in number and more obtuse in their angle than common, bringing the exterior portion of the teeth more radial with the axis of the stripper, to enable the centrifugal force to throw off the strippings more readily. The arrangement of strippers around the main cylinder will be apparent from the claim and illustration.

Claim.—First, the stripper A, constructed and clothed as described, having card teeth formed or constructed, and inserted into the fillet in the peculiar manner set forth and described.

Second, the stripper A, with clothing prepared and applied in manner and form as described, in combination with the cylinder B and with the main cylinder C, and operated below the said main cylinder C at any convenient point between the doffer D and the licker-in E, substantially as described and for the purposes set forth.

Third, the stripper A', as described, in combination with the main cylinder C, the cylinder B', and the doffer D, operated below the main cylinder C and doffer D, substantially as described and for the purposes set forth.

Fourth, the combination and arrangement of the stripper A', with the features described in the third claim, and operated above the doffer D and the main cylinder C, substantially as described and for the purposes set forth.

No. 39,903.—LEWIS EIKENBERRY, of Philadelphia, Pa.—*Improvement in Governors for Steam Engines*.—Patent issued September 15, 1863; antedated September 26, 1862.—The arms and levers of the governor are so arranged in relation to the spring that, on the gradually increasing resistance of the latter, an increasing lever force comes into action to aid the governor in overcoming it. The other points are explained in the second and third claims.

Claim.—First, arranging the arms or levers constructed as described of a governor in relation to a spring or springs in the manner and for the purposes set forth.

Second, the arrangement in a governor of the nut e, screw shaft B, bevel gear wheels C E E', sliding rotary shaft F, and pins or ratchets A A', in the manner as and for the purposes set forth.

Third, so constructing the shaft B that the nut e is allowed a chance to run out of gear with the screw thread of said shaft before a crowding and breaking of the parts of the machine occurs, and so combining a spring, or its equivalent, with the nut and shaft, and the nut shall be kept in gearing position with the shaft, substantially as described.

No. 39,904.—JOSEPH S. ELLIOTT, of Philadelphia, Pa.—*Improvement in Gas Meters*.—Patent dated September 15, 1863.—This is an improvement on the inventor's patent of September 17, 1861, in stopping or holding the driven wheels by means of levers, each arranged to vibrate between the periphery of the driver and the stop teeth of the driven of each pair of wheels, excepting at the time the former is moving the latter.

Claim.—Producing the stop motions in the registers of gas meters by means of the levers B, or their equivalents, arranged to operate in combination with the recesses and teeth of the wheels A, substantially in the manner described and set forth for the purpose specified.

No. 39,905.—WILLIAM ELMER, of New York, N. Y.—*Improvement in the Manufacture of Illuminating Gas*.—Patent dated September 15, 1863; patented in England March 6, 1863.—One object in this invention is to produce the hydrogen in a separate vessel from that in which the olefant gas is formed, and it is accomplished by the devices recited in the first six claims. Another object is to free the hydrogen from condensable substances previous to its introduction into the retort where the olefant gas is formed, and the device for that purpose consists of the combination of the retort for the decomposition of the water with the retort for the formation of the illuminating gas through the intervention of the condenser. The other two points are expressed in the eighth and ninth claims.

Claim.—The combination of the following devices or their equivalents, viz:

First, a retort in which water is decomposed to furnish hydrogen.

Second, a retort in which a fluid hydro-carbon is decomposed by heat.

Third, one or more furnaces for heating the retorts to the required temperature.

Fourth, apparatus for supplying water in regulated quantities to the retort in the manner in which it is decomposed.

Fifth, apparatus to supply a fluid hydro-carbon in regulated quantities to the retort in which it is decomposed.

Sixth, a connexion to conduct the hydrogen from the place where it is formed to the hydro-carbon retort; the combination as a whole constituting an apparatus for manufacturing illuminating gas, and operating substantially as set forth.

Seventh, the combination of the hydrogen retort with the hydro-carbon retort through the intervention of a condenser, substantially as set forth.

Eighth, the combination of the boiler for generating steam with the hydrogen retort through the intervention of a heating apparatus, substantially as set forth.

Ninth, the combination of the hydrogen retort with the hydro-carbon retort through the intervention of a heating apparatus, substantially as set forth.

No. 39,906.—JAMES FINEGAN, of Haverstraw, Rockland county, N. Y.—*Improvement in Brick Presses*.—Patent dated September 15, 1863.—The plunger rod is composed of two portions; the lower one is embraced by the forks of the upper one; the lower has a pin traversing in slots in the upper, pushing a sliding block before it; the motion of the latter is limited by an adjustable pin.

Claim.—The plunger rod D, composed of two parts a b, one part a, having a pin c passing tightly through it, which pin passes through an oblong slot d in the other part b, in combination with the slide E fitted in the slot e of the part a of the plunger rod, and the adjustable pin f, all arranged as and for the purpose specified.

No. 39,907.—JOSEPH E. FISK, of Salem, Mass.—*Improvement in Dry Gas Meters*.—Patent issued September 15, 1863; antedated February 13, 1863.—The valve of this gas meter, while operating over the ports of its seat, is so controlled that all of its sides maintain a parallelism with the sides of the several ports of the seat, and at the same time the working surface of the valve describes small circles, the radii of which are equal to the radius of the eccentric or crank which produces the motion in the valve, the radius being about equal to the width of the ports, and the effect being that the working surface of the seat is worn equally.

Claim.—First, the combination of a rotary crank or eccentric and guides and stops K K M M O, substantially as and for the purpose set forth.

Second, the arrangement of the chambered valve, which is operated with an eccentric motion and controlled by a cross or its equivalent, as described in said motion, in combination with the gas ports arranged on opposite sides of the seat and around a central discharge passage, in the manner and for the purposes herein described.

No. 39,908.—LAVINIA H. FOY, of Worcester, Mass.—*Improvement in Corsets*.—Patent dated September 15, 1863.—The rim at the lower edge of the corset from which the skirt is suspended, and which projects horizontally from the figure, is formed by cutting out a straight or nearly straight piece from the lower edge of the corset-cloth and inserting a semicircular piece whose fulness gives the required shape; a brace from the top of the shoulder passes back to the rear insertion of the shoulder straps.

Claim.—First, forming the rim C by cutting out a piece from the lower part A' of the waist A, as seen in figure 4, at a a, and inserting the semicircle piece C', figure 5.

Second, the combination with the waist A and straps E E of detachable shoulder braces F.

No. 39,909.—LAVINIA H. FOY, of Worcester, Mass.—*Improvement in Corsets*.—Patent dated September 15, 1863.—The peculiarly shaped pieces numbered from 1 to 5 are stitched together to form the corset.

Claim.—Forming the corset from the peculiar shaped pieces Nos. 1, 2, 3, 4, and 5, substantially as shown and described.

No. 39,910.—LAVINIA H. FOY, of Worcester, Mass.—*Improvement in Corset Skirt-Supporters*.—Patent dated September 15, 1863.—The lower edge of the corset has a projecting rim made by the insertion of gores in the body piece, which has also gores for the required breast enlargements.

Claim.—First, forming the rim B of a corset skirt-supporter from the bottom part of the piece A, in combination with the use and employment of gore pieces e f g, of different sizes, substantially as shown and described.

Second, the combination with the peculiar formed piece A, of the gore pieces e f g and c c, when located as shown and described and for the purposes stated.

No. 39,911.—LAVINIA H. FOY, of Worcester, Mass.—*Improvement in Corset Skirt-Supporters*.—Patent dated September 15, 1863.—The cutting of the cloth to form the edge and over the hoop in the rim, the lacing of the front, and adjustability before and behind, are pointed out as the points of novelty, and will be best understood from the claim and illustration.

Claim.—First, cutting the binding cloth bias, in combination with the mode of applying the same to the extensor or outer edge of the rim L, whereby all gathering is avoided while a corded appearance and a case for the hoop M are produced, substantially as set forth.

Second, the combination of laced opening K K, or either of them, with the front part of the body I, substantially as set forth.

Third, the body I, open in front and adjustable both in front and in back, substantially as shown and described.

Fourth, forming the case for the hoop and corded edges O and P from the same piece of bias-cut cloth, as shown and described.

No. 39,912.—JOHN FRAVEL, of St. Louis, Mo.—*Improvement in Artificial Legs.*—Patent dated September 15, 1863.—The improvements are in the ankle and knee joints: the former consists of a swivel joint, in which the hanging piece is attached by branching arms to the inside of the leg, and the rolling bearing rod pivoted in the hanging piece. Side straps, acting as stops, attach the lower leg to the thigh, in addition to the main tendon or support which has free play between its upper bearing, on a cross-piece in the thigh, and its lower elastic bearing behind the patella.

Claim.—First, the within described ankle joint, composed of the parts *f f' h g*, all being constructed and arranged to operate substantially as and for the purposes set forth.

Second, constructing the knee joint in such manner that the side straps *k* may be made to work in mortises in the knee, and to act as stops, and so that the space *n* may be afforded for the free action and movement of the tendon *e*, substantially as herein described for the purposes set forth.

No. 39,913.—D. FULLER, of Cherry Valley, Winnebago county, Ill.—*Improvement in Machines for Printing Addresses on Newspapers, &c.*—Patent dated September 15, 1863.—The different addresses are set up in a galley to which an automatic motion is given after each stroke of the machine by which a new address is brought into a position to be printed upon a paper held between it and the projection on the reciprocating platen which corresponds to the orifice in the spring shield. The paper having been printed is dropped on to the floor below and swept away by the reciprocating scoop.

Claim.—The arrangement of the shield E with springs *e*, and aperture *e*, in combination with the reciprocating plunger C, with projection *d*, and with the galley F, constructed and operating substantially as and for the purpose herein shown and described.

Also, the reciprocating scoop H, in combination with the plunger C, shield E, and galley F, constructed and operating in the manner and for the purpose substantially as set forth.

No. 39,914.—WILLIAM F. GOODWIN, of Powhatan, Belmont county, Ohio.—*Improvement in Mounting Field Ordnance.*—Patent dated September 14, 1863.—The adjustments consist of the elevating screw under the bed plate, over which is a laterally adjustable grooved plate, the trunnions being journaled in sliding bearings.

Claim.—The combination of the laterally adjustable grooved plate D and the trunnion and spring guides *e*, with the vertically adjustable plate C, tongue *b*, axle A, and screw E, all constructed and operating as herein shown and described.

No. 39,915.—ALBERT HALL, of Danville, Des Moines county, Iowa.—*Improvement in Metallic Cartridges.*—Patent dated September 15, 1863.—The cartridge case has a rearwardly projecting priming tube; the cylindrical portion near the front has a depression into which a flange on the rear of the ball is pressed.

Claim.—As an improved article of manufacture, a metallic cartridge made with a priming tube in one piece with the shell A, the rear portion of the shell cut and bent as shown, the front portion grooved at *b*, and provided with a bullet B grooved and attached to the shell, all in the manner herein shown and described.

No. 39,916.—JOHN FREDERICK HEISSENBUETTEL, of Brooklyn, N. Y.—*Improved Rolling Pin.*—Patent dated September 15, 1863.—The roller has flanges on its ends which come in contact with the pastry board and determine the thickness of the paste.

Claim.—An improved article of manufacture, a rolling pin, made with flanges *b*, in the manner and for the purpose herein shown and described.

No. 39,917.—JOHN HEWITT, of Carmichael, Greene county, Penn.—*Improved Washing and Wringing Machine.*—Patent dated September 15, 1863.—An elliptic spring on each side board of the machine is attached at one end to the latter, and at the other to a prolongation of the upper journal box; a hand bar lying upon said springs is pivoted by arms to the sides of the machine, and by it the pressure on the roller is adjusted. The clothes may be run through and through the machine, or received on a sliding board as required.

Claim.—First, the combination of the hand bar *f* with the springs E, slides *d*, and roller B, substantially in the manner and for the purpose set forth.

Second, the removable inclined bed piece G, in combination with the containing vessel A and rollers B B', substantially as and for the purposes set forth.

No. 39,918.—G. B. HILL, of New York, N. Y.—*Improvement in the means of using Hydro-carbon Oils as Fuel.*—Patent dated September 15, 1863.—The steam and hydro-carbon are conducted to a mixing chamber in which they are mingled, and from which they pass to radiating pipes and through orifices, where they are ignited under the boiler. In starting, steam is obtained from a supplementary boiler, afterwards from the main boiler, being superheated in the pipe as it passes to the mixer, and the hydro-carbon is vaporized in its passage to the same chamber.

Claim.—First, the employment or use of a mixture of hydro-carbon liquid with steam as fuel in furnaces, &c., substantially as herein specified.

Second, the mixer *a* and pipes *b b'*, in combination with the vessel *a'* and radiating pipes B, constructed and operating in the manner and for the purpose shown and described.

No. 39,919.—EBEN NORTON HORSFORD, of Cambridge, Mass.—*Improved Fire-proof Safes.*—Patent dated September 15, 1863.—The safe is made of two separate casings, an inner and an outer, and the intervening space filled with incombustible material, which is so arranged that under ordinary circumstances the moisture from the filling cannot reach the interior, and under the heat of a burning building the steam from the filling will pass to the exterior through holes, which, until the temperature is sufficiently raised, were filled with alloy.

Claim.—First, a fire-proof safe consisting of two air and water tight metallic casings or shells A B, arranged one within the other, when constructed and combined substantially in the manner described, for the purposes set forth.

Second, a fire-proof safe having apertures in its outer shell or casing for the escape of steam, when said apertures are closed with fusible alloy or cement which melts at a temperature of 212 Fah., or thereabouts, substantially in the manner and for the purposes specified.

No. 39,920.—EBEN N. HORSFORD, of Cambridge, Mass.—*Improvement in Fire-proof Safes or Chests.*—Patent dated September 15, 1863.—Explained by the claim.

Claim.—First, forming cavities in the filling of the fire-proof safe, substantially in the manner described, for the purposes of providing for the expansion of the water to prevent the bursting of the safe by freezing, as set forth.

Second, covering those portions of the safe exposed to contact with the filling with a mixture of gutta-percha and paraffine varnish compounded in the proportions, or thereabouts, and substantially in the manner described.

No. 39,921.—EBEN N. HORSFORD, Cambridge, Mass.—*Improved Composition for Filling Fire-proof Safes.*—Patent dated September 15, 1863.—Compounded as follows: To seventy pounds of cold water add, with constant stirring, two pounds of starch and boil; when cold, add fifty pounds plaster of Paris.

Claim.—As a new composition of matter for filling safes to render them fire-proof, calcined and powdered gypsum, mixed with gelatinized water, substantially in the manner and proportions described.

No. 39,922.—EBEN N. HORSFORD, of Cambridge, Mass.—*Improvement in the Manufacture and Use of Neutral Sulphite of Lime.*—Patent dated September 15, 1863.—The sulphite of lime is dried in an atmosphere of carbonic acid gas, and the resulting salt used to arrest fermentation.

Claim.—First, depriving sulphite of lime of its incidental and constitutional water by heat. Second, depriving sulphite of lime of its incidental and constitutional water, in a space from which oxygen gas is nearly or quite excluded.

Third, the use of dry, neutral, sulphite of lime, to arrest the fermentation of saccharine juices.

No. 39,923.—WM. H. HORSTMANN and HENRY J. BEHRENS, of New York, N. Y.—*Improvement in Machine for Making Cartridges.*—Patent issued September 15, 1863; ante-dated March 24, 1862.—In this machine the cartridge cases are formed of paper, or other suitable material, by automatic movements, the ball inserted, and the cord fastened around it. A detail of the movements would be beyond the limits of this report.

Claim.—First, the combination of a mandrel A, roller B, or its equivalent, and guides C, for feeding, in giving directions to and forming the paper case, substantially as and for the purposes set forth.

Second, in combination with the mandrel as above specified, attaching and winding the cord around the paper case as described.

Third, also the finger G3, for inserting the end of the cord to the mandrel.

Fourth, also, in combination with the cartridge machine, the knife I, substantially as and for the purposes set forth.

Fifth, also drawing out the cord into a loop as it is severed, so as to have a projecting end to insert for the next operation, as described.

Sixth, also the employment of an apparatus to produce a slack and tension of the cord of a machine for making cartridge cases, substantially as herein set forth.

Seventh, also a cord carrier or guide by which the cord is kept in position to wind properly upon the paper tube or case, as specified.

Eight, the apparatus by which the balls are conveyed to and inserted in the paper case.
Ninth, also discharging the paper case from the mandrel, substantially as herein set forth.
Tenth, also the vibrating trough K, for conveying the completed case away from the machine.
Eleventh, also the vibrating pressing apparatus B, for holding the paper and cord to the mandrel while being conveyed to the machine.
Twelfth, roughening the surface of the mandrel for the purpose of feeding the paper into the machine.

No. 39,924.—BENNET HOTCHKISS, of New Haven, Conn.—*Improved Atmospheric Trip Hammer*.—Patent issued September 15, 1863; antedated July 2, 1863.—In this machine the hammer is raised by the elevation of the pneumatic spring-box, in which the body of air under the piston forms an elastic spring. In the number and disposition of the air passages this is an improvement on the inventor's patent of June 14, 1859, and is sufficiently described in the claim. The piston-rod is enlarged at its junction with the hammer to guard against fracture, and an elastic washer placed beneath the bolt heads and against the frames to avoid fracture from the concussion of the hammer.

Claim.—First, the elastic washer i and bolts N, in combination with the supporting frame A and working frame B, in the manner and for the purpose substantially as herein set forth.

Second, two air passages a and b, in combination with a pneumatic or air-spring cylinder, when said passages are arranged substantially in the manner and for the purpose described.

Third, the valves F G, arranged as described, in combination with a pneumatic or air-spring cylinder, operating in the manner and for the purpose substantially as herein specified.

Fourth, the combination described of the valves F G with the air-passage H, for the purpose of changing the air from the upper to the lower air-spring, or vice versa, to lessen or increase the force of the blow of the hammer without changing the velocity of the cylinder, substantially as set forth.

Fifth, the enlargement of the piston-rod in the manner described, in combination with the stuffing-box plates, or their equivalents, substantially for the purpose specified.

No. 39,925.—JAMES L. HOWARD, of Hartford, Conn.—*Improvement in Railroad Car Ventilators*.—Patent dated September 15, 1863.—The elevated central portion of the car roof is extended to form an air-receiving chamber, from whence the air is carried down, brought into contact with water, and raised again free from dust, to enter the car.

Claim.—The air-chambers A, produced by the extension of the raised or elevated roof of railway passenger cars, as shown in the drawings, in combination with the automatic doors F and air-passages B C and D and registers E, when constructed and operating substantially as described.

No. 39,926.—O. A. HOWE, of Fort Plain, Montgomery county, N. Y.—*Improved Horse-shoe*.—Patent dated September 15, 1863.—The lower or face side of the shoe is provided with a groove having pendant projections within it, to hold a filling of India-rubber, and prevent the accumulation of snow in the shoe.

Claim.—A horseshoe having India-rubber applied and secured to it in the manner substantially as herein set forth.

No. 39,927.—EDWARD P. HOWLAND, of Worcester, Mass.—*Improvement in Car Coupling*.—Patent dated September 15, 1863.—The device consists of a combined weight and pin in connexion with a sliding pin support and two springs, so arranged that the link is enabled to secure itself in the draw-head when forced therein, and retained in a horizontal position when in one draw-head only, to avoid being bent in case of the adjoining draw-heads of two cars coming in contact.

Claim.—The construction of the drop bar B with a flattened portion and a pin c upon its lower extremity, as herein shown and described, so that said pin c will pass through and lock the connecting link, while the flattened portion will press upon, and by its weight maintain the link in a horizontal position, all as set forth.

Also, the employment, in each draw-head, of two separate springs G I, of unequal tension, operating in the manner substantially as and for the purpose herein shown and described.

No. 39,928.—MAURICE C. HULL, of New York, N. Y.—*Improvement in Fireplace Grates*.—Patent dated September 15, 1863.—The fire-pot is enlarged by being extended back of the grate front, the heated air rises to a chamber traversed by pipes, in which latter the air has previously passed against the back of the fireplace. Additional heating surface is gained underneath the inclined ash plate by a chamber which communicates with the air-jacket encircling the grate.

Claim.—First, the end pieces c c of the fire-pot, extending back behind the grate-frame, as set forth, for increasing the size of such grate or fire-pot, as set forth.

Second, the pipes A, extending from the end pieces c to the chamber g, for the purposes and as specified.

Third, the air-pipe or pipes s t and u, passing through the chamber g, when said pipes are so located as to cause the air that passes through them to ascend contiguous to the heated back of the grate, as set forth.

Fourth, the chambers d', at the base of the end plates c, for the purposes and as specified.

No. 39,929.—G. W. HUNT, of Muscatine, Iowa.—*Improvement in Ploughs*.—Patent dated September 15, 1863.—This is an improvement on the inventor's former patent, dated March 27, 1860, and consists of an arrangement for keeping the beam of the plough horizontal when the machine is on inclined ground, which is accomplished by means of a lever, segment pinion, and ratchet, acting upon a sliding plate which inclines the standard to which the plough-beam is attached. The driver's seat is upon the rear end of the beam, and is supported upon two wheels journaled in a branching standard.

Claim.—First, inclining the plough to suit the inclination of the land, by means and in the manner herein shown and described.

Second, the friction rollers H I, in combination with the sliding plate J, fixed plate C, and rod F, for the purpose specified.

Third, the employment or use of the two wheels V V, at the rear or back end of the beam D, when said wheels are used in combination and in relation with the plough E, and driver seat W, as set forth.

Fourth, the arrangement of the T, branched at its lower end to receive the axle x of the wheels v v, as and for the purpose set forth.

No. 39,930.—LEMUEL P. JENKS, of Boston, Mass.—*Improvement in Compound Sabot for Hot Shot*.—Patent issued September 15, 1863; antedated October 2, 1862.—Pottery ware and plaster of Paris are interposed between the hot iron and the wooden sabot.

Claim.—The interposition between the shot and sabot, or its attachments, of a non-conductor or non-conductors of heat, substantially as described.

No. 39,931.—JOHN M. KELLY, of Clinton, Ill.—*Improvement in Seed-Planters*.—Patent issued September 15, 1863; antedated November 2, 1861.—In this device the draught-pole is rigidly attached to the axle on which are the supporting wheels; pivoted to this axle is a frame on which are two series of devices, each consisting of a cutter-wheel, share, and a seed box, which drops the corn into the furrow behind the share; the frame is lifted so as to gauge the depth of furrow by a lever attached to the forward part of the frame and pivoted to a standard attached to the rigid frame.

Claim.—The arrangement of the pivoted frame L L M and N, carrying the sheaves or ploughs P, seed boxes O, and cutter-wheels Q Q, in combination with the stiff main or draught beams A A, lever K, and standard J, for the purpose of regulating the depth of furrow, substantially as and for the purpose set forth.

No. 39,932.—JAMES P. KENYON, of Brooklyn, N. Y.—*Improvement in Journal Boxes*.—Patent issued September 15, 1863; antedated February 2, 1863.—The journal is supported upon and surrounded by friction rollers whose journals are retained within concentric rings and kept at their relative distances in their annular track by smaller rollers.

Claim.—The employment of the rings E E E E and D' D' D D, to confine and support the rollers C C C C C C, in position as shown, or any other device substantially the same.

No. 39,933.—OLIVER LAFRENIERE, of New York, N. Y.—*Improved Bedstead and Table Combined*.—Patent issued September 15, 1863; antedated December 12, 1862.—The two pair of legs are pivoted to corresponding pairs of legs under the table; by being spread, the table comes near the floor and the curves of the legs project upwards so as to form points of attachment for a sacking bed-bottom.

Claim.—The combination of the disk or plate A, legs D, and sacking bottom or mattress F, constructed and arranged to form a new and useful article of manufacture, for the purpose specified.

No. 39,934.—ISAAC W. LAMB, of Detroit, Mich.—*Improvement in Knitting Machines*.—Patent dated September 15, 1863.—This is explained in the claim.

Claim.—First, the employment in a knitting machine of two straight rows of needles operating alternately in such a manner that the yarn conductor passing down and back will carry the yarn over one row of needles while passing in one direction, and over the other row while passing in the opposite direction, substantially as herein described, thereby uniting the work produced by the two rows of needles at each end of the rows, and making tubular knitting in a straight knitting machine.

Second, the employment, for giving motion to the two straight alternately operating rows of needles to produce tubular knitting, of two cams F G and F' G', a portion of which is shifted at every stroke of the machine to produce the alternation in the operation of the two rows of needles, substantially as herein specified.

Third, combining the movable portions of the cams with the sliding frame or carriage which carries them by means of slides H, longitudinally moving parallel bars J J', oblique slots g g, and pins p p, the whole operating substantially as herein set forth.

Fourth, combining the longitudinal parallel bars J J' with the sliding frame or carriage which carries the cams by means of a screw L, secured to the transverse connexion K of the said bars, and finished with a head L' and adjustable stop-nuts M M', operating substantially as and for the purpose herein specified.

Eighth, the apparatus by which the balls are conveyed to and inserted in the paper case.
Ninth, also discharging the paper case from the mandrel, substantially as herein set forth.
Tenth, also the vibrating trough K, for conveying the completed case away from the machine.
Eleventh, also the vibrating pressing apparatus B, for holding the paper and cord to the mandrel while being conveyed to the machine.
Twelfth, roughening the surface of the mandrel for the purpose of feeding the paper into the machine.

No. 39,924.—BENNET HOTCHKISS, of New Haven, Conn.—*Improved Atmospheric Trip Hammer*.—Patent issued September 15, 1863; antedated July 2, 1863.—In this machine the hammer is raised by the elevation of the pneumatic spring-box, in which the body of air under the piston forms an elastic spring. In the number and disposition of the air passages this is an improvement on the inventor's patent of June 14, 1859, and is sufficiently described in the claim. The piston-rod is enlarged at its junction with the hammer to guard against fracture, and an elastic washer placed beneath the bolt heads and against the frames to avoid fracture from the concussion of the hammer.

Claim.—First, the elastic washer i and bolts N, in combination with the supporting frame A and working frame B, in the manner and for the purpose substantially as herein set forth.

Second, two air passages a and b, in combination with a pneumatic or air-spring cylinder, when said passages are arranged substantially in the manner and for the purpose described.

Third, the valves F G, arranged as described, in combination with a pneumatic or air-spring cylinder, operating in the manner and for the purpose substantially as herein specified.

Fourth, the combination described of the valves F G with the air-passage H, for the purpose of changing the air from the upper to the lower air-spring, or vice versa, to lessen or increase the force of the blow of the hammer without changing the velocity of the cylinder, substantially as set forth.

Fifth, the enlargement of the piston-rod in the manner described, in combination with the stuffing-box plates, or their equivalents, substantially for the purpose specified.

No. 39,925.—JAMES L. HOWARD, of Hartford, Conn.—*Improvement in Railroad Car Ventilators*.—Patent dated September 15, 1863.—The elevated central portion of the car roof is extended to form an air-receiving chamber, from whence the air is carried down, brought into contact with water, and raised again free from dust, to enter the car.

Claim.—The air-chambers A, produced by the extension of the raised or elevated roof of railway passenger cars, as shown in the drawings, in combination with the automatic doors F and air-passages B C and D and registers E, when constructed and operating substantially as described.

No. 39,926.—O. A. HOWE, of Fort Plain, Montgomery county, N. Y.—*Improved Horse-shoe*.—Patent dated September 15, 1863.—The lower or face side of the shoe is provided with a groove having pendant projections within it, to hold a filling of India-rubber, and prevent the accumulation of snow in the shoe.

Claim.—A horseshoe having India-rubber applied and secured to it in the manner substantially as herein set forth.

No. 39,927.—EDWARD P. HOWLAND, of Worcester, Mass.—*Improvement in Car Coupling*.—Patent dated September 15, 1863.—The device consists of a combined weight and pin in connexion with a sliding pin support and two springs, so arranged that the link is enabled to secure itself in the draw-head when forced therein, and retained in a horizontal position when in one draw-head only, to avoid being bent in case of the adjoining draw-heads of two cars coming in contact.

Claim.—The construction of the drop bar B with a flattened portion and a pin c upon its lower extremity, as herein shown and described, so that said pin c will pass through and lock the connecting link, while the flattened portion will press upon, and by its weight maintain the link in a horizontal position, all as set forth.

Also, the employment, in each draw-head, of two separate springs G I, of unequal tension, operating in the manner substantially as and for the purpose herein shown and described.

No. 39,928.—MAURICE C. HULL, of New York, N. Y.—*Improvement in Fireplace Grates*.—Patent dated September 15, 1863.—The fire-pot is enlarged by being extended back of the grate front, the heated air rises to a chamber traversed by pipes, in which latter the air has previously passed against the back of the fireplace. Additional heating surface is gained underneath the inclined ash plate by a chamber which communicates with the air-jacket encircling the grate.

Claim.—First, the end pieces c c of the fire-pot, extending back behind the grate-frame, as set forth, for increasing the size of such grate or fire-pot, as set forth.

Second, the pipes A, extending from the end pieces c to the chamber g, for the purposes and as specified.

Third, the air-pipe or pipes s t and u, passing through the chamber g, when said pipes are so located as to cause the air that passes through them to ascend contiguous to the heated back of the grate, as set forth.

Fourth, the chambers d', at the base of the end plates c, for the purposes and as specified.

No. 39,929.—G. W. HUNT, of Muscatine, Iowa.—*Improvement in Ploughs*.—Patent dated September 15, 1863.—This is an improvement on the inventor's former patent, dated March 27, 1860, and consists of an arrangement for keeping the beam of the plough horizontal when the machine is on inclined ground, which is accomplished by means of a lever, segment pin-ion, and ratchet, acting upon a sliding plate which inclines the standard to which the plough-beam is attached. The driver's seat is upon the rear end of the beam, and is supported upon two wheels journaled in a branching standard.

Claim.—First, inclining the plough to suit the inclination of the land, by means and in the manner herein shown and described.

Second, the friction rollers H I, in combination with the sliding plate J, fixed plate C, and rod P, for the purpose specified.

Third, the employment or use of the two wheels V V, at the rear or back end of the beam D, when said wheels are used in combination and in relation with the plough E, and driver seat W, as set forth.

Fourth, the arrangement of the T, branched at its lower end to receive the axle π of the wheels v v, as and for the purpose set forth.

No. 39,930.—LEMUEL P. JENKS, of Boston, Mass.—*Improvement in Compound Sabot for Hot Shot*.—Patent issued September 15, 1863; antedated October 2, 1862.—Pottery ware and plaster of Paris are interposed between the hot iron and the wooden sabot.

Claim.—The interposition between the shot and sabot, or its attachments, of a non-conductor or non-conductors of heat, substantially as described.

No. 39,931.—JOHN M. KELLY, of Clinton, Ill.—*Improvement in Seed-Planters*.—Patent issued September 15, 1863; antedated November 2, 1861.—In this device the draught-pole is rigidly attached to the axle on which are the supporting wheels; pivoted to this axle is a frame on which are two series of devices, each consisting of a cutter-wheel, share, and a seed box, which drops the corn into the furrow behind the share: the frame is lifted so as to gauge the depth of furrow by a lever attached to the forward part of the frame and pivoted to a standard attached to the rigid frame.

Claim.—The arrangement of the pivoted frame L L M and N, carrying the sheaves or ploughs P, seed boxes O, and cutter-wheels Q Q, in combination with the stiff main or draught beams A A, lever K, and standard J, for the purpose of regulating the depth of furrow, substantially as and for the purpose set forth.

No. 39,932.—JAMES P. KENYON, of Brooklyn, N. Y.—*Improvement in Journal Boxes*.—Patent issued September 15, 1863; antedated February 2, 1863.—The journal is supported upon and surrounded by friction rollers whose journals are retained within concentric rings and kept at their relative distances in their annular track by smaller rollers.

Claim.—The employment of the rings E E E E and D' D' D D, to confine and support the rollers C C C C C C, in position as shown, or any other device substantially the same.

No. 39,933.—OLIVER LAFRENIERE, of New York, N. Y.—*Improved Bedstead and Table Combined*.—Patent issued September 15, 1863; antedated December 12, 1862.—The two pair of legs are pivoted to corresponding pairs of legs under the table; by being spread, the table comes near the floor and the curves of the legs project upwards so as to form points of attachment for a sacking bed-bottom.

Claim.—The combination of the disk or plate A, legs D, and sacking bottom or mattress-F, constructed and arranged to form a new and useful article of manufacture, for the purpose specified.

No. 39,934.—ISAAC W. LAMB, of Detroit, Mich.—*Improvement in Knitting Machines*.—Patent dated September 15, 1863.—This is explained in the claim.

Claim.—First, the employment in a knitting machine of two straight rows of needles operating alternately in such a manner that the yarn conductor passing down and back will carry the yarn over one row of needles while passing in one direction, and over the other row while passing in the opposite direction, substantially as herein described, thereby uniting the work produced by the two rows of needles at each end of the rows, and making tubular knitting in a straight knitting machine.

Second, the employment, for giving motion to the two straight alternately operating rows of needles to produce tubular knitting, of two cams F' G and F' G', a portion of which is shifted at every stroke of the machine to produce the alternation in the operation of the two rows of needles, substantially as herein specified.

Third, combining the movable portions of the cams with the sliding frame or carriage which carries them by means of slides H, longitudinally moving parallel bars J J', oblique slots q q, and pins p p, the whole operating substantially as herein set forth.

Fourth, combining the longitudinal parallel bars J J' with the sliding frame or carriage which carries the cams by means of a screw L, secured to the transverse connexion K of the said bars; and finished with a head L' and adjustable stop-nuts M M', operating substantially as and for the purpose herein specified.

Fifth, providing for the permanent attachment of the parallel bars J J' to the sliding frame or carriage, either in position to fix both needle cams in an operative position, to operate both rows of needles for the production of ribbed work, or in a position to secure one cam in an operative condition and the other in an inoperative condition, for the knitting on but one row of needles, as in knitting the heels of stockings.

Sixth, in combination with the needle plates having their several needle grooves open from the inner to the outer edges of the needle plates, the rods s s inserted through grooves v v in the needle plates, intersecting the needle grooves, substantially as set forth, for the purpose of preventing the needles from slipping out.

Seventh, the yielding jacks t t applied in combination with the needle plates and needles, substantially as and for the purpose herein specified.

No. 39,935.—THOMAS S. LAMBERT, of Peekskill, N. Y.—*Improvement in Studs*.—Patent issued September 15, 1863; antedated October 11, 1862.—Two buttons attached by an elastic cord.

Claim.—A stud constructed by fastening together or nearly together two buttons or similar devices by a thread, cord, braid, or other elastic material, substantially as set forth.

No. 39,936.—ROBERT H. LECKY, of McClure, Alleghany county, Pa.—*Improved Propelling and Steering Apparatus*.—Patent dated September 15, 1863.—The shaft of the propeller of this apparatus is capable of a horizontal rotary motion under the impulse of the tiller ropes, and thus the vessel is guided and driven.

Claim.—The combination and arrangement of the propeller b, shafts c and d, packing box i, wheels g h and j, head block n, tiller ropes m and o, and tiller wheel P, the whole being combined and arranged substantially as herein described and for the purpose set forth.

No. 39,937.—JOSEPH LEEDS, of Philadelphia, Pa.—*Improvement in Ventilators for Buildings*.—Patent issued September 15, 1863; antedated December 14, 1862.—It consists in so constructing the vibratory valve plate and attaching it to its frame or case as that the gravitation of the former will give it a constant tendency to fall inwards towards the flue, whilst the single cord, suspended therefrom and extending down into the room, has a weight attached as a counterpoise to the gravitating tendency of the valve plate.

Claim.—Operating the valve plate B of the ventilator, by means of its gravitating tendency, in combination with the one cord C and a weight E attached to the lower end of the said cord, substantially in the manner described.

No. 39,938.—JAMES LYON, of Mott Haven, Westchester county, N. Y.—*Improvement in Skates*.—Patent dated September 15, 1863.—This is a method of attachment of the runner to the sole of the shoe by means of dovetail mortise blocks attached to the latter, in which are slipped corresponding tenons firmly attached to the runner.

Claim.—The dovetail recesses in the blocks d and e, open from end to end, in combination with the tapering dovetail blocks b and c on the skate a, as and for the purposes specified.

No. 39,939.—GEORGE H. MAGERSUPPE, of New York, N. Y.—*Improvement in Coal Stores*.—Patent dated September 15, 1863.—This consists of a plate set in the bottom of the stove and movable by means of a handle, so as to clear the ashes from between the grate bars by means of pins which are attached to the plate, and also to close or regulate the draught.

Claim.—In a stove for burning dust and refuse coal, the movable bottom n, with its pins o o o, grate e, handle E, in combination with the inner cylinder B, when constructed and operating substantially as described.

No. 39,940.—WILLIAM McCORD, of Sing Sing, N. Y.—*Improvement in Projectile for Many-chambered Gun*.—Patent issued September 15, 1863; antedated November 1, 1862.—The projectile consists of a head with a chisel-shaped face, and with bolts in the rear which project into the different bores of the many-chambered gun.

Claim.—The before described projectile formed of a steel or other hard metal chisel-shaped front, as described, with pistons B attached to the rear of the same, for insertion into the corresponding bores of the many-chambered gun, as herein set forth.

No. 39,941.—WILLIAM McKIBBIN, of Buck Valley, Fulton county, Pa.—*Improvement in Sight for Fire-arms*.—Patent dated September 15, 1863.—The sight consists of two plates of different lengths set at right angles to each other and pivoted at their angle, a sight notch being cut in the edge of each.

Claim.—The right-angle sight herein described.

No. 39,942.—JOHN McMURTRY, of Lexington, Fayette county, Ky.—*Improvement in Rifled Projectile*.—Patent issued September 15, 1863; antedated October 16, 1862.—The object of the improvement is to make the rifling in the projectile so as to obtain the rotation

of the projectile from the smooth-bore gun. The channels are made in the ball, commencing near the point and running straight one-third of the distance back, and from that point assuming an increase twist. The base of the projectile is concave.

Claim.—The making, on the sides of an elongated projectile, two or more grooves or channels, with an increasing spiral twist toward the rear end of the projectile, substantially as described and for the purposes set forth.

Also, the above-named improvements in projectiles in combination with the "Minié" feature, substantially as described and for the purposes set forth.

Also, the above-mentioned improvements in projectiles, in combination with the omission of that portion of the channels B B from the front of the projectile to that part of the same where the twist of the channel commences, substantially as described and for the purposes set forth.

No. 39,943.—SOLOMON MEAD, of New Haven, Conn.—*Improvement in Ploughs*.—Patent dated September 15, 1863.—The mould-board is of a shape corresponding to a segment of a cone.

Claim.—The construction of the mould-board or turning surface of ploughs to correspond with a section or segment of a cone, substantially as before described and for the purposes set forth.

No. 39,944.—HENRY D. MEARS, of Washington, D. C.—*Improved Inconceivable Mark or Label for Bales of Cotton, &c.*—Patent dated September 15, 1863.—The label is attached by an inconceivable metal connecting the hook or needle, which is buried in the bale, with the tag, label, or seal.

Claim.—The combination with a label or tag or identifying mark for bales of cotton, wool, hemp, flax, hay, or other fibrous material, of an attachment of metal rendered inconceivable, or of metal or material of itself inconceivable, in the manner and for the form herein set forth.

Also, the combination of the hook or needle, the metallic cord or cable, the tag and seal, the whole constructed and operating substantially as herein set forth.

No. 39,945.—CHARLES MONSON, of New Haven, Conn.—*Improvement in Brackets for Lamp or Gas-lights*.—Patent issued September 15, 1863; antedated July 4, 1862.—This is an improvement on J. R. Hunter's patent of October 30, 1855, in that it gives the outer ends of the long sides of the parallelogram a curve or right-angled bend so as to admit of the use of insertion conduit joints, the elevation of the bracket being sustained by a brace and ratchet.

Claim.—The use of the parallel tubes, as A and B, in combination with Z-shaped tubes, as C, Fig. 2, or tubes of any analogous form, so as to use insertion conduit joints, when the whole is constructed, arranged, and fitted for use, substantially as herein described.

Second, the use of the rack a and ratchet or click b for sustaining the light at the desired elevation, in combination with the parallelogram, substantially as set forth.

No. 39,946.—WILLIAM MOORE, of Brooklyn, N. Y.—*Apparatus for Rubbing Type*.—Patent issued September 15, 1863; antedated October 18, 1862.—This is designed for removing the projection or sprue attached to the cast type. The cutting plates, between whose edges the type are forced, are dressed so that one edge is thicker than the other, so as to make an interval or "mouth" between them, when they are ranged side by side and confined by screws within the stock. Two of these stocks are arranged relatively to the bed, with a space between them to be traversed by the type impelled by suitable machinery.

Claim.—The employment of cutting plates formed with wedge-shaped mouths, substantially as specified and for the purposes set forth.

Also, the employment of plates with openings between them to press the type to the cutters and avoid heating, as set forth.

No. 39,947.—NELSON W. NORTHRUP, of Greene, Chenango county, N. Y.—*Improvement in Submarine Battery*.—Patent issued September 15, 1863; antedated August 14, 1862.—This consists of a series of magazine buoys, moored by means of anchors so as to be beneath the surface of the water, and so arranged and constructed as to be exploded by the contact of any ship or boat with any part of the rigging of the buoy.

Claim.—The combination of the buoys, magazines, levers, spring hammers, nipple tubes, cords or wires, and cables with the anchor weights, made, arranged, and operated as herein before described, and for the purpose therein named.

No. 39,948.—M. PAKE, of Dorchester, Macoupin county, Ill.—*Improvement in Apparatus for Evaporating*.—Patent dated September 15, 1863.—This is a double or reverting furnace communicating by an arch at the back, so as to make it approximate a horseshoe form; pans are set over each furnace, the upper communicating with the other by a faucet.

Claim.—The within-described arrangement of the pans (C and C') in combination with the furnace A A' A'' r s, all being constructed and arranged substantially as and for the purposes set forth.

No. 39,949.—F. C. PAYNE, of New York, N. Y.—*Improved Self-holding Clamp for Curtain Fasteners*.—Patent issued September 15, 1863; antedated January 18, 1863.—The conical pulley is arranged within a case which has an open side in front, and the cord runs freely on the smaller part of the pulley, but, when shifted to the larger part, is clamped against the inner surface of the case and the pulley prevented from rotating.

Claim.—The shell or case A, having an open front and an interior surface *a*, composed of a groove *b* and raised surface *c* and also provided with a recess *e* at one side, in combination with the conical pulley B, placed in the shell or case, and arranged relatively in respect to its diameter or larger and smaller ends, with the groove *b* and raised surface *c*, to operate as and for the purpose herein set forth.

No. 39,950.—T. MORRIS PEROT, of Philadelphia, Pa.—*Improvement in Packing Bottles, &c., for Transportation*.—Patent issued September 15, 1863; antedated June 16, 1863.—Projections or belts are so arranged on the bottles or packages as to bear snugly against each other, and keep the main bodies of the packages from contact.

Claim.—The system of cases or packages C C, having belts or projections so arranged that while the said packages fit snugly together within a box or drawer A, the main body of one package shall be free from contact with that of the adjacent package, as set forth for the purpose specified.

No. 39,951.—T. MORRIS PEROT, of Philadelphia, Pa.—*Improved Wagon for Transporting Medicines*.—Patent dated September 15, 1863.—The body of the wagon is occupied by four chests, and an intervening space for the dispensing officer to occupy. Another chest is placed over the lower tier, a flap in which is let down for a dispensing table. The cases are provided with convenient drawers and compartments.

Claim.—The arrangement within the body of the wagon, substantially as described, of the cases D E F G and H, the intervening space I, and doorway J, for the purpose specified.

No. 39,952.—T. M. PEROT, of Philadelphia, Pa.—*Improved Medicine Case*.—Patent dated September 15, 1863.—The chest has a cavity in the centre which is closed by a lid; it has also a lower drawer and falling front resting as a table upon the drawer. The fallen front exposes a series of partitions with which also two side drawers are provided. Each partition has a spring to raise the bottle against the top of the recess where its stopper lodges in a cavity and a ledge in front which holds the bottom of the bottle from slipping out.

Claim.—First, the within-described case, with its partitioned front C, partitioned drawers D, lid G, chamber A, and drawer or drawers E, the whole being constructed and arranged substantially as and for the purpose herein set forth.

Second, the within-described recess for the bottles, each recess having at the bottom a spring *d* for elevating the bottle, a notch or cavity at the top for the reception of the stopper, and a guard *i* in front, and the whole being arranged substantially as and for the purpose herein set forth.

No. 39,953.—WILLIAM J. POTTER and WILLIAM H. ARNOLD, of Chicago, Ill.—*Graining Tool*.—Patent dated September 15, 1863.—This is a roller on an axis in a handle with spring arms so as to be readily detached. Its periphery has a pattern to be transferred by the act of revolving the roller in connexion with the object to be ornamented; a break or gap in the roller affords means for the fair commencement of the ornamentation at a given line, and the rollers are ornamented in sets so as to make a general combination of their united patterns.

Claim.—First, constructing a roller for graining and other ornamental painting with two jaws L and R, substantially as and for the purposes herein shown and described.

Second, the combination and arrangement of the circular plate C, the rods *d*, provided with the pin *i*, the spring *s*, and the slots *a* and *c*, constructed and operating substantially as and for the purposes herein shown and specified.

Third, arranging said rollers in sets, and the ornamental design thereon, in such a manner that one complete and perfect design may be grained or imitated by the employment of said rollers in set, in the manner herein specified and described.

No. 39,954.—GEORGE M. POWELL, of River Falls, Pierce county, Wis., CHARLES D. LINCOLN, of Biddeford, York county, Me., and G. EVANS, of Richburg, Alleghany county, N. Y.—*Improved Camp and Hospital Cot*.—Patent issued September 15, 1863; antedated April 11, 1863.—This consists of a webbing which is supported by three pairs of crossed and pivoted legs, which are locked in their open position, their upper ends projecting through grommet holes in the webbing which is stayed by ropes attached to tent pins.

Claim.—First, the combination of the webbing A B, rollers C, stays E, and legs H J, constructed and employed substantially as and for the purpose set forth.

Second, the grommet F, formed upon the ends of the stays E, passed through the rollers C, all as hereinbefore explained.

Third, the locking device N, employed in connexion with the hinged legs H I or J, in manner substantially as and for the purposes set forth.

No. 39,955.—WILLIAM B. ROBINSON, of Detroit, Mich.—*Improvement in Slide Valves for Steam Engines*.—Patent dated September 15, 1863.—The packing consists of concentric rings in segmental sections arranged in an annular cavity in the back of the valve. The steam presses them against the steam chest and against the inner face of the cavity.

Claim.—The packing *f g*, composed of two or more divided or segmental rings, or their equivalents, fitted one within the other and arranged and fitted within a cavity *e e*, in the back of the valve, to which steam is admitted through openings *j j*, in such manner as to compress or contract the packing around the inner face of the said cavity and at the same time press it against the cover or back of the steam chest, all substantially as herein specified.

No. 39,956.—TOPPAN P. RODGERS, of Taunton, Bristol county, Mass.—*Improvement in Belt Shippers*.—Patent dated September 15, 1863.—This consists of a sliding plate and attached box, which moves in guides over the belt hole in the floor; the belt passes through the box, and the latter is moved by a lever to shift the position of the belt relatively to the pulley which revolves beneath.

Claim.—The boxes G, one or more, connected to or cast with sliding plates E, fitted between suitable guides arranged on plates E, or otherwise, in such a manner as to admit of the boxes G, as the belt is shifted, working over the bolt openings *a*, in the floor, substantially as and for the purpose herein specified.

No. 39,957.—JOHN B. ROOT, of New York, N. Y.—*Improved Steam Engines*.—Patent dated September 15, 1863.—In this engine two pistons are combined in one cylinder. One of them is hollow and has a reciprocating rectilinear motion; the other is inside of the former and has a motion of similar character, but at right angles to the motion of the former. To the latter piston the crank is attached. Steam is admitted to the outer box and the interior of the outer piston, so as to act first on one and afterwards on the other side of each piston, and to commence operating on either side of one piston when the other piston is at half stroke, so that it acts on both pistons at once to produce a rotary motion. The leakage of steam between the adjacent surfaces of the pistons and cylinder heads is prevented by a packing plate and wedge frame. The arrangement of eduction and induction valves, consisting of a flat disk with an annular cavity, and fitted directly to an eccentric with the methods of reversal of the same, and of lubricating the crank wrist and its bearing, are explained in the claim.

Claim.—First, the two pistons D and E, combined with each other and with the cylinder A and crank shaft G, to operate substantially as herein specified.

Second, the packing plate Q, applied in combination with the cylinder head C and the two pistons D E, substantially as and for the purpose herein set forth.

Third, the wedge frame R and its double series of wedges *y y*, applied in combination with the cylinder head *c* and packing plate Q, to operate substantially as and for the purpose herein described.

Fourth, the eccentrically-moving disk or ring-valve I, constructed with an annular cavity *i*, and operating substantially as herein described.

Fifth, combining the valve operating eccentric J with the crank shaft G by means of the arm L and the toothed gearing *p q r*, or its equivalent, substantially as and for the purpose herein set forth.

Sixth, providing for the lubrication of the crank-wrist bearing by means of channels or passages made in the wrist and wrist plate or arm of the crank, and communicating with the journal box or bearing provided for the shaft in one of the cylinder heads, substantially as herein described.

Seventh, and finally, an engine composed of a cylinder A, two pistons D E, working one within and at right angles to the other in the said cylinder, a shaft G, furnished with a crank connecting directly with the inner piston E and a valve I, and system of ports *e e' f f'*, for effecting the induction and eduction of the steam or other liquid to and from the cylinder and the interior of the outer piston, the whole operating substantially as herein described.

No. 39,958.—REUBEN ROLPH, of Coventry, N. Y.—*Improvement in Holdbacks for Carriages*.—Patent issued September 15, 1863; antedated November 2, 1861.—This consists of a holdback hook with a bridge, on which is an India-rubber tube caused to bulge up against the point of the hook and retain the ring, unless it is forcibly drawn forward, as by the horse in walking forward from between the shafts.

Claim.—The combination of the India-rubber tube F, bridge *b*, and hook A, arranged substantially as and for the purpose set forth.

No. 39,959.—CHARLES ROSS, of Hartland, Livingston county, Mich.—*Improvement in Machines for Measuring Grain*.—Patent dated September 15, 1863.—This consists of an index operated by the discharging grain-slide of a weighing machine. The motion is communicated to a ratchet wheel on the index shaft by a bent spring arm and an inclined plane.

Claim.—The combination with the frame A, discharge opening C, and grain valve or slide B, of a grain bin of the arm D, inclined block E, actuating pawl J, and index box F, containing the indicating mechanism, in the manner and for the purpose herein shown and described.

No. 39,960.—T. F. RUMBOLD, of St. Louis, Mo.—*Improvement in Rolling Mills*.—Patent issued September 15, 1863; antedated June 2, 1863.—This is designed for rolling tapered iron, and consists in making a spiral groove around the one roller and a corresponding thread around the other, making a continuous track of decreasing area.

Claim.—The forming of the mould or working surface around the rollers in a spiral or screw-like form, making one continuous track from one end of the rollers to the other end of the same, so as to be the counterpart of the bar or beam that is desired to be rolled, substantially as set forth.

No. 39,961.—J. L. RUNK, of Nashville, Washington county, Ill.—*Improvement in Gang Ploughs*.—Patent dated September 15, 1863.—The ploughs are attached to a beam whose front end rests on an axle supported by wheels, the rear end being supported by a castor wheel. The front end of the beam is mortised into a wedge-shaped piece on the axle, which is capable of lateral adjustment, by means of a screw, to throw the plough in and out of land.

Claim.—The employment of the inclined bolster D, in combination with the screw *f*, platform E, and beams H, all being constructed and arranged to operate substantially as herein described for the purposes set forth.

No. 39,962.—GELSTON SANFORD and JAMES E. MALLORY, of New York, N. Y.—*Improvement in Machine for Breaking and Cleaning Flax, Hemp, &c.*—Patent dated September 15, 1863.—The screw which rotates the wheels also acts by its longitudinal reciprocating motion as a rack to impart a reciprocating rotary to them, and the excess of motion in one direction, owing to the continuous rotation due to the revolution of the screw, feeds the flax through the machine.

Claim.—Imparting to one or more pairs of rollers for breaking and cleaning flax, or other fibre-yielding plants, a rotary reciprocating motion, with the range of motion greater in one direction than in the opposite direction, by combining with the said rollers a screw or worm having a rotary and a longitudinal reciprocating motion, substantially as herein described.

No. 39,963.—SAMUEL T. SANFORD, of Fall River, Mass.—*Improved Device for Quartering, Coring, and Stringing Fruit*.—Patent dated September 15, 1863.—This device consists of a sliding rod with curved arms and a spur which drive an apple down upon the coring, quartering, and stringing device, so as to complete those operations at one movement.

Claim.—The coring device G, quartering cutters H, and stringing cutters I, arranged as shown, in combination with the sliding rod C, provided with the point or spur E and curved arms D, the above parts being connected or applied to a suitable upright or support A, and all arranged substantially as herein set forth.

No. 39,964.—MINA SEHILLE, of New York, N. Y.—*Improvement in Corsets*.—Patent dated September 15, 1863.—The improvement is in the cutting out of the parts so as to make the requisite protuberances of the finished article, and consist of gores for the bosom-holders and quilted sections to produce the requisite fullness and rounded conformation for the hips.

Claim.—The hip pieces *d d*, quilted and introduced in the lower portions of the sides of the corset below and between the parts *a* and *b*, in the manner and for the purposes specified.

Also, the quilted bosom gores *c c*, introduced in the front piece *a* of the corset, with the tongue *7* between them, as set forth.

No. 39,965.—ALBA F. SMITH, of Norwich, Conn.—*Improved Condenser for Steam Engines*.—Patent dated September 15, 1863.—The improvement relates to the arrangement of the passages connecting the tanks with the condenser, and conducting the air into the water, so as to secure a circulation of the water and bring them together, so that the water, heated by exposure to the steam, shall part with its heat to the air for combustion. The devices are defined in the claim.

Claim.—First, in condensing or partially condensing steam engines, the arrangement of the condenser and passages *7* and *8*, connecting the same with the tanks *W W'*, and the passage *9*, connecting the tanks *W W'*, substantially as and for the purpose herein set forth.

Second, in such engines, the passage of the air for combustion, or for promoting the draught through the water, or equivalent receptacle for storing the caloric, and thus aiding the efficiency of the apparatus, substantially in the manner herein set forth.

Third, in such engines, when a quantity of water or other fluid is used as a receptacle for so storing caloric, bringing the water, after its use, to condense the steam in direct contact with the air employed to receive the heat, substantially in the manner and for the purpose herein set forth.

Fourth, in such engines, so introducing such air that the motion thereof towards the surface of the water, which is due to the difference in density between the air and the water, shall induce or promote a circulation of such water, substantially in the manner and for the purpose herein set forth.

No. 39,966.—ALBERT M. SMITH, of New York, N. Y.—*Improvement in Sewing-work Holders*.—Patent issued September 15, 1863; antedated November 1, 1862.—This is intended for holding work and skeins on the lap, and is made in two sections, hinged together in such

a manner that it can be attached to the lap by closing them together on the garment, and withstand ordinary pulling in any direction, the India-rubber band confining the sections together, and they holding the garment by means of points or hooks.

Claim.—First, the holder, as described, constructed in two sections, so arranged and hinged together that it can be attached to the lap by closing them together on the garment covering it, as described.

Second, in combination with the foregoing, the spring *h*, in connexion with the attachments *f f* and *g g* to the sections, substantially as and for the purpose herein described.

No. 39,967.—DANIEL E. SOMES, of Biddeford, Me.—*Improved Cooling Room for Preserving Provisions*.—Patent issued September 15, 1863; antedated July 20, 1862.—The chamber (with the exception of the doorway) is surrounded by a series of walls, with intervening spaces communicating by a pipe with the outer air. The chamber itself is supplied with fresh air, cooled by the application of refrigerating mixtures or ice, by means of a pipe from the exterior, which discharges the air below the lattice floor, from whence it reaches the chamber. The foul air is carried off by a pipe from the upper part of the chamber, which pipe passes through the partitions to the outer air.

Claim.—The combination of the insulated chamber A, vertical tube or tubes E, one or more vats E', and ventilating pipe F, all constructed, arranged, and operating in the manner and for the purposes herein shown and explained.

No. 39,968.—DAVID STEINERT, of Hamburg, Germany.—*Improvement in Varnish for Making Printers' Ink, and for other purposes*.—Patent dated September 15, 1863; patented in France September 19, 1862.—Explained by the claim.

Claim.—First, the within-described production of thick varnish, the same consisting of refined petroleum and resin or resinous gums, the latter in very large proportion, with or without the addition of soap, the ingredients being agitated together at the temperatures designated, as and for the purpose herein set forth.

Second, the within-described production of thin varnish, the same consisting, first, of refined petroleum and resin or resinous gum, the latter in very large proportions, with or without the addition of soap, and ultimately of a much larger proportion of petroleum, the ingredients being agitated at the temperatures designated, while the proportion of petroleum is small, then cooled and subsequently again agitated at the moderate temperature designated, as and for the purpose herein set forth.

Third, the use of soap in combination with petroleum and resin or resinous gums, as and for the purpose herein set forth.

No. 39,969.—SALMON STEVENS and JOSEPH P. SMITH, of Pittsburg, Pa.—*Improvement in Grates*.—Patent issued September 15, 1863; antedated November 24, 1862.—The basket grate is fitted in the fireplace so as to be slipped in and out, to radiate, more or less, into the room; a perforated guard-plate at the back end of the grate retains the coal. By means of the damper the volatile products are allowed to pass behind or before the drum, which communicates with air ducts, and by which arrangement the draught of the chimney and the radiation of heat is controlled.

Claim.—First, in combination with the grate B thus arranged, the perforated guard-plate C, applied to the grate as and for the purpose set forth.

Second, the drum or cylinder E, communicating with the air ducts *i i j*, provided with a slot or opening *l* at its upper part, and arranged relatively with the flue or chimney F, grate B, and damper G, to operate as and for the purpose specified.

No. 39,970.—JOSEPH STILES, of Salem, Washtenau county, Mich.—*Improvement in Ladders*.—Patent dated September 15, 1863.—Resting upon the upper rounds of the double ladder is a platform, with cleats underneath it, and a strip by which one of the rounds is confined, so that the platform cannot tilt up.

Claim.—The strip *h* attached to the cleats *f g* at the upper side of the platform C, and operating in combination with the rounds *b c* of the ladder and support, in the manner and for the purpose shown and described.

No. 39,971.—GOTTFRIED TEICHAERT, of New Haven, Conn.—*Improvement in Carriage Seat*.—Patent issued September 15, 1863; antedated November 26, 1862.—The object is to make the seat board and seat reversible, so as to be folded out of the way when out of use, and to admit of the driver sitting inside. The seat folds back and over inside of the carriage, while the foot back is folded over on to the seat support.

Claim.—First, the arrangement of the curved levers F, with slots *i* and hinged reversible seat C, with curved arms *b*, in combination with the arms *g* and foot-board E, all constructed and operating as and for the purpose shown and described.

Second, the combination of the hinged reversible seat C and foot-board E with the dashboard B of a carriage, substantially as and for the purpose set forth.

No. 39,972.—JOHN R. TREADWELL, of Brooklyn, N. Y.—*Improvement in Preparing Dough for Biscuit, &c.*—Patent issued September 15, 1863; antedated September 11, 1863.—The plunger is attached to the bed-plate of the engine, and the mould is lifted up against the

plunger by being attached to the rising cross-head by links with a toggle-joint connexion. A follower in the bottom of the mould discharges the slab of dough.

Claim.—The application of pressure to a mass of loosely-mixed or "cast" dough by means of moulds and a suitable press, substantially as described, whereby the mass is compressed into a solid slab of dough, having a comparatively smooth surface or skin, of convenient shape for the succeeding operation of the brake rolls, substantially as set forth.

No. 39,973.—GEORGE VANAUKEN, of Phelps, Ontario county, N. Y.—*Improvement in Fence Posts.*—Patent dated September 15, 1863.—The fence posts are bolted to stone bases, which are set in the ground.

Claim.—Supporting a fence by bolting the posts A, to which the horizontal rails or boards C are attached, to the vertical faces and near the upper ends of flat stones B set edgewise in or upon the ground, all as herein particularly described and for the purposes specified.

No. 39,974.—WILLIAM W. VIRDIN, of Baltimore, Md.—*Improvement in Pumps.*—Patent dated September 15, 1863.—The pump consists of three concentric cylinders, all provided with central lower valves, and of which the outer and central cylinders are stationary and connected at the top, and the middle cylinder has a vertical reciprocating motion, derived from a lever handle and connecting arms. The discharge tube proceeds from the upper end of the central cylinder.

Claim.—First, the intermediate moving valved chamber B, constructed, arranged, and operating substantially as described, in combination with the stationary valved chamber E and the valved receiving outer stationary chamber A, all adapted to the end stated, and substantially as specified.

Second, the outer stationary valved cylinder A, stationary inner mast, discharging cylinder E, in combination with the intermediate valved cylinder B and connecting arms C C, the latter passing directly through the central plate G and cap plate D, the whole constructed and operating substantially as described.

Third, the manner of securing the three-valved cylinders A and E together at their upper ends, viz: by means of the flanges *a f* and plate G, substantially as described.

No. 39,975.—W. WADSWORTH, of Sacramento, Cal.—*Improvement in Rotary Spading Machines.*—Patent dated September 15, 1863.—As the spades rise, after having performed their office, the soil is scraped out of them, and they are pressed and caused to pass under the casing until they are again projected to operate upon the ground.

Claim.—The employment of the cleaner or cam G in combination with the spades *d*, substantially in the manner and for the purpose herein shown and described.

No. 39,976.—M. W. WARNE, of St. Louis, Mo.—*Improved Soda Water Fountain.*—Patent dated September 15, 1863.—This fountain is intended to discharge a solution of supercarbonate of soda. The air chamber is arranged in the tank so as to contain a supply under pressure for delivery to the draught tube.

Claim.—The arrangement of the air chamber F within the soda tank B, and in combination with the suction and force pump and the draught pipe, the whole arranged relatively to the stand C, substantially as and for the purpose herein described.

No. 39,977.—CHARLES A. WATERBURY, of New York, N. Y.—*Improvement in Projectile for Fire-arms.*—Patent issued September 15, 1863; antedated November 8, 1862.—The shot has a cylindrical body with a rounded head. A cone starts from the base towards the rear, having a prolonged spindle. On the latter is an elastic packing, such as leather, which, in firing, is driven on to the cone and expanded into the rifling of the gun. The spindle, in striking the end of the bore, purposely limits the depth to which it descends.

Claim.—The method of giving the revolving motion to the projectile—that is to say, by forming a conical projection and spindle upon the base of the shot, and combining therewith a movable ring or disk of an expansible material, in the manner and for the purpose described herein.

No. 39,978.—J. W. WETMORE, of Erie, Pa.—*Improved Apparatus for Condensing Oil Vapor.*—Patent dated September 15, 1863.—The invention consists in double upward-flowing currents of water through shallow chambers above and below the condensing and cooling surfaces; the propulsion of these currents on the principle of the siphon; the corrugation, by transverse ridges, of the upper metal plate; angular cross ridges or plain breaks in the upper part of the upper water chamber; cross ridges in the vapor chamber, with horizontal doors to allow the oil to pass while they throw the vapor against the upper condensing surface; and the application of water and steam jets to this form of condenser.

Claim.—First, the separate upward-flowing currents above and below the vapor chamber. Second, the propulsion of these currents on the principle of the siphon.

Third, the corrugation of the upper condensing surface.

Fourth, the breaks of wooden angles or doors in the vapor chamber.

Fifth, the sprinkler *s*, Figure 4, all substantially as set forth for the purposes specified.

No. 39,979.—ALEXANDER WHITE, of Geneseo, Henry county, Ill.—*Improvement in Governor Valves for Steam Engines.*—Patent dated September 15, 1863.—The tubular rod and central rod are so connected to each other (the governor and the crank-arm on the disk valves) that by the raising of the rod steam is admitted to start the engine and the crank retained at a point dependent upon the relative speed and consequent position of the governor balls. The valve consists of two disks, which are packed against their respective faces by three right and left screws or posts.

Claim.—First, the employment, in combination with a valve having such a system of openings as hereinbefore described, of an extensible connexion, consisting of a link F, or its equivalent, operating substantially as and for the purpose herein set forth.

Second, combining the two disks of a double disk valve by means of posts *j j*, constructed with right and left-hand screw threads, and applied to operate substantially as herein described.

No. 39,980.—THOMAS WILSON, of Metamora, Woodford county, Ill.—*Improvement in Machines for Measuring Grain.*—Patent dated September 15, 1863.—This machine is intended to be attached to a threshing machine to measure the amount of grain threshed. It consists of a cylinder with two grain-holders, which receive the grain from a hopper, and a scale-beam apparatus for detaching, revolving, and indexing.

Claim.—First, the cylinder C, provided with two grain receptacles *a a*, in connexion with the hopper E, provided with the slide F, operated through the medium of the roller G and projections *i i*, substantially as and for the purpose herein set forth.

Second, the scale-beam H, connected with the hinged plate I, in combination with the pins *j j* on the cylinder C, arranged to operate as and for the purpose set forth.

Third, the screw rod D passing through the cylinder shaft B, and provided with the weights *b b*, for the purpose of balancing the cylinder C on the shaft B, as specified.

Fourth, the two indexes M Q operating by gearing from the shaft B, substantially as shown, when said indexes and dials are used in combination with the cylinder C and scale-beam H, and all arranged for joint operation, as and for the purpose set forth.

Fifth, the brake formed of the cam *a* or shaft B, the elastic rod R, rod S, curved or bent, as shown, and the projections *s s* on the cylinder C, in combination with the lever or catch T, all arranged to operate as set forth.

No. 39,981.—W. E. WOODBRIDGE, of Little Falls, Herkimer county, N. Y.—*Improvement in Separating Vegetable Fibres.*—Patent issued September 15, 1863; antedated June 24, 1863.—The object of the invention is to separate the fibre for the manufacture of paper and for similar uses, and consists in the method of treating the material with alkaline solutions, the removal of the alkali from the fibre, and the subsequent recovery and preparation of the same for renewed use.

Claim.—First, the application of the quantity of alkali requisite for separating the fibres of the material acted on in such condition or strength of solution that it may be wholly absorbed within the pores of that material, and subjecting the material so impregnated to a desiccative heat, thereby concentrating the absorbed solution and promoting the action of the alkali, the quantity of alkali and the precise temperature to be regulated by the nature and quality of the materials employed, as set forth in this specification.

Second, the method of impregnating the material by enclosing it in a revolving vessel to which the solution is gradually supplied, substantially as described.

Third, the subjection of the material thus impregnated to desiccative heat in the same vessel in which the impregnation is effected.

Fourth, in connexion with the process described, the recovery of the alkali contained in the soluble portions of the prepared material, for renewed use, by removing them with as small a quantity of water as is usefully practicable, and by evaporation and incineration.

No. 39,982.—H. M. WYETH, of Broomfield, Davis county, Iowa.—*Improvement in Corn Planters.*—Patent dated September 15, 1863.—The two corn droppers are supported upon pivoted bars, and are raised and lowered by the action of cams on a central wheel, by which also the longitudinal motion of the feed-bar is accomplished. The hand lever throws the parts out of gear and stops the feed.

Claim.—The combination of the seed droppers E with the levers F and L and cams H and I, by which a vertical reciprocating motion is imparted to the seed droppers, while the seed slide M is operated horizontally, substantially in the manner herein described.

Also, in combination with the seed droppers, substantially as herein described, the lever N, for throwing the machine out of gear, substantially in the manner herein set forth.

No. 39,983.—JOHN YOUNGBERG, of Galva, Henry county, Ill.—*Improved Weather-Strip for Doors.*—Patent issued September 15, 1863; antedated December 8, 1861.—This consists of an elastic membrane stiffened with a plate; it is fastened at the ends and covers the length of the opening below the door; it is pushed back by the opening of the door, and covers its place by its own elasticity.

Claim.—The construction of a weather-strip, as described, of India-rubber stiffened by a plate, in such a manner that it will be opened by the opening of the door, and closed by its own elasticity when the door is closed.

No. 39,984.—WALTER AITKEN, of Newark, Ill., assignor to Himself and H. R. FOWLER, of the same place.—*Improved Marine Propelling Apparatus*.—Patent issued September 15, 1863; antedated September 12, 1863.—B B represent beams projecting horizontally from the sides of the vessel, and supporting pulleys C C and longitudinal sliding bars D D, connected by bands passing around the said pulleys. To the bars D are pivoted floats *a* or *a'*, in connexion with which are used levers of peculiar form to support the floats either from the front or back, so that they will act against the water in one direction, and yield in the other. The reciprocation of the bars D is thus made to propel the vessel forward or backward as directed.

Claim.—The combination and arrangement of the arms B, the wheels C, the reciprocating bars D, the band *d*, and the folding floats *a* *a'*, with the peculiar shaped levers E and the rods *n*, all being constructed, arranged, and operating substantially as and for the purposes herein described and delineated.

Second, the peculiar form and construction of the rod *m* *n*, in Figure 3, when used in combination with the bar D and the buckle *a'*, for the purposes herein specified and set forth.

Third, the combination of the arms B and the wheels C, the reciprocating bars D, the bands *d*, and the hanging bucket *a'*, with the peculiarly formed and constructed rod *m* *n* shown in Figure 3, when all are arranged, constructed, and operating substantially as and for the purposes herein delineated and set forth.

No. 39,985.—WILLARD BASCOM, of New York, N. Y., assignor to ROBERT FOULDS, of Brooklyn, N. Y.—*Improvement in Device for Driving Nails, &c., in Picture and other Frames*.—Patent dated September 15, 1863.—This machine consists in an arrangement of a hammer and awl combined, whereby the awl can be actuated to pierce the wood forming the picture frame, and the hammer brought to operate—the same machinery actuating each, and not necessitating the moving of the article till all is accomplished.

Claim.—First, the piercing awl or awls, fitted as specified, in combination with the hammer or hammers that cover the awls and press in the nails, as set forth.

Second, the sliding head actuated by a treadle, in combination with the awls and hammers, actuated as specified, whereby the attendant is at liberty to use his hands in the introduction of the nails and the steadying of the frame, as set forth.

Third, the construction of the holder *q* to receive the pieces of material forming the frame, and fitted with the springs *3* to retain said pieces in place, as specified.

Fourth, the ejecting pins *v*, in combination with the frame *r* and holder *q*, for the purposes set forth.

No. 39,986.—AMOS BOND, of Philadelphia, Penn., assignor to Himself and LOUIS B. LOUX, of the same place.—*Improved Composition for Blacking and Polishing Leather*.—Patent dated September 15, 1863.—Sufficient asphaltum is dissolved in warm benzine, spirits of turpentine, or other solvent, to make the composition of the consistence of cream; beeswax is added to make it of the required consistence for blacking.

Claim.—A composition of asphaltum, or its equivalent, beeswax and benzine, or other equivalent solvent, prepared substantially in the manner and for the purpose described.

No. 39,987.—HEZEKIAH BRADFORD, of New York, N. Y., assignor to HORATIO BOGERT, of the same place.—*Improvement in Tobacco Pipes*.—Patent issued September 15, 1863; antedated May 5, 1863.—The invention consists in certain arrangements, specified at length in the claim, for suspending the pipe from the lower jaw; for impelling the smoke through water by which its rankness is modified; a bulb to prevent the water from reaching the tobacco when the smoke is exhaled; the doubled or return form of the pipe recurring on itself; and a cap for heating the air by compelling it to pass in contact with the tube before entering the bowl.

Claim.—First, the spur or projection *b* to hook behind the teeth in the lower jaw and suspend the pipe, in the manner and for the purposes specified.

Second, the pipe *d* formed with the bulb *c*, and entering said bulb at the bottom, in combination with the mouth-piece or pipe *a*, passing away from the upper part of said bulb, in the manner and for the purposes specified.

Third, the pipe *d*, returned or bent around from the bottom of the bulb *c* to the mouth-piece or tube *a*, or nearly so, as specified, and for the purposes set forth.

Fourth, the reaction bulb or chamber *f* in the pipe *d*, for the purposes specified.

Fifth, the cylinder or cap *n* surrounding the bowl *e*, for the purpose of directing the air against the heated bowl in its passage into the pipe, for the purposes specified.

No. 39,988.—JAMES R. BROWN, of Boston, Mass., assignor to BROWN & ASHCROFT, of the same place.—*Machinery for Cutting Screws*.—Patent issued September 15, 1863; antedated February 29, 1861.—This machine consists in a collar to be placed upon the pipe or rod to be operated upon, provided interiorly with a die-carrier and dies, and exteriorly with a lever of rotation. The die-carrier is cylindrical, having dies protruding from its inner surface, and on its exterior periphery having notches, into which the pawl in the shaft of the lever works; the pawl being inserted in a tubular recess in the end of the lever, and protruded by a spring, and the lever being inserted into a prolongation of the collar, and retained in place by a set screw; a guide upon the collar acts to regulate the position of the cutter.

Claim.—A screw-cutting machine, having its parts constructed and operating to cut a screw upon a pipe or cylinder, substantially as set forth.

Also, the combination and arrangement of the screw guide D, the tubular cutter carrier B, provided with dies *a a a*, and ratchet and pawl K F, constructed and made to operate as set forth.

Also, the peculiar construction of the said ratchet and pawl, and their application to the cutter carrier B and the lever I, the same being substantially in the manner and for the purpose as specified.

No. 39,989.—CHARLES P. CARPENTER, of St. Johnsbury, Caledonia county, Vt., assignor to Himself and EHEN L. CLEMENT.—*Improvement in Hay Rakes*.—Patent issued September 15, 1863; antedated December 17, 1862.—This rake consists of an oblique head armed with teeth and pivoted to the coupling pole of the carriage, so that as it passes along the meadow it elevates and throws back the hay into the windrow, and by the action of the tumbling rake shaft in the rear of the windrow, is made into hay-cocks.

Claim.—The arrangement, in combination with the longitudinal beam A, of the shoe D, roller S, diagonal and adjustable head B, on one or both sides of the beam A and the tumbling rake E, substantially in the manner and for the purposes as set forth.

No. 39,990.—JOHN CRAM, of Boston, Mass., assignor to Himself and JOHN S. CRAM, of same place.—*Improved Clothes Washer and Wringer*.—Patent dated September 15, 1863.—This machine consists of a rectangular tub, and standards rising from the sides, in which are three journaled rollers, one above the other, and wrapped with strips of rubber wound helically. These rollers work by the rotation of the centre one, which has a hand crank attached, pressure being placed upon them from above. A sliding box carrying a bar of soap brings the latter by a spring in contact with the middle roller.

Claim.—The combination of the two washing rollers D E, when constructed substantially in manner and so as to operate as specified.

Also, the combination and arrangement of the squeezing roller C and the two washing rollers D E, the whole being constructed and arranged with respect to the tub A, and provided with pressure springs and levers, or mechanical equivalents therefor, substantially in manner as specified.

Also, the combination of the movable soap or detergent holder H and its spring I with the two washing rollers D E and the tub A, arranged as explained.

No. 39,991.—ANTHONY L. FLEURY, of Troy, N. Y., assignor to WM. E. HAGAN, of same place.—*Improvement in the Manufacture of Iron*.—Patent dated September 15, 1863.—This is a process for the manufacture of iron from the cinders of puddling and other furnaces, and is applicable to some kinds of ores. The cinders are ground to powder and mixed with fresh lime, which is then slaked with water having a chlorine salt in solution; the mass is made into bricks, dried, and treated in a cupola furnace.

Claim.—The use of the chlorine salts with the lime and cinder, in the manner and for the purpose substantially as herein shown and described.

No. 39,992.—H. E. GRANDY, of Ballardsville, Essex county, Mass., and SARGENT O. MORSE, of Medford, Mass., assignors to the WHIPPLE FILE MANUFACTURING COMPANY.—*Improved Machinery for Grinding the Edges of File Blanks*.—Patent dated September 15, 1863.—The file blank is caused to traverse against the surface of the grindstone by being fed between two sets of feed rollers, while a pressure roller, operated by a lever and arm, causes it to impinge upon the grindstone with sufficient force.

Claim.—The feed-rolls G and H and the pressure roll I, operated by the lever K and arm L, or their substantial equivalents, in combination with the grindstone C, constructed, arranged, and operating substantially as set forth.

No. 39,993.—STEPHEN HEDGES, of Hudson, Columbia county, N. Y., assignor to Self, SAMUEL M. LONGLEY, and SAMUEL B. SMITH.—*Improved Sash Stop and Fastener*.—Patent dated September 15, 1863.—The tubular case of the sliding stop is set in the window jamb; the stop or bolt engages with holes in the side of the sash under the impulse of a spiral spring being retracted by a projecting arm, which is attached to the bolt and traverses a slot in the tube.

Claim.—A window-sash stop or fastener, composed of a tube C, slotted in the side as at C, and provided with a spring bolt D, a side elbow or arm E, working through said slot, and a strip F, all made and operating as herein shown and described.

No. 39,994.—HENRY HOWSON, of Philadelphia, Pa., assignor to WM. F. WARBURTON, of same place.—*Improved Match Box*.—Patent issued September 15, 1863; antedated March 12, 1863.—This match box has an angular projecting front, the upper side of which is closed by a gravitating door being hinged to the ends of the box by arms.

Claim.—The stationary receptacle A, its inclined or projecting front *a* and opening *b*, the whole being formed substantially as set forth, in combination with the lid or cover B, the latter being hung to the receptacle through the medium of the arms *h h* at such points that the said lid may be self-closing as described, for the purpose specified.

No. 39,995.—GEORGE HUNZINGER, of Brooklyn, N. Y., assignor to C. HENRY GLIMMAN, of New York, N. Y.—*Improved Folding and Reclining Chair*.—Patent issued September 15, 1863; antedated December 14, 1862.—The back is sustained under the pressure of the person by the notched bar which engages the upper front corner of the X-shaped support, whose intersection is the pivotal point of the support; the foot and leg boards are capable of being set up or inclined, and a slide on the former prolongs its length as required; the raising of the notched bars frees the machine of its rigidity and allows it to collapse.

Claim.—First, the arms *f*, in combination with the bars *g*, attached at the centre of the folding X legs, as and for the purposes specified.

Second, the notched bar *d* connected to the lower end of the back *c*, in combination with the foot-rest *e* and pins or screws, (three or four,) as and for the purposes specified.

Third, the sliding board or frame 14 in the foot-rest *e*, when combined with the folding and reclining chair aforesaid, in the manner and for the purposes aforesaid.

No. 39,996.—JOHN LAWRENCE, of New York, N. Y., assignor to ALFRED T. SERRELL.—*Improvement in Pressure Blocks for Planing Machines*.—Patent issued September 15, 1863; antedated December 14, 1862.—The block is made sectional so that it may be set to press upon the varying surfaces of the stuff subjected to the revolving cutters, and just in front of the cutters, to prevent the raising of splinters. The pressure required is obtained by a set-screw in the block frame.

Claim.—The sectional pressure block, constructed substantially as specified, to hold the material against the action of the rotary cutter, for the purposes set forth.

Also, the arrangement of the shaft *h*, arm 3, nuts 5, and screws *o*, to give the required pressure and control the motion of the pressure block, as set forth.

No. 39,997.—DUSTIN F. MELLE, assignor to Himself and J. C. WILDER, of Manchester, N. H.—*Improvement in Bobbin Winders*.—Patent issued September 15, 1863; antedated September 7, 1862.—The cogs on the periphery of the wheel drive the bobbin or spool, while the concentric rows of teeth on the face of the wheel are suited to drive the pinion *Z* in its varying adjustments according to the length of the spool and the size of thread required.

Claim.—The toothed wheel *C*, the periphery of which is provided with gears to drive the bobbin or spool, and the side with concentric rows of cogs, in combination with the adjustable pinion *Z*, substantially as and for the objects specified.

No. 39,998.—THEODORE SCHNEBELY, of Bay Ridge, Kings county, N. Y., assignor to JEREMIAH MEYER, of same place.—*Improvement in Bleaching Textile Fabrics*.—Patent issued September 15, 1863; antedated January 3, 1863.—1. The goods are placed in solution of caustic soda of three degrees Twaddle, and remain half an hour; are then removed and washed. 2. Are placed in a solution of chloride of lime of three degrees Twaddle, and remain fifteen minutes; are then removed and washed. 3. Are placed in a solution of sulphuric acid of three degrees Twaddle, and remain for fifteen minutes; are removed and washed. 4. Are exposed a second time to solution No. 2. 5. Are exposed a second time to the solution No. 3. All the solutions applied cold, and the process takes from three to three and a half hours.

Claim.—The within-described process for bleaching textile fabrics by treating them with the liquors herein set forth, and applied in the order and substantially in the manner specified.

No. 39,999.—JOSEPH STEGER, of New York, N. Y., assignor to CHARLES W. BAKER, of same place.—*Improvement in Device for Stopping and Starting Railroad Cars*.—Patent dated September 15, 1863.—As the brake is applied, the clutches come together and collapse the spiral spring, which, as the pressure on the brake is removed and the clutches are disengaged, assists in starting the car.

Claim.—The clutches *I M*, when used in combination with suitable internal gearing drums and springs, applied and operating for the purpose and in the manner substantially as shown and described.

Second, so combining the treadle *k* with the hand lever *J*, and clutches *I M*, that by depressing the treadle the clutch *M* is applied and the clutch *I* released, substantially in the manner set forth.

No. 40,000.—DWIGHT TRACY and GEORGE HOBBS, assignor to DWIGHT TRACY aforesaid, of Worcester, Mass.—*Improvement in Sewing Machines*.—Patent dated September 15, 1863.—The improvement consists in the method and intermittent measured delivery of the needle thread and is described with sufficient clearness in the claim; it also consists in placing the spool case diagonally to the axis of rotation of the hook, and also in the construction of the loop check which serves to hold the spool case in position, to hold the loop of needle thread below the cloth, and assist in its proper delivery to the needle, and also to hold the loop so as to enable the hook to leave it; the feed dog rocks upon a centre so as to adapt itself to sudden or gradual increase or diminution of the thickness of the work.

Claim.—First, in a sewing machine which forms the stitches by means of a needle and rotating hook as described, the delivering to the needle at each stitch a measured length of the needle thread, corresponding to the thickness of material to be sewed and the length of

the stitches to be made, and the drawing up of such measured length of thread, by a uniform and positive action, to complete the stitch by means of the needle and its actuating mechanism, and the gripper for holding and controlling the needle thread above the cloth, and the rotating hook and loop check for holding and distending the loop of needle thread below the cloth, or other device equivalent thereto, so combined and arranged to co-operate substantially in the manner herein described.

Second, the employment, in combination with the device which controls the needle thread in delivering the same to the needle and tightening the stitch, of a device for drawing sufficient thread from the bobbin to make the next stitch in advance of its delivery to the needle, substantially in the manner and for the purpose described.

Third, forming the clamping device or gripper for the needle thread by a combination of the bent lever *L* with the plate *K'*, on the needle arm, or their equivalents, and operated by the stop *i* on the connecting rod *M'*, substantially as described.

Fourth, the employment, in combination with the rotating hook, of a spool case placed diagonally to the axis of motion of the hook and held in position by any appropriate devices; to enable a large bobbin to be used, and the coop of needle thread to be passed around it more readily, substantially as described.

Fifth, the employment, in combination with a needle thread, of the loop shock, so called, constructed and operating substantially as described.

Sixth, the employment of a detached or movable feed dog, as described.

No. 40,001.—JOSEPH WELLS, of Hoboken, Hudson county, N. J., assignor to ORLANDO A. WILCOX.—*Machine for Making Paper Bags*.—Patent issued September 15, 1863; antedated March 19, 1863.—This is a machine for making paper forms into bags by being folded and pasted. The series of motions is too lengthy to be described here.

Claim.—First, the combination of two sliding tables *I* and *H H*, for the purpose substantially as set forth.

Second, the bag folder *J J*, by which the bag itself is folded (permitting the bag to be drawn from it, although the folder should remain closed on the table *I*,) separately and in combination with the table *I* and the binder *C*, substantially as set forth.

Third, the binder *C*, for holding one-half of the paper form on the table *I*, while the other half is being folded over it, separately and in combination with the table *I* and the slides supporting said table, substantially as set forth.

Fourth, the combination of the roller *T* with the sliding table *H H* and the strips *X X*, for the purpose as substantially set forth.

Fifth, the combination of the lap folders *W W* with the thin-edged wheels *V V* and the roller *T*, substantially as set forth.

Sixth, the combination of the lap folders *W W* with the table *H H*, elevated strips *X X*, and the roller *T*, substantially as set forth.

Seventh, the use of the braces *P P*, for the purpose substantially as set forth.

Eighth, the taking of the paper forms from the feeding table by the bag folder *J J*, substantially as set forth.

Ninth, the application of the paste by pressure, as substantially set forth.

No. 40,002.—A. D. WHITMORE, of Housatonic, Berkshire county, Mass., assignor to E. W. VAILL, of Worcester, Mass.—*Improved Camp Stool or Chair*.—Patent dated September 15, 1863.—The X-shaped legs are united by the flexible seat and to the back by hinges.

Claim.—The combination of the legs *A B*, seat *C*, back *D*, and hinges *E e*, when the parts are all constructed and arranged in the manner and for the purpose represented and specified.

No. 40,003.—G. W. N. YOST, of Nashville, Tenn.—*Improvement in Subsoil Ploughs*.—Patent dated September 15, 1863.—The subsoil plough share is attached behind the preceding plough by means of a standard bolted to a U-shaped projecting holder secured to the plough frame.

Claim.—The U-shaped holder *A*, constructed and operating substantially as herein set forth, for the purpose of combining a subsoil plough *B* with a furrow plough *C*.

No. 40,004.—HIRAM S. JACONS, of Portland, Multnomah county, Oregon.—*Improved Wheel Dressing Machine*.—Patent dated September 15, 1863.—This machine is adapted to reaming the hubs and dressing the rims of wheels, and consists in devices for chucking on a concave plate, and for operating and guiding the cutters and reamer, and driving them from a common drum at varying distances from the centre of the wheel which is being dressed, and for adapting them to work obliquely with the axis of the wheel to dress it to a level.

Claim.—First, the concave plate *C*, provided with a centring pin *B2*, and clamp hooks *D D'*, operating substantially as and for the purposes set forth.

Second, the combination with a suitable face plate of the cutters *H1 H2 H3*, driven simultaneously by hands from a common drum *E*, in the manner and for the purposes explained.

Third, the reamer *M*, carried by an advancing and receding stock *N*, in the described combination with the yielding centre pin *B2*, for the objects specified.

Fourth, in combination with the cutters H1 H2 H3, driven by belts from a common drum E, as explained, the sliding table G, and segmental guides, by means of which the said cutters may be adjusted in the arc of a circle concentric with the said drum in order to adapt the machine to operate on wheels of any size.

Fifth, in combination with cutters H1 H2 H3, operated in the manner explained, the use of guide ways or bearings adjustable on vertical axes, in order to admit of dressing the face, back and tread of the wheel to any required bevels.

No. 40,005.—A. J. AMBLER, of Chicago, Ill.—*Improvement in Car Brakes*.—Patent dated September 22, 1863.—This invention consists in an improved mode of applying the power to that class of car brakes which are actuated from the locomotive, and it consists in the employment or use of a friction wheel applied to an adjustable shaft having a screw upon it, which by actuating said shaft may be thrown in gear with a worm wheel on a shaft having a loose drum upon it connected with the shaft by means of a spring pressing one end of the drum in contact with a conical hub attached to the worm wheel, all being arranged in such a manner that the brakes of a train of cars will be under the complete control of the operator or engineer.

Claim.—The screw I and a worm wheel J, the latter being placed on a shaft K, working or rotating in fixed bearings, and the screw placed on a shaft D having a swiveling or adjustable bearing, the above parts being arranged substantially as shown, and used in combination with a friction wheel H placed on the shaft D and arranged relatively with a flange d' of a wheel C of a locomotive, to operate as and for the purpose herein set forth.

Also, in combination with the screw I, worm wheel J, and friction wheel H, arranged as shown, the spring M and drum L applied to the shaft K, as and for the purpose specified.

No. 40,006.—CALVIN C. ALEXANDER, of Denver, Colorado.—*Improvement in Pumps*.—Patent dated September 22, 1863.—Four cylinders, more or less, are attached to a reservoir by means of pipes to check valve seats on top of the reservoir. Valves inside the cylinder head allow the piston to pass the whole length of the cylinder, and the piston rods being attached by pitmen to cranks working in rotation at right angles, a continuous stream of water is obtained without the usual pauses or pulsations.

Claim.—The peculiar arrangement of the cylinder to a reservoir by means of the pipes fastened to a cylinder head and to a check valve seat, substantially as hereinbefore described.

No. 40,007.—AUGUSTINE IREL AMBLER, of Chicago, Ill.—*Improvement in Railroad Car Brakes*.—Patent dated September 22, 1863.—This is an improvement in that class of brakes which act simultaneously throughout the train, so that the necessity for a number of brakemen is dispensed with and the entire train under control of the engineer. The particular manner of effecting this result will be understood from the claim and engravings.

Claim.—First, the frictional clutch G placed on the axle of the tender or engine and actuated through the medium of the levers A F and rod E, in connexion with the chain I, lever K, and bar N, the latter being provided with the shoe k, and all arranged, as shown, to operate as and for the purpose set forth.

Second, the shaft O with pulley Q, in connexion with the pulley T on the axle U, the pendant arm m with rod P attached and connected with the chain E' through the medium of the pulleys p g, arranged as shown, or in any equivalent way, to operate as and for the purpose set forth.

Third, the connecting of the drum R on the shaft O with the pulley Q on said shaft by means of a spring S arranged with nuts s, substantially as shown, for the purpose of limiting the tension of the chain u and the power of the brakes, as set forth.

Fourth, the combination and arrangement of the clutch G, chain I, lever K, chain E', shaft O, with pulley Q attached, the pulley T on the axle U, drum R, on shaft O, connected therewith by a clutch and spring, the chain u attached to drum R and applied to the brakes, all in the manner substantially as and for the purpose specified.

No. 40,008.—C. L. ADANCOURT, of Troy, N. Y.—*Rotary Pump*.—Patent dated September 22, 1863.—This invention consists, first, in the use of packing pieces of a peculiar form fitted in sockets in the edges of the abutment and of the sliding pistons so as to have a limited vibration therein and form tight joints by the pressure of the water. The sliding pistons are operated by cam grooves in customary manner. Second, in the use of grooved side flanges attached to the piston for the purpose of packing the ends of the latter with but little friction, and increasing the capacity of the water chamber. The improvements are also applicable to rotary steam engines.

Claim.—The arrangement of the packing pieces C and H, with rounded stems to fit into sockets b or j, substantially in the manner and for the purpose herein described.

Also, the combination of the grooved flanges d, with the sliders F and piston D, substantially as and for the purpose described.

No. 40,009.—ALVARO BUTHICK, of Chelsea, Orange county, Vt.—*Improved Feathering Paddle Wheel*.—Patent dated September 22, 1863.—In this wheel the floats are, each of them, attached to a shaft which rotates on an axis at right angles to that of the wheel, for the purpose of exposing a flat side to the water during a part of the revolution, and an edge to the resistance during the rest of the revolution; and this is accomplished, whichever way the wheel is driven, by stationary guides which come in contact with cams on the shaft of the floats and turn them so as to present the desired surface.

Claim.—The arrangement of the spiral-faced movable self-adjusting hub B, spindles F, and floats E, with the spiral clutches H H', cams G, and guides I I', all operating in the manner herein shown and described.

No. 40,010.—JOEL BRYANT, of Brooklyn, N. Y.—*Improvement in Shears and Scissors*.—Patent issued September 22, 1863; antedated July 29, 1863.—The invention consists in making the shears, &c., with blades of a curved form, with the rivet or pivot of attachment in the line of the curve.

Claim.—The construction and exclusive use of shears and scissors S, figures 1 and 2, when made with curved blades A and B, and with their rivets R, set on a line with the curve of the said blades A and B, substantially as herein described and for the purposes as herein set forth.

No. 40,011.—JOEL BRYANT, of Brooklyn, N. Y.—*Improvement in Construction of Fly-Wheels*.—Patent issued September 22, 1863; antedated June 9, 1862.—The invention consists in adapting fly-wheels to the compass and use of a portable machine by making it rotate on a vertical spindle and underneath the base or platform of the machine on suitable bearings and rollers.

Claim.—The within-described mode of using fly-wheels W in connexion with portable or other machines M, figures 1, 2, 4, and 6, when the said fly-wheels W are set to run within or beneath the base B of said machines M on anti-friction roller bearings G, or their equivalent, substantially as herein described and for the purposes set forth.

No. 40,012.—ERASTUS D. BOOTMAN, of Eameton, Otsego county, N. Y.—*Improvement in Monochord Tuning Instruments*.—Patent dated September 22, 1863.—This improvement consists in the construction of a movable bridge or bearing which may be adjusted on the sound-board to stop the string at the point to make it produce the required note.

Claim.—The movable bridge, bearing or stop, composed of two pieces of steel or other metal J K, as described, in combination with the mortises e e in the sound-board, substantially as and for the purpose herein set forth.

No. 40,013.—JOHN V. V. BOORAEM, of Jersey City, N. J.—*Improvement in Joints for Tubes of Surface Condensers*.—Patent dated September 22, 1863.—The invention consists in a method of avoiding leakage from the joints owing to the alternate contraction and expansion of the parts by the application of elastic material between the joints, which is packed by a thimble embracing the tube and screwed into the tube sheet.

Claim.—Forming the joint between the tube and tube sheet by means of a packing a of India-rubber or other suitable material surrounding the tube, and a hollow screwed thimble passing over the tube and screwing into the tube sheet, substantially as herein specified.

No. 40,014.—F. B. BLANCHARD, of New York, N. Y.—*Improvement in the Application of Blowers to the Furnaces of Locomotives*.—Patent issued September 22, 1863; antedated December 18, 1861.—This invention consists of a method of operating a blower by means derived directly from the driving or other wheel through a crank pin, rod, gearing, &c.

Claim.—Combining the fan shaft of the blower with the driving or other wheel of the locomotive by means of cranks f f and d d, rods e e, a shaft D, gears g g', pinions h h' and clutches i j and i' j', the whole applied and operating substantially as and for the purpose herein specified.

No. 40,015.—RICHARD BEEBE, of West Springfield, Hampden county, Mass.—*Tuning Attachment for Piano-fortes*.—Patent dated September 22, 1863.—The invention consists in the attachment of a monochord directly to the sound-board of the instrument, together with apparatus for bringing the monochord and the string to be tuned simultaneously under the control of the hand.

Claim.—First, the combination of the monochord with the piano-forte in such manner that the sound-board of the piano-forte constitutes the sound board for the monochord, rendering any peculiar or separate sound-board for the monochord unnecessary, substantially as herein described.

Second, the combination with the so-applied monochord of a movable key, by which it can be struck simultaneously with any one of the strings by the action of the same hand, substantially as herein set forth.

No. 40,016.—ANSON F. BARTON, of Dedham, Norfolk county, Mass.—*Improvement in Steam Boilers*.—Patent dated September 22, 1863.—The improvement consists in a peculiar construction of the boiler with crescent-shaped water vessel projecting below the ordinary cylindrical boiler and forming a fire-bridge and floor to the back part of the furnace, the additional boiler being connected at the rear by pipe to the upper one.

Claim.—The improved steam generator as constructed with the smoke-flue H, and the crescent-shaped water-vessel F, combined and arranged with the main boiler E, substantially in the manner and so as to operate as specified.

No. 40,017.—CHARLES L. BARITT, of New York, N. Y.—*Improved Coffee and Water Cup for Soldiers*.—Patent dated September 22, 1863.—The invention consists in the introduction of a strainer or filterer of a suitable shape inside the cup.

Claim.—As a new article of manufacture, the use of a cup having a filterer or strainer in it, in form and principle of operation substantially as hereinbefore set forth.

No. 40,018.—FRANCIS E. CALVERT, of Lowell, Mass.—*Improvement in Carding Engine*.—Patent dated September 22, 1863; Patented in England in 1860.—In this machine the cotton or wool is taken from the feed roller by a "licker-in," which is covered with steel teeth, and which works the fibre somewhat and carries it to the main card, which it continuously strips, bringing the fibre in contact with retainer. The surfaces of the "licker-in," the retainer, and the main cards move at the rate of 3, 2, and 1, respectively, by gearing or by bands and pulleys properly proportioned.

Claim.—The improved carding machine as constructed with its licker-in, made substantially as described, and combined with the main card cylinder, a retainer, and mechanism by which, when rotated, such licker-in shall be made not only to seize the fibrous material from the feeding rollers, and transfer it to and work it when on the retainer, but operate to continuously strip the main card cylinder at its rear, substantially as hereinbefore specified.

Also, the combination of the toothed licker-in, one or more retainers, and machinery by which such licker-in may be driven or rotated at a velocity greater than that of the retainer, or that of either of them when more than one may be employed.

No. 40,019.—JAMES B. CLARK, of Plantsville, Conn.—*Machine for Folding Tags*.—Patent dated September 22, 1863.—The end to be folded is placed between two plates, one the shape of the piece, and the other and upper one the desired shape when folded; two folders approach, one on each side, and lap over the corners, then one approaches and laps over the truncated end, leaving it ready for the insertion of the eyelet.

Claim.—The stationary folding plates H I, in combination with the movable folding plates F F G, the plates F being attached to pivoted arms C, on a sliding plate B, and the plate G, attached to a sliding plate G, the arms C, being operated by the slots d and pins c, when the plate D is moved alone, and all arranged to operate substantially as and for the purpose herein set forth.

No. 40,020.—CHARLES COURTOIS, of Volcano, Amador county, Cal.—*Improvement in Rock Drills*.—Patent dated September 22, 1863.—The improvement is in the shape of the tool and the die by which it is sharpened and swedged into shape, and both are clearly described in the claim.

Claim.—A drill A, having its head b formed square and bevelling with concave sides, and the concave edge c, about one-third the width of the face of the square, as shown and described.

Also, the employment or use of the die B with a cavity d, corresponding to the shape of the head b, as described, for the purpose of sharpening the drill A.

No. 40,021.—JAMES MASLIN COOPER, of Pittsburg, Pa.—*Improvement in Revolving Fire-arms*.—Patent dated September 22, 1863.—The details of the improvement will be understood from the claim and drawings as well as from any description within the assigned limits of this abstract. They refer to devices for locking the cylinder except when being rotated; double locking at the moment of firing; for retaining the spent cap on the tube until rotated away from the hammer; making longitudinal grooves in the base pin for the retention of the dirt which may collect on the base pin, and for holding oil; and to the cocking and trigger-setting device.

Claim.—First, the use in revolving fire-arms, susceptible of being operated by the trigger of a positive locking bolt for locking the revolving breech, independently of the action of the trigger, at all times excepting when the cylinder is being revolved, substantially as hereinbefore described.

Second, placing the locking bolt on the left-hand side of the axes of the revolving cylinder, where the cylinder revolves from right to left, (and *vice versa* where it moves in the opposite direction,) for the double purpose of insuring the entry of the head of the bolt into its recess or notch in the cylinder, and of aiding the revolution of the cylinder just before firing, so as to lock the breech before the hammer is at full cock, substantially as described.

Third, double locking the cylinder at the moment of firing, so as to hold it perfectly rigid by means of the hand or driver, operated by the trigger to sustain it in one direction, and the locking bolt to receive the pressure and sustain it in the opposite direction, substantially as described.

Fourth, the use of a gate attached to the recoil shield, placed at the end or throat of the hammer recess, having a narrow slot or hole of less width than a percussion cap, to allow of the passage of the point of the hammer to strike the cap, for the purpose of preventing the passage of the spent caps into the hammer recess, and also to prevent the caps from projecting so far backward as to interfere with the rotation of the revolving breech, substantially as described.

Fifth, the use of a groove or grooves in the arbor or base pin of revolving breech fire-arms where such groove or grooves are parallel to the axis of the base pin, for the purpose hereinbefore described.

Sixth, so constructing and arranging the hammer, trigger, and driver of hammer-cocking revolving breech fire-arms, as that the cocking of the hammer will draw back or set the trigger, holding it in a drawn position so as to be fired by a mere touch, substantially as described and for the purposes set forth.

No. 40,022.—CHARLES CROZAT CONVERSE, of Dubuque, Iowa.—*Improved Mangle*.—Patent dated September 22, 1863.—The improvement consists in an arrangement of three rollers revolving in bearings, the lower one having an endless apron traversing upon it and two other rollers forming an extension; the roller immediately above this is turned by a crank, and upon it winds and unwinds an auxiliary apron, between which and the endless apron the clothes are pressed; the upper one is a friction roller and keeps the apron smooth, and it is retained at the desired pressure by screws and springs.

Claim.—The winding roller and its auxiliary apron, substantially as described, in combination with the bottom roller and endless apron, substantially as and for the purpose specified.

No. 40,023.—ABEL CROWFOOT, of Chicago, Ill.—*Ratchet Tube Cutter*.—Patent issued September 22, 1863; antedated March 11, 1862.—This is an application to the ordinary ratchet drill stock of an extension rod to reach a back centre to support the rear end, and an arrangement by which the cutter is applied to the desired point within the tube. To the stock head a cutter is attached which projects radially from the axis of rotation and is introduced within the end of the tube to the required distance; a set screw at the back of a lever which projects the cutter affords a means of feeding the latter as it makes its progress through the sides of the tube.

Claim.—The combination, with a common ratchet drill stock, of the cutter U, with either a square or angular shaped cutting edge, the lever W, feed-screw T, head Q, and extension rod B, for the purpose of cutting off boiler flues, in the manner set forth.

No. 40,024.—A. C. CRONDALL, of New York, N. Y.—*Improved Stuffing for Mattresses, Pillows, &c.*—Patent dated September 22, 1863.—The cork is ground to reduce it to a moderate size and give it roundness and elasticity, then cleaned and treated with oil.

Claim.—A stuffing for mattresses, cushions, &c., composed of ground cork and oil, made as herein shown and described.

No. 40,025.—H. C. DREW, of Oshawa, Ontario county, Canada West.—*Improvement in Wheel Vehicles*.—Patent dated September 22, 1863.—The hind end of the tongue is pivoted between segmental plates which form guides for the inner ends of the short axles attached to the fore wheels. The tongue is attached by a pivoted bar and side bars to the axles.

Claim.—The combination of the segment guides J J, pivoted bar L, and bars j j, with the front axles and the tongue K, in the manner herein shown and described.

No. 40,026.—ABRAHAM DREY, of Baltimore, Md.—*Improvement in Shirts*.—Patent dated September 22, 1863.—The outer bosom consists of lapels which may be fastened, opened, or closed.

Claim.—A double bosom shirt, when composed of an inner bosom d and outer flaps or lapels a a, substantially as and for the purposes described.

No. 40,027.—S. C. ELLIS, of Jersey City, N. Y.—*Improvement in the Manufacture of Match Sticks*.—Patent dated September 22, 1863.—The splint blank is furrowed by gangs of rotary cutters placed on a mandrel so as to leave the splints of any required sectional shape.

Claim.—The employment or use of rotary cutters A A', substantially such as herein specified, for the purpose of producing match sticks.

No. 40,028.—JOHN ERICSSON, of New York, N. Y.—*Improvement in Instruments for Taking Soundings*.—Patent dated September 22, 1863.—The bag of air, suitably protected, is allowed to trail upon the bottom, and by means of a tubular connexion with a pressure gauge the depth of water is indicated.

Claim.—Obtaining soundings by means of an air bag, or its equivalent, loaded to touch bottom, and connected by means of a tube with a register or pressure gauge attached to the vessel, the pressure of air in which gauge indicates the depth of water.

No. 40,029.—JOHN and SAMUEL FAHRNEY, of Boonsboro', Washington county, Md.—*Improvement in Molasses Faucets*.—Patent dated September 22, 1863.—This consists of a cylinder of definite capacity, and a piston and valve by which it is filled from the passage leading to the cask; and a valve and passage by which it is discharged from the cylinder to the exit orifice.

Claim.—First, the combination and arrangement of the pipe A, cylinders D E, valve R, piston F, opening O, and valve Q, as described.

Second, in combination therewith the stop-cock S, as described.

Third, in combination with cylinder E, the valve R, opening O, piston F, with the plug d, the screw rod G, and crank K, as described.

Fourth, the combination of the piston F, piston rod G, cross-bar H, thumb-screw r, and sliding rod u, as and for the purposes described.

No. 40,030.—JOHN D. FILKINS and JOHN M. FILKINS, of Johnson township, Lagrange county, Ind.—*Improved Punch Block*.—Patent dated September 22, 1863.—The upper and the lower plates are punched with a series of holes of corresponding sizes. The space between the plates is adjusted to the thickness of the iron, and the mark having been brought to the centre of one of the upper holes, the punch is applied and the piece driven through the lower plate.

Claim.—As a new article of manufacture the punch block a, in combination with the steel plate b, the set screw c, mortise e, and guide f, constructed substantially as and for the purposes set forth.

No. 40,031.—JOSEPH W. GARDNER, of Shelburne Falls, Franklin county, Mass.—*Improvement in Table Cutlery*.—Patent dated September 22, 1863.—The tang of the knife passes longitudinally through the handle and is secured at the end by a set screw; the bolster has supporting flanges which embrace the handle.

Claim.—As an improvement in table cutlery a knife or fork having its handle or bolster made and applied together, in manner substantially as hereinbefore described and as represented in the accompanying engravings.

No. 40,032.—THOMAS W. GODWIN, of Portsmouth, Va.—*Improvement in Oil Cups for Machinery*.—Patent dated September 22, 1863.—The object is to apply the oil to the machine against the pressure of the steam, and the device consists of two valve stems, one screwing into the other, and the lower square-shanked one prevented from rotating by passing through a square aperture; the oil chambers are three, in a vertical series, and the flow to and from the central chamber is regulated by two valves on the upper and lower stems respectively.

Claim.—First, the arrangement with an oil cup of the valve L, or its equivalent, the valve stem G, and the cup N, as shown and described.

Second, the arrangement within an oil cup of the stems G and G and their valves, when constructed and operated substantially as shown and described.

No. 40,033.—WILLIAM H. HARRIS, Grand Rapids, Kent county, Mich.—*Improvement in Air Heating Furnaces*.—Patent dated September 22, 1863.—The grate bars are hollow and are supplied with air from a chamber in the base of the stove, which air passes through them and into an air-heating chamber which surrounds the furnace. The volatile products of combustion pass into a drum which is traversed above by tubes which connect the air-heating chambers above and below the drum.

Claim.—The arrangement and combination of the curved tubes B, forming the fire-grate of the furnace, cold-air passages E, air-heating chamber F, drum H, provided with the tubes J, and the furnace A, as herein fully shown and described.

No. 40,034.—ANSON HARDY, of Boston, Mass.—*Improvement in Machines for Shearing Iron*.—Patent issued September 22, 1863; antedated September 12, 1863.—Explained by the claim.

Claim.—First, so attaching the rotary knife to the carriage which carries it that, without raising or lowering said carriage, said rotary knife may be raised or lowered, for the purpose of increasing or diminishing the distance between the stationary straight knife and the said rotary knife, in the manner substantially as herein described.

Second, the combination of wrought-iron trusses, in the manner substantially as herein shown, with the upper and lower beams and side pieces and the rotary knife of the machine, for the purpose of adding rigidity to said upper and lower beams and side pieces, and also for the further purpose of causing said machine to do its work with a less expenditure of power, and with very much less risk of breaking said rotary knife.

Third, suspending the knife carriage to the lower side of the upper beam, and bracing it laterally against the rear side piece below the lower side of the carriage, in the manner substantially as herein described, so as to obtain a much greater distance than has ever before been obtained between the upper and lower beams, for the purpose of enabling the workmen conveniently to secure the sheet of metal to be cut in the exact position desired between the knives, and for the purpose of enabling said workmen to see distinctly if said sheet of metal is accurately placed.

No. 40,035.—W. C. HERIDER, of Miami town, Hamilton county, Ohio.—*Blackboard and Map Case*.—Patent dated September 22, 1863.—The outer casing or outside of the doors is painted for a blackboard, while the interior is fitted up with frames or slides, in which maps are secured.

Claim.—A combined blackboard and map case, substantially as herein shown and described.

No. 40,036.—ASAHEL R. HOLCOMB, of Naples, Ontario county, N. Y.—*Improvement in Shingling Hipped Roofs*.—Patent dated September 22, 1863.—The angular piece which finishes the course on the edge of the hip is brought down one course below, so as to make an additional thickness at that point, and afford means for a more secure attachment.

Claim.—Substituting for the ordinary small triangular pieces that complete the courses at the hip the joint shingles b' c' d', each projecting to the base line of the course already laid, arranged so as to be securely nailed and held in place, without splitting or warping and without the necessity of weatherboards, and furnishing an extra thickness of covering, substantially as herein set forth.

No. 40,037.—SAMUEL HOYT, of New York, N. Y.—*Improvement in Coffee Roasters*.—Patent dated September 22, 1863.—This consists of a corrugated drum to contain the coffee berries attached to a perforated shaft, and heated by gas jets emitted by the tubular frame; the perforated tube carries the vapor and volatilized essential oil to a chamber.

Claim.—First, the hollow shaft B, in combination with a roasting drum, the shaft serving to bear and to drive the roasting drum A, and being provided with apertures k k in its circumference, and outlets at one or both ends to conduct off the gases from the interior of the drum, either into an aromatizing chamber G or off into the chimney, substantially as described.

Second, making a part of the frame within which a coffee roaster is arranged, of tubes d d, which are slotted or punctured in such manner that they constitute fluid or gas burners, substantially as and for the purposes described.

Third, the combination with an aromatizing chamber G of a roasting drum A, the same communicating with each other by means of a hollow shaft, or equivalent device, substantially as and for the purposes described.

Fourth, the combination of a corrugated cylindrical drum and a series of gas or fluid burners, which constitute the ties or longitudinal parts of the frame in which the drum is arranged, substantially as and for the purposes described.

Fifth, a cylindrical corrugated tight roasting drum composed of one continuous piece of corrugated metal and two plates or heads, which are scolloped around their edges or circumferences, as and for the purpose described, in combination with an axial shaft, as set forth.

No. 40,038.—ALEXANDER HOGG, of Rutland, Meigs county, Ohio.—*Improvement in Bee-hives*.—Patent dated September 22, 1863.—The rectangular case has a central chamber, which has a slat floor. On each side of and above this chamber are partition walls or ceiling, and beyond these are compartments for honey boxes, the partitions having holes for communication between the central and exterior boxes.

Claim.—A beehive composed of a rectangular box or case A, provided with a slatted bottom E, and with vertical partitions g g and horizontal partitions h h, all arranged, as shown, to form compartments to receive drawers B C D D', the drawers B being at the sides of drawers D D', and the drawers C above the latter, a communication being formed between the drawers D D' and B C, as shown, and the drawers D D' being constructed and arranged, as shown, so as to form the body or main part of the hive, and still either of the drawers rendered capable of removal, for the purpose specified.

No. 40,039.—EDWARD F. HOWARD, of Boston, Mass.—*Improvement in Machinery for Finishing Rim-bases of Ordnance*.—Patent dated September 22, 1863.—The end of a stationary shaft is attached by a collar to the trunnion of the gun, the axial line of the shaft being perpendicular to the axis of the gun. On the shaft are a stationary plate and a sliding pattern-plate, and parallel to these is a cam-plate or ring, and a sliding gear-wheel, on which a tool-holder is pivoted; the front end of the tool-holder carries the tool, and the other end rests upon and is operated radially by the surface of a pattern on the sliding plate; the motion of the cutter radially to the axis of the gun is by means of a cam on the inside of the cam-plate acting on a pin on a projection from the sliding gear-wheel, which carries the tool. The longitudinal motion of the sliding pattern-plate is caused by the screw-threads on the shafts carrying satellite wheels operated by the gear-wheel on the auxiliary motor shaft.

Claim.—Finishing or cutting the rim-bases of ordnance, by the employment of a cutting tool, guided automatically by a pattern, cam, rotating and feeding mechanism, substantially as described.

Also, giving to the pattern L the reverse movement, in the manner and for the purpose as set forth.

No. 40,040.—JOHN HULL, of Vienna, Warren county, N. J.—*Improved Rubber Attachment for Wash-board*.—Patent dated September 22, 1863.—This is an attachment to the wash-board, and consists of a rubber block attached by toggle joint arms to the lower part of the wash-board, and adapted to be rubbed upon the clothes over the crimped surface of zinc.

Claim.—Attaching the rubber B by means of the joints *d d* on its upper surface to the wash-board A, by means of the jointed or flexible frame formed of the rods *e e*, shaft *f*, and arms *h*, when the frame is pivoted or jointed to the lower end of the wash-board, as herein shown and described.

No. 40,041.—J. BURROWS HYDE, of Newark, N. J.—*Improvement in War Rockets*.—Patent issued September 22, 1863; antedated April 25, 1863.—The improvement consists in the construction of that part of the rocket which gives it rotation from lateral or tangential holes, for the escape of burning gases therefrom, and in the means for igniting the contents of the shell or head of the rocket, and in the method of firing the contents of the shell when charged with incendiary composition.

Claim.—First, the construction of a rocket case with the ring *a*, combined with the apertures *c c*, and core E, by means of the channel *d*, or their equivalent, substantially as described.

Second, the radial adjustable fuse *f*, arranged as described, for igniting the contents of the shell directly or through the agency of the inner fuse *e*, as described.

Third, the hood match *p*, and its protector *r*, secured and ignited, as described.

Fourth, the partially guarded match *h*, with its branches for simultaneously igniting the rocket and shell fuse, as described.

No. 40,042.—I. BURROWS HYDE, of Newark, N. J.—*Improvement in Press for Charging Rockets*.—Patent issued September 22, 1863; antedated April 22, 1863.—This apparatus consists of a press with three standards with strong headings. One of these standards forms an axis on which the movable platen carrying the case holder is journaled, so that it may swing in and out.

Claim.—Employing one of the bars or ties of the frame-work of a condensing press as the axle or journal for a rotating working table or platen for supporting or carrying the work to be acted upon by the press, and arranged in the manner and for the purpose specified.

No. 40,043.—GUSTAVUS A. JASPER, of Charlestown, Mass.—*Improved Machine for Crushing Sugar and Forming it into Blocks*.—Patent dated September 22, 1863.—The sugar loaf is chopped into pieces by knives on a rotary cylinder operating against sets of stationary knives attached to bars. The crushed sugar falls between moulding cylinders whose peripheries present rectangular cells, which so correspond with each other as to press the sugar between them and discharge it below in blocks approximating a cubical form.

Claim.—The above-described improved sugar-crushing and blocking machine, having its parts arranged and constructed substantially in the manner and to operate as specified.

No. 40,044.—JACOB JAHRAUS, of Buffalo, N. Y.—*Improvement in Faucets and Vents*.—Patent dated September 22, 1863.—This is a piston faucet having a compound discharge nozzle and a hollow discharge piston; as the latter is raised the liquor flows freely through the outer cylinder, and as the valves descend a small quantity remains to be forced out a hole in the bottom of the inner cylinder. The motion of the lever-handle opens and closes the ventilating plug on the top of the cask.

Claim.—The compound discharge nozzle composed of the cylinders G and H, in combination with the hollow valve piston K, (with or without the holes K',) valve-stem C, and valve *c l*, and lever E, arranged and operating for the purposes and substantially as described.

Also, the valve P, arranged and operating upon the outside of the ventilating plug M, substantially as set forth.

No. 40,045.—F. JONES, of Prescott, Pierce county, Wis.—*Roller Attachment for Breast Straps*.—Patent dated September 22, 1863.—This consists of a roller in a stirrup frame attached to the ring of the neck-yoke, so as to allow the breast strap to traverse without rubbing.

Claim.—The frame A, provided with the roller B, and the hook *b*, when applied to the neck yoke and breast straps, substantially as and for the purpose specified.

No. 40,046.—W. DAVIDSON JONES, of Hagerman's Mills, Montgomery county, N. Y.—*Improvement in Water Elevators*.—Patent dated September 22, 1863.—By the forward rotation of the shaft the engagement of the cam-faces brings the disks closer together, so that by their frictional cohesion the shaft is rotated, the pawl and ratchet taking up the gained motion; when it is desired to descend, the crank is rotated in the reverse direction, which disengages the disks and the shaft revolves freely, unless controlled by a pressure, slight or otherwise, due to the partial engagement of the faces of the disks.

Claim.—The peculiar arrangement of the several parts of the described friction clutch and crank combined, in combination with the pawl *g*, shaft *a*, and crank, handle or lever *d*, constructed and operating substantially as and for the purposes shown and described.

No. 40,047.—THOMAS KEECH, of New York, N. Y.—*Improvement in Haversacks*.—Patent dated September 22, 1863.—The haversack is made of duck or other textile fabric, and on the side is a detachable piece of water-proof stuff to preserve the clothes from contact with the soiled side of the haversack.

Claim.—A haversack formed of pervious material, and having a detachable or impenetrable side-piece, the whole arranged to operate substantially as described for the purposes set forth.

No. 40,048.—RICHARD KITSON, of Lowell, Mass.—*Improvement in Brakes to Cotton Lappers*.—Patent dated September 22, 1863.—The brake is so combined with the shipper or other device which starts and stops the machine, that it is thrown into action by the act of starting the feed rolls, and thrown out by the contrary motion.

Claim.—So combining the brake with the shipper that it is brought into action when the operation of the machine commences, and is thrown out of operation when the operation of the machine ceases, substantially as herein described.

No. 40,049.—RICHARD KITSON, of Lowell, Mass.—*Improvement in Machine for Preparing Cotton and other Fibrous Material for Carding*.—Patent dated September 22, 1863.—It consists in the arrangement of an endless apron, in combination with the draught cylinders, so as to permit a larger number of cylinders to be used in forming a breaker lap.

Claim.—The arrangement of the endless apron G and draught cylinder or screws, in combination with each other and in relation to the mouth of the trunk and to the lap head, substantially as herein specified, whereby several sheets of fibre delivered from the cylinders or screens are united and delivered in a united state to the lap head.

No. 40,050.—CHARLES H. KUPFER, of Hoboken, N. J.—*Improvement in Lamp Burners*.—Patent dated September 22, 1863.—The improvement consists of a fluted cone around the base of the lamp-wick, perforations at the lower end of the burner, and a contraction of the deflector, their purpose being to concentrate a vertical column of air around the base of the flame; the partial isolation of the deflector from the burner preventing the conduction of heat to the reservoir.

Claim.—First, the arrangement, within a burner, of a fluted cone F, constructed and operating substantially as set forth.

Second, the deflecting cap G, when provided with a contraction *h* at about half way of its height, but whether with or without the perforations *m m*, the whole constructed and operating substantially as described.

Third, the combination with said fluted cone F of the perforations *b b*, operating as specified.

Fourth, the combination of the fluted cone F, the cap G, contracted as described, and the perforations *b b*, the whole constructed and operating as above mentioned.

Fifth, the arrangement set forth for attaching the cap G to the body A of the burner, so as to form an air-space *q* to diminish the conduction of heat to the oil reservoir.

No. 40,051.—AUGUSTUS LAFEVER, of Battle Creek, Calhoun county, Mich.—*Improvement in Removing Spikes from Guns*.—Patent dated September 22, 1863.—The invention consists of an annular bit on a shaft rotating in a frame clamped upon the gun. The shaft rotates in a rocking socket so as to be able to drill at any required angle, and the frame is hinged upon the supporting clamp, which straddles the gun so as to be rocked back to see whether the drill is progressing right in removing the metal from around the spike, leaving it as a core to be grasped and drawn out.

Claim.—First, the mode herein described of unspiking guns by means of an annular bit, in combination with the adjustable frame A, substantially as described.

Second, the adjustable frame A, constructed and operating substantially as described.

Third, the self-adjusting socket C, in combination with the adjustable plate B.

No. 40,052.—CALEB J. LEGG, of Penn Yan, Yates county, N. Y.—*Improvement in Corn Shellers*.—Patent dated September 22, 1863.—The corn is passed between the surfaces of an inner rotating and an outer stationary cylinder placed in vertical positions. The sides of the respective cylinders are composed of alternate fixed and vibrating bars armed with teeth. The vibrating bars have springs behind them, which keep them against the corn.

Claim.—The shelling and husking cylinder A, constructed with hinged radially vibrating staves B B, controlled by springs *a a*, and with teeth arranged spirally both upon the staves and intermediate portions of the cylinder, substantially as herein specified.

Also, the combined construction and arrangement of the fixed staves *c c* and hinged radially vibrating staves D D, controlled by springs H H, together composing the concave to the shelling cylinder, substantially as herein set forth.

No. 40,053.—NORMAN LANPHEAR, of Monmouth, Warren county, Ill.—*Apparatus for Ornamenting Gum Jewelry, &c.*—Patent dated September 22, 1863.—The ornament is adjusted on the gum ring, the latter being upon the anvil; the heated pressure tool is then brought down upon the ornament and imbedded in the gum, which closes over and retains it securely.

Claim.—The forming of letters or other devices in or upon the surface of articles of gutta-percha, India-rubber, or other gum, by the use of the clamping tool A, anvil a, die stock b, and set screw c, all constructed, combined, and arranged as herein shown and described, so as to be adapted for use by heating that portion only of the tool which presses or forces the dies or devices into the gum.

No. 40,054.—WILLIAM MAGINN, of New York, N. Y.—*Improvement in Explosive Shells.*—Patent dated September 22, 1863.—The forward part of the shell has an annular cavity, in which is a loose ring with an enlargement to answer the purpose of a hammer: a part of the groove is occupied by a hollow plug and nipple, and the inertia of the ring on the firing of the shell from the rifled ordnance brings the hammer against the cap on the nipple and lights the time-fuze.

Claim.—The ring C and attached hammer b, applied to operate with a double groove d d, in combination with a nipple c and fuze hole g, substantially as and for the purpose herein specified.

No. 40,055.—ROBERT L. MARCHER, of New York, N. Y.—*Apparatus for Applying Metal Leaf to Mouldings, &c.*—Patent dated September 22, 1863.—The moulding is fed along in its channel, while the vibrating and reciprocating brush alternately picks up a sheet of metal leaf from the pile, and withdrawing it, lays it upon the surface of the moulding. The action of the brush and of the mechanism for feeding the moulding are alternate, and proceed from the reciprocating motion of the handle.

Claim.—First, the employment or use of the tip or brush I, attached to an arm H, and arranged with or without a spring a*, or with the equivalent of a spring, to operate substantially as and for the purpose herein set forth.

Second, the endless apron L, in combination with the arm H, tip or brush I, and slide G, arranged for joint operation as and for the purpose specified.

Third, the combination of the endless apron L, slide G, arm H, tip or brush I, and the sliding bar B, which supports the moulding C, actuated from the slide G, through the medium of the pawl E, lever F, and the rack in the bar B, substantially as and for the purpose set forth.

No. 40,056.—JOHN N. MORRISON, of Philadelphia, Pa.—*Improvement in Beds for Invalids.*—Patent dated September 22, 1863.—It consists in devices for adjusting the leg-rests and securing them in position in their flexed or extended positions; the traversing carriage for placing the bed pan or its substitute, the pad, in position; the ratchet, pawl, and lever arrangement for elevating the pan to the aperture in the mattress, and retaining it as required; the desk-holder, consisting of a swivelled clamp on an adjustable stalk.

Claim.—First, the combination of the jointed leg-rests E E and jointed supporting bars F F G G, when the said parts are constructed and arranged to operate in the manner and for the purposes herein specified.

Second, the carriage H, constructed and operated substantially as set forth, to place either the pad L or pan M beneath the aperture a in the bed.

Third, the elevating lever P P and retaining ratchet R, or equivalent devices, operating in any manner substantially as described, to raise the pad or pan, and retain it in the aperture a.

Fourth, the air-tight cover T, employed in the described combination with the carriage H, to close the pan M when not in use.

Fifth, the combination of the removable swivelled standard W, swivel V, and clamp screws or nuts u v, for securing the desk or table U in any required position.

No. 40,057.—WILLIAM MULLINS, of Steubenville, Ohio.—*Improvement in Lamps.*—Patent dated September 22, 1863.—For the purpose of keeping the oil in a fluid state, the oil cup is surrounded by an air jacket, which is supplied with heated air by an arched pipe reaching above the flame.

Claim.—Surmounting the oil cup with a hot-air chamber, and supplying heat thereto by means of the bent tube D passing over the flame of the lamp from a point below the bottom of the oil cup, and discharging into the air chamber in the manner and for the purpose described.

No. 40,058.—EDWARD L. NORFOLK, of Salem, Mass.—*Improved Device for Supplying Gas Retorts with Liquids.*—Patent dated September 22, 1863.—This device consists of a chamber with liquid for the supply of the retorts, and placed so far above them as to overcome, by the height of the column of liquid, the pressure of the gas in the retort, thereby affording a regular and continuous stream.

Claim.—Maintaining a regular supply of hydro-carbon for gas purposes by means of the chamber A and connecting pipes E and F, or their equivalents, the whole operating in the manner and for the purpose set forth.

No. 40,059.—GABRIEL D. PEARSON, of Ypsilanti, Washtenaw county, Mich.—*Improved Cross-cut Sawing Machine.*—Patent dated September 22, 1863.—The saw frame is attached to the side of the log by dogs and guys, and the requisite motion given to the saw by means of a geared shaft and pitman. The saw slips on ways in a box which is suspended by a cord from a ratchet pulley, and is guided by an arc-shaped bar attached to the frame.

Claim.—The combination of the working bar G, saw K, and guide block J, with the circular guide posts b b, and the mode of raising and lowering the saw by means of the crank shaft N, and the manner of attaching the machine to the log, arranged and operated in the manner and for the purpose herein explained.

No. 40,060.—DAN. PEASE, of Floyd, Oneida county, N. Y.—*Improvement in Smut Mills.*—Patent dated September 22, 1863.—The invention consists in constructing a stationary hollow cylinder for the outside shell of a smut machine of numerous small cast-iron pieces, so placed together as to make the ridges and hollows of the adjacent sections alternate with each other; also in the clearing plates on the top of the cylinder.

Claim.—A stationary hollow cylinder for a smut machine, composed of small cast-iron pieces, constructed, combined, and connected as herein described, and for the purposes described.

Also, separately, the construction of the cast-iron pieces of which the said cylinder is composed in such manner and form as that the internal trenches alternate with the intervening ridges as herein described, and for the purposes described.

Also, the clearers x on the top covering of the revolving cylinder, constructed and arranged as described, and for the purposes described, the whole being constructed, combined, and arranged substantially in the manner herein set forth.

No. 40,061.—JESSE PILBEAM, of Seneca Falls, Seneca county, N. Y.—*Improvement in Coal Hods.*—Patent dated September 22, 1863.—The rim is a flanged and armed metallic ring, to which the edges of the receptacle and base are attached by means of a plate and bolt.

Claim.—The ring C, constructed as described, in combination with the receptacle A and base B, arranged and operating substantially as herein set forth.

No. 40,062.—FRANÇOIS FERDINAND PRUDHOMME, of Paris, France.—*Improvement in Pumps.*—Patent dated September 22, 1863.—This is intended for deep wells or mines, and consists of a lift pump near the bottom of the shaft and a diving pump at the surface. They are connected by pipes, and the motion of the upper piston is communicated to the lower pump pistons by the water in the ascension pipes.

Claim.—First, the combination of two pumps, one being a lift and the other a force pump, arranged as herein shown, or in any equivalent way, to operate conjointly in the manner as and for the purpose specified.

Second, the particular construction of the lift pump as herein described, to wit: two solid pistons of equal size fitted in a cylinder divided into two compartments by a fixed partition, forming a resisting surface to the action of the water, as described.

Third, the combination of the cylinders M A A', pistons P B B', pipes F' J J', and valves D D d' L L', all arranged and operating substantially as set forth.

Fourth, the described arrangement and combination of parts constituting the double-acting driving pump without valves, but with a solid piston transmitting motion to the lift pump pistons through continuous columns of water, whereby the use of a rod extending down the well, mine-pit, or shaft, is dispensed with.

No. 40,063.—GELSTON SANFORD, of Great Britain, and JAMES E. MALLORY, of New York, N. Y.—*Improvement in Machine for Breaking and Cleaning Hemp, Flax, &c.*—Patent dated September 22, 1863.—One or more pairs of rotating fluted rollers are combined with a pair of toothed rollers which have a longitudinal reciprocating motion in addition to their rotary motion, so as to give a close rubbing action to the fibres as they pass through the machine.

Claim.—The pair of toothed rollers, one of which has a longitudinal reciprocating motion as well as a rotary motion, in combination with fluted rollers having a continuous rotary motion, substantially as described and for the purpose set forth.

No. 40,064.—WILBUR REED, of Greenwood, El Dorado county, Cal.—*Improvement in Hay and Cotton Press.*—Patent issued September 22, 1863; antedated October 17, 1862.—The improvement is in the method of applying power to the press, and consists in imparting an alternate pressing and releasing movement to the follower of a cotton press from the continued circular motion of a sweep or lever, provision being made for arresting the movement of the follower while the motion of the sweep is continued.

Claim.—The combining with the drums G G', arranged as described, the loose shaft g with its lever H, spur wheel k with its toothed hub i, spur wheel j, sliding plate k, levers m and p, all arranged substantially as set forth, and causing the drums G G' to operate upon their respective ropes c and s t, as herein specified.

No. 40,065.—N. C. SANFORD, of Meriden, New Haven county, Conn.—*Improvement in Boys' Sleds*.—Patent dated September 22, 1863.—The improvement consists of a central fin or rudder between the runners, operated by a pivoted bar under the control of the rider, by means of the tiller ropes or the feet which rest against the projecting ends of the bar; the projecting fins or the runners and rudder prevent the lateral motion of the sled.

Claim.—First, attaching the rudder D to the rear end of the seat B between the runners C, in the manner and for the purpose shown and described.

Second, the application of the flanges *f* and rib *g* in combination with the runner C and rudder D, constructed and operating in the manner and for the purpose substantially as specified.

No. 40,066.—SAMUEL O. SCHOONMAKER, of Wright, Schoharie county, N. Y.—*Improvement in Distance Indicators for Railroads*.—Patent dated September 22, 1863.—At every mile in the road a double inclined casting is laid, which, as the locomotive passes over it, raises a bar whose connexion with a pawl and ratchet operates an index point upon a circle, indicating miles, stations, &c.

Claim.—The double incline plane or lifter M, together with the arrangement of the striker K, spring L, lever G, and vertical rod E and catch D, when used in combination with the distance indicator, substantially as and for the purpose specified.

No. 40,067.—MAXIMILIAN WAPPICH, of Sacramento, Cal.—*Improvement in Operating Ordnance*.—Patent dated September 22, 1863.—This is an improvement on the inventor's former patent of March 10, 1863, and refers to the bracing of the carriage, the use of a compressor to clamp the carriage to the rails of the chassis, and a device for throwing the carriage off and on its wheels. The object is to raise the gun to its casemate or port-hole, so as to enable it to be fired out of a smaller aperture; to adapt the position of the gun to the aperture in attaining the required range and elevation. The compressing jaws act on the under side of the flange of the chassis, drawing the gun carriage down vertically upon the rails with the required force, which latter is adjustable by the revolution of the screw to which the jaws are pivoted; the cams are rotated upon loose collars on the axle to raise the gun carriage from the chassis and to throw its weight upon the wheels.

Claim.—First, elevating and depressing guns by their trunnions, by means substantially as and for the purposes described.

Second, providing a gun carriage which is constructed of cheeks C C, lateral braces, arranged above and below a gun which oscillates on, and is elevated and depressed by, its trunnions, substantially as described.

Third, so constructing a gun carriage and mounting a gun (which swings on its trunnions) therein, that while the gun can be raised or depressed, and the carriage remain stationary, the trunnions will have a rigid and firm support, substantially as described.

Fourth, the application of compressing jaws F F to a gun carriage in such manner that they will operate simultaneously upon the lower surfaces of the flanges of the chassis, and press upwards or in direct opposition to the gravity of the carriage, substantially as described.

Fifth, adapting the slow cams *s s* to operate in conjunction with the loose collars *g g* on the axle P, for the purpose of throwing the gun carriage upon its truck wheels, substantially as described.

No. 40,068.—R. N. WARFIELD, of Rochester, N. Y.—*Improvement in Deodorizing Petroleum, Naphtha, &c.*—Patent dated September 22, 1863.—This invention is explained by the claim.

Claim.—Deodorizing petroleum, naphtha, &c., by the introduction of a volume of steam into the liquid beneath its surface, by means of the pipe C and drum B, or in an equivalent manner, so that the steam is distributed throughout the contents, and removes the gas by its passage through the oil, substantially as herein set forth.

Also, passing the steam through the box E, or its equivalent, containing chloride of lime, muriate of ammonia, and stone lime, so that the steam becomes impregnated with the principles of those elements prior to entering the oil, for the purpose of further purification, substantially as specified.

No. 40,069.—JOEL WHITNEY, of Winchester, Middlesex county, Mass.—*Improvement in Rolling Leather*.—Patent dated September 22, 1863.—Pressure is brought upon the journals of the upper rollers by an India-rubber block and temper screws. The lower roller journals are supported upon blocks which are raised simultaneously by a common shaft and pinions, the bearings of which rest upon the ends of levers which are operated by a treadle and retained in the required position by a ratchet.

Claim.—First, the arrangement of the geared screws *a a* and the geared actuating shaft with the rollers V V' and springs *t2 t2*, so that the lower as well as the upper roller is adjustable, substantially as set forth.

Second, combining the rollers V V' with an actuating shaft and bevel wheels located below the lower roller, by means of which power may be applied to the rollers through the rotation of such shaft and wheels, and by a lever power additional thereto, all from a point below the lower roller, substantially as and for the purpose described.

Third, in combination with pressure rollers V V, to which power may be applied from a point below the lower roller, either solely by an actuating shaft and bevel wheels, or, in conjunction with a lever power additional thereto, the application of rubber springs *t2 t2* and the pendant ratchet *h*, substantially as and for the purpose described.

Fourth, the combination of the parts *a* and *p'*, by means of the bracket Q, as and for the purpose set forth.

No. 40,070.—GEORGE B. WIESTLING, of Oxford Furnace, Warren county, N. J.—*Improved Gun and Blasting Powder*.—Patent issued September 22, 1863; antedated December 3, 1862.—Take of nitrate of soda, ten pounds; chlorate of potassa, four pounds; pulverized roll sulphur, two pounds; dissolve the chlorate of potassa in eight pounds of boiling water; add the soda, and with the solution saturate pulverized charcoal; add the sulphur, and mix intimately and dry the compound.

Claim.—The manufacture of gun and blasting powder of charcoal, sulphur, nitrate of soda, and chlorate of potassa, either with or without nitrate of potassa, by the process herein specified.

No. 40,071.—CHARLES WITTMAN, M. D., of Brooklyn, N. Y.—*Improvement in Surgical Splints*.—Patent dated September 22, 1863.—This splint is made of sheet metal, strengthened by beads, and perforated to admit of the evaporation of lotions or secretions which may come in contact with it. The metal is coated with varnish to prevent rusting, and provided with a device for adjusting it to the axis of the joint of the limb. The foot-piece is set upon springs and provided with hinged screws, which admit of its adjustment to the desired position of the foot.

Claim.—First, a perforated sheet-metal splint, made in the manner and for the purposes substantially as herein shown and described.

Second, the application of the buckles *c' g* and eyes *e e*, with or without springs *f*, in combination with the two parts A' A'' of a splint, as described, for the purpose of effecting an elastic or unelastic extension and counter-extension to the limb.

Third, the double-hinged serrated bar B with the adjustable spring catch *j*, in combination with the splint A' A'', constructed and operating in the manner and for the purpose substantially as shown and described.

Fourth, the adjustable pivot *h*, in combination with the rods *a' d* carrying the parts A' A'', as described, for the purpose of accommodating the joint of the splint to the axis of the joint of the limb to be treated.

Fifth, the application of the screws *ll'* with hinges *l' l''* to the foot-plate A''', as and for the purpose specified.

Sixth, the arrangement of the springs *n* in combination with the foot-plate A''', constructed and operated in the manner and for the purpose substantially as set forth.

No. 40,072.—JAMES D. WHELPLEY, of Boston, Mass.—*Improvement in Quartz Crushers*.—Patent dated September 22, 1863.—This consists of a tub with grated sides, into which the quartz is dropped and broken by coming in contact with the edges of rotating knives on the arms of a horizontally revolving wheel.

Claim.—First, revolving the radial cutters L, or their equivalents, close to the bottom and side of a suitable tub or cylinder, and causing the material which is to be broken to fall by its own weight upon the cutters, whereby, while falling in a free and open space and held by inertia alone, it is effectually broken or shivered to pieces, substantially as described.

Second, in combination with the horizontally revolving cutters L the grate or perforations N in the periphery of the tub, substantially as and for the purpose described.

No. 40,073.—WILEY S. WRIGHT, of St. Louis, Mo.—*Improvement in Stores*.—Patent dated September 22, 1863.—This is an arrangement for securing the sliding doors to the door frame, and consists of an overhanging lip and a projecting lug on the upper and lower edges, respectively, of the door frame, and a lug on the lower edge of the door projecting inwardly over the edge of the frame.

Claim.—First, supporting the inner end of sliding stove doors upon the top edge of the lower part of the door frame by means of hooks, which are applied to and move with doors, substantially as described.

Second, the outside auxiliary supports *e e*, in combination with hooks *c c*, arranged on the inside of the doors, substantially as and for the purposes described.

Third, in combination with the inner hooks and outer supports, the overhanging strip *b* applied to the door frame, substantially as and for the purposes described.

No. 40,074.—VICTOR BEAUMONT, of New York, N. Y.—*Improvement in Hand Stamps*.—Patent dated September 22, 1863.—This improvement consists in a number of appliances combining in one instrument a hand stamp and inking pad; so that the stamp is inked automatically without the use of inking rollers held against the stamp when not in use, and brought out of contact with the stamp before the latter partakes of the motion of the hand, being projected out of the path of the stamp at the moment of impression.

Claim.—First, the combination in one instrument of a hand stamp with an inking pad, under an arrangement substantially as hereinbefore described, so that the stamp shall be inked automatically without the use of inking rollers, substantially as herein set forth.

Second, the method of connecting the inking pad with the head or knob of the stamp by means of articulated pendant rods, in combination with guides or their equivalents, for giving to the pad when actuated by the knob the requisite motion for clearing the path of the stamp, substantially as herein set forth.

Third, combining with the stamp and inking pad a frame, so arranged as to constitute the means for firmly holding the paper, for supporting the instrument, and for properly guiding the pad and stamp in their various movements during the operations of the instrument, substantially as herein described.

Fourth, the employment, in combination with a knob and inking pad united as herein before referred to, of a shank tube and extension spring for holding the pad against the stamp when the instrument is not in use, and for maintaining the stamp ready inked before a downward motion is imparted to it, substantially as herein described.

Fifth, the combination with a knob sliding upon the shank of a helical spring located within the knob and around the shank and between reverse flanges applied to the knob and shank respectively, in the manner and for the purposes substantially as herein described.

Sixth, combining the head or knob of a hand stamp, operated by pressure applied to the head with the inking pad, so that the said pad is brought out of contact with the stamp before the stamp itself partakes of the movement imparted to the head, substantially as set forth.

Seventh, enlarging the guide slots in or about the plane in which the pad rests in contact with the stamp, so as to allow a sufficient play of the pad for the occasional renewal of surfaces of contact, substantially as herein shown and described.

No. 40,075.—ANDREW BUCHANAN, of Jersey City, N. J., assignor to Himself and WILLIAM A. RIGHTER, of Newark, N. J.—*Improved Mode of Directing Motion*.—Patent dated September 22, 1863.—The object of this invention is to obtain a perfect rectilinear movement of a body without the application of fixed guides, and it consists of an oscillating arm with an attached slide or roller moving in a fixed arc or on a curved surface, whereby a certain point on said arm is caused in its oscillation to describe a right line and produce a rectilinear movement, as represented in the drawing, applied to the slide valve of a steam engine.

Claim.—The oscillating and longitudinally moving arms C, slide F, and stationary-are formed or curved guide *ff*, the whole applied in combination with each other and with the body whose motion is to be directed, substantially as and for the purpose herein specified.

No. 40,076.—R. W. and D. DAVIS, of New York, N. Y., assignors to Themselves, DANIEL APPLETON and COMPANY, JOHN PERKINS, and NEHEMIAH P. STANTON, all of same place.—*Improvement in Moulds for Casting Printing Type*.—Patent dated September 22, 1863.—The mould is made of a series of detached strips fastened by a connecting band and passed through a box under a receiver filled with plastic material and fitted with a plunger, whereby the material is pressed into the moulds and cut off by the knife from the receiver, the registering of the moulds with the matrices being insured by projections on the mould.

Claim.—First, the construction of the mould in parts of a series of strips *g g h h*, fitted loosely to and combined by a flexible and elastic connecting piece *F*, substantially as and for the purpose herein specified.

Second, the combination of the tenons or projections *j j*, on each or any number of the strips *g g*, and corresponding mortises or recesses in the matrix block or matrix strip, substantially as and for the purpose herein specified.

Third, the mould slide D, receiver G, plunger G', and cut-off H, the whole applied in combination with each other, and with the box A and cover B, substantially as and for the purpose herein specified.

No. 40,077.—RANDOLPH S. FOSTER, of Sing Sing, N. Y.—*Improvement in Locks*.—Patent dated September 22, 1863.—The double-bitted key engages with a cam whose projections and pin operate the bolt and tumblers so that a pin on the cam and a stud on the bolt are brought to correspond with certain gates in the tumblers so as to allow the motion of the bolt. When the latter has passed beyond a certain point, so that the stud is in the rectangular recess of the tumblers, the lock will then act as a knob catch and night latch.

Claim.—In combination with a double-bitted key G, the cam-wheel F, tumblers E, and bolt C, constructed and operating together in the manner and for the purpose herein described and represented.

No. 40,078.—S. S. HOWARD, of Milton, Ulster county, N. Y., assignor to EDGAR D. GILLIS, of same place.—*Improvement in Grinding Mills*.—The hopper is attached by pendant rods and bolts to the plate which covers the pivoted plates which regulate the feed opening; the latter plates are situated above and pivoted to the cap of the mill.

Claim.—First, the arrangement of the feed-regulating plates K K, between the cap J and the plate L, substantially as and for the purpose herein shown and described.

Second, the annular plate L, provided with the ears O O, in connexion with pendant rods *p p*, attached to the hopper M, and passing through the ears or lugs O O, for the purpose of securing the hopper to the mill and rendering the plate K accessible for adjustment.

No. 40,079.—GEORGE HUTTELMAIER, of Alleghany, Pa., assignor to Himself and HENRY P. MUELLER, of same place.—*Improved Machine for Oiling Tanned Leather*.—Patent dated September 22, 1863.—The hides are exposed to friction in a close-heated vessel containing grease.

Claim.—The process of subjecting tanned hides to friction in a close-heated cylinder or other vessel, so constructed as to retain its heat for a considerable time, and containing melted grease for the purpose of greasing them, substantially as hereinbefore described.

No. 40,080.—A. C. KETCHUM, of New York, N. Y., assignor to WILLIAM P. PETTINGILL and S. T. McDUGAL, of same place.—*Improvement in Coal Oil Lamps*.—Patent dated September 22, 1863.—Running at right angles to the wick tube is a cross-bar to cause the air to enter on each side of the deflector independently of the other, and to impel the current of air upwards in the case of side draughts.

Claim.—First, the application of the partition or cross-bar E to the tube B, and base *a*.

Second, the peculiar mode of attaching the jacket D, as shown in Fig. 1.

Third, the combination of the jacket D with the partition E, and attached to the tube and base B and A, substantially as described, thereby making a simple and economical burner.

No. 40,081.—HIPPOLYTE A. MARINONI and FRANÇOIS NOEL CHANDRÉ, of Paris, France, assignors to RICHARD MARCH HOE.—*Improvement in Printers' Quoins*.—Patent dated September 22, 1863.—The form is driven forcibly and packed against the side and end of the chase by means of revolving toothed quoins and wedge-shaped toothed furniture, so that by the rotation of the quoins under the impulse of a key they climb upon the inclined face of the furniture and tighten the type in the chase.

Claim.—The combination of toothed or cogged roller quoins and furniture having corresponding racks, teeth, or cogs, substantially as herein described.

No. 40,082.—FRANCIS A. PRATT, of Hartford, Conn., assignor to PRATT, WHITNEY & Co., of same place.—*Improvement in Apparatus for Attaching Pumps to Bungs of Barrels*.—Patent dated September 22, 1863.—This consists of a rigid suction pipe attached to a portable pump, and a saddle or crab, a hooked bolt for clamping the crab to a barrel, and a set screw for clamping the suction pipe to the crab.

Claim.—The employment in combination with the suction pipe of a portable pump of a crab, or saddle C, a hooked bolt *b*, and a clamp screw *h*, or their respective equivalents, combined, arranged, and operating to secure a barrel pump to a barrel, substantially in the manner hereinbefore described.

No. 40,083.—TREAT T. PROSSER, assignor to Himself and M. C. and K. A. DARLING, of Fond du Lac, Wis.—*Improved Method of Utilizing Exhaust Steam*.—Patent dated September 22, 1862.—The exhaust steam from the engine is applied under the boilers with a pressure capable of being regulated for the purpose of utilizing the heat of the steam.

Claim.—First, applying the exhaust steam of a steam-engine under pressure greater than that of the atmosphere to a boiler or boilers, or any part thereof, whether the boiler or boilers be used separately or in combination with other boiler or boilers, either exclusively for the purpose of generating steam in the boiler or boilers or for aiding the fire to generate it.

Second, the valve *f*, or its equivalent, in combination with the diaphragm *c*, and exhaust steam tubes or flues, with or without a steam chamber around the boiler, for regulating the pressure to be given the exhaust steam.

Third, the chamber K, (Figs. 7 and 21 and cross section, Fig. 14,) constructed and arranged in the manner and for the purpose set forth.

No. 40,084.—ISRAEL M. ROSE, assignor to J. WILCOX, of New York, N. Y.—*Improvement in Tucking Device for Sewing Machines*.—Patent dated September 22, 1863.—Explained by the claim.

Claim.—First, the mechanism herein described, to be used as an attachment to sewing machines for marking tucks, said mechanism being constructed and arranged so that when actuated by the needle arm or other moving parts of the sewing machine it shall form a well-defined ridge on the face of the cloth opposite that in contact with the table, substantially in the manner hereinafter shown and described.

Second, as the sewing machine attachment, the device or mechanism for marking tucks, said mechanism consisting of jaws arranged in pairs closing and opening at regular intervals to seize and release the cloth, in the manner and for the purposes herein set forth.

Third, so combining the parts of a sewing machine attachment for marking tucks for action substantially as set forth, as that the jaws are brought down in contact with, to impinge upon the cloth while yet open, and are closed by the resistance then offered to the further descent of the jaws, substantially as herein shown and described.

Fourth, combining with the jaws acting substantially as hereinbefore described a metal strip arranged in line parallel with the feed and operating in conjunction with the jaws, substantially in the manner and for the purposes set forth.

No. 40,085.—ADDISON SMITH, of New York, N. Y., assignor to Himself and JAMES M. SAYRE, of same place.—*Improvement in Gas Compensators*.—Patent dated September 22, 1863.—This is an improvement on P. W. Mackenzie's patent of March 4, 1862. The cylinder is secured between the gas pipes, and provided with ports and a valve mechanism, with a fluid joint for operating the valves; so that if the exhauster be driven too fast and thereby the pressure on the retorts be reduced below the desired point, the cup is depressed and the valve thrown open, allowing the gas to pass through the ports to supply the deficiency due to the increased speed of the exhauster.

Claim.—First, combining with a cylinder provided with ports and a valve mechanism, substantially as described, the inverted cup and fluid joint for operating the valves and regulating the pressure of gas, substantially as described and set forth.

Second, the combination with an inverted cup and fluid joint of a double valve, whereby a small movement of the inverted cup causes the valve to give increased communication between the pipes, and thereby more quickly and evenly regulate the pressure of gas, substantially as described and set forth.

No. 40,086.—GEORGE C. TAYLOR, of Worcester, Mass., assignor to A. G. BROWN and L. G. KNIFFEN, of same place, and THOMAS H. DODGE, of Nashua, N. H.—*Improvement in Pawl and Ratchet*.—Patent dated September 22, 1863.—The pawl is pivoted in a socket in the circular flange of the hub, the other end of the flange carrying a spring by which the pawl is caused to engage the teeth in the rim.

Claim.—First, the circular pawl supporting socket D, in combination with the rear end of the pawl *a'*, substantially as shown and described.

Second, the combination of the pawl *a'*, socket D, flange *A'*, and spring S, when constructed and arranged to operate in relation to each other and the ratchet teeth *b b*, as shown and described.

Third, the combination of the internal flange or hub *B'* with the parts B and A, as and for the purposes set forth.

No. 40,087.—ENOCH WAITE, of Lawrence, Mass., assignor to the BOSTON FIBRILIA FELTING COMPANY, assignor to BERKLY MANUFACTURING COMPANY.—*Improvement in Felting Machine*.—Patent dated September 22, 1863.—The picker is composed of a large toothed cylinder covered by a cap, a feeding apron, and a smooth toothed cylinder arranged over a stationary bar; directly in front of the cylinder is a hollow drum or wire cylinder succeeded by revolving endless aprons which pass between stationary and movable platens which are hollow and heated by steam. A continuous sheet of paper, which is passed in contact with a size roller in a paste reservoir, is placed in contact with the lower surface of the felting material in its passage between the platens. Threads or rovings from bobbins are incorporated with the bat before it reaches the felting platens.

Claim.—A combination of a picker, a perforated cylinder F, or its equivalent, and machinery for felting, the whole being arranged and so as to co-operate substantially as described.

Also, a machine or combination composed not only of machinery for making felt, but of a mechanism or apparatus for applying paste or cement to a sheet of paper, or the equivalent thereof, when applied to make felt in manner and under circumstances substantially as described.

Also, the combination composed of felting mechanism, a pasting apparatus, a perforated or woven wire cylinder F, and a picker, the whole being made and arranged so as to co-operate substantially as specified.

Also, the combination of one or more stripping bobbins R R, or the equivalent thereof, and suitable supporting devices therefor, with the machinery, substantially as described, for producing felt fabric.

Also, in combination with the felting mechanism a means of heating one or more of its platens, whereby they may be rendered capable of drying and smoothing the felted fabric, or the same and the paper to which it may be connected.

No. 40,088.—EDWARD P. BACON, of Milwaukee, Wis.—*Suspension Rack for Coupon Tickets*.—Patent dated September 29, 1863.—This invention consists in an arrangement of horizontal boards provided with hooks adjustable vertically on perpendicular supports, and receding as they rise so as to expose to view the heading of the bills or coupons.

Claim.—A case or rack for coupon tickets, or other articles to which it may be adapted, provided with horizontal bands or supports *a a* attached to upright standards *b b*, with projections *d d* on the latter at the several points of intersection, hooks or other means of suspension being affixed to the horizontal bands from which tickets or other articles may be suspended, when constructed in this or any other manner substantially the same, for the purposes set forth.

No. 40,089.—EDSON P. CLARK, of Northampton, Mass.—*Marking Brush*.—Patent dated September 29, 1863.—Upon a hollow stem is an elastic ink-chamber, which communicates with a central tube, traversed by the stem of an ink brush, which, as it is projected and used, is kept, by means of said communication, constantly supplied with ink, and may be retracted within the tube when disused.

Claim.—The elastic fountain B, in combination with the tube A and brush G, as shown and described, for the purpose set forth; also the brush G, connecting with the handle C sliding within the tube A, in the way and for the purpose before described.

No. 40,090.—M. C. COGSWELL and A. G. WILLIAMS, of Buffalo, N. Y.—*Improvement in Furnaces for Grain Dryers*.—Patent issued September 29, 1863; antedated September 20, 1863.—The air from the blower is conducted by three flues, each provided with a damper under the inner partition walls, and to the hot-air chamber above the fire; the middle of these flues is tapped by another, which leads directly to a point under the fire grate. The volatile results of combustion are led by a pipe to the dryer.

Claim.—The arrangement of the flues *c c1 c2 c3* and D (including their valves) relatively with the blower H, hot-air chamber E, and pipe M, for the purposes and substantially as described.

No. 40,091.—SAMUEL COWAN, of Bloomfield, Davis county, Iowa.—*Improvement in Flax Brake and Swingler*.—Patent dated September 29, 1863.—The flax is placed upon the apron and fed between the first pair of rollers, which have square cogs, and delivered upon the second apron; is passed by its means, and that of the reel which travels at the same speed, to the second pair of rollers, which have round teeth and are more closely geared; it is then withdrawn and passed down a hole in a board where it is exposed to a swingling wheel which removes the trash from the fibre and puts it in a condition for hackling.

Claim.—The combination of the rollers F G N O with the endless aprons B and I and reel P, when the two latter move at the same speed, substantially in the manner and for the purposes herein set forth.

Also, combining with a flax brake, constructed and operating as herein described, the swingler T, substantially in the manner and for the purposes set forth.

No. 40,092.—WILLIAM H. DIBBLE, of Middletown, Middlesex county, Conn.—*Improvement in Cartridge Bullet*.—Patent dated September 29, 1863.—The tubular recess in the bullet extends so far to the rear as to form a powder chamber; an inflammable cap covers the end, and a fibrous covering encloses the tubular portion.

Claim.—The within described new article of manufacture, to wit: A quick powder, ductile metal tubular cartridge projectile *a b c e* with a quick powder charge within it, and with a fibrous covering *h* and a highly inflammable cementing and igniting cap *i*, all as set forth.

No. 40,093.—WILLIAM H. DUTTON, of Utica, N. Y.—*Improved Skate Fastening*.—Patent issued September 29, 1863; antedated September 25, 1863.—Metallic loops are attached to the ends of the stationary straps which pass upward from the sides of the skate; through these loops straps are passed with a double turn and secured by being slipped over pins.

Claim.—First, the metal loops, as constructed and provided with the posts and buttons H, in combination with the stationary straps, in the manner and for the purpose described.

Second, the double turn or pulley in the strap, in combination with the metal loops and button fastenings, as described, and for the purposes described, the whole being arranged and operating substantially in the manner herein set forth.

No. 40,094.—M. B. DYOTT, of Philadelphia, Pa.—*Improvement in Lamps*.—Patent dated September 29, 1863.—Two depressions are in the lamp, one around the collar and the other at the point of attachment of the handle in the side.

Claim.—A lamp made with a drip-trough depression *b* at its neck and a handle depression or indentation C at its side, with attached handle C therein, all as herein shown and described.

No. 40,095.—BENJAMIN F. FIELD, of Sheboygan Falls, Wis.—*Improvement in Cultivators*.—Patent dated September 29, 1863.—The cultivator shares drag behind, attached to bars which are pivoted to the forward part of the machine frame; each share is suspended by a cord from a bar, and the height of the bar is adjusted by means of a crank and pulley, and a cord fastened to the bar; an independent rolling shield attached to a drag bar revolving in company with each share affords a protection for the young plants, and is adjustable simultaneously as to height with the shares by attachment to the same rod. The wheels are adjustable longitudinally on their axis, and are fixed in position by collars and screws.

Claim.—First, the arm or drag-bar G, when constructed as described.

Second, the combination of the arm G, the cultivator E F, the independent rolling shield K, and the arm L.

Third, the combination of the crank R, the pulleys *t* and *s*, the shaft P, and the cords or chains *r* and *p*, for the purpose of elevating the cultivators and shields.

Fourth, making the wheels of a cultivator adjustable on their shaft or axle by means of the collars *u u* and set screws *e*, substantially as set forth.

No. 40,096.—BENJAMIN F. FIELD, of Sheboygan Falls, Sheboygan county, Wis.—*Improvement in Cultivators*.—Patent dated September 29, 1863.—When it is required to change the drill to a cultivator the shares are attached to the seed tubes of the drill by means of loop straps on the back of the share which embrace the tube, and are secured in position by screws. The gang of shares are lifted by means of a handle attached to the bar, from which they are suspended by chains.

Claim.—First, a cultivator share, when constructed substantially in the manner described, to be attached to the ordinary drill tooth.

Second, The long handle H, in combination with the lifting bar G, substantially as described and for the purpose set forth.

No. 40,097.—JOHN S. FRENCH, of San Francisco, Cal.—*Improvement in Rock-Drilling Machines*.—Patent dated September 29, 1863.—Explained by the claim.

Claim.—First, the manner of arranging the frame I of the machine so that it, and consequently the drill T, may be adjusted in either a vertical or horizontal position or at any degree of inclination between those positions, and at any point in a circular plane parallel with the axis of the drill, to wit, by having the frame I hung loosely on an arm i which is attached to a block or nut F fitted in a vertical column C having a screw G placed in it, which passes through the block or nut, and the column arranged to turn on a plate B on the truck A, the column being retained at any desired point, and also the frame I, by the means herein described, or their equivalents.

Second, the drawing back of the drill T after each stroke, by means of the slide R connected with the drill through the medium of the collar d' fitting in the ledge c' on the slide, the slide being operated by the rack r', pinion s, pawl S, and crank u, on shaft K, and springs u u, or their equivalents, as set forth.

Third, rotating or turning the drill T, during its backward movement, by means of the box V, gearing f' g', ratchet h', and pawl V, attached to the pawl S, substantially as set forth.

Fourth, opening the hammer Q through the medium of the cam L, slide bar M, and springs P P, substantially as specified.

No. 40,098.—THEODORE FOSTER, of Coxsackie, Greene county, N. Y.—*Improvement in Hay Forks*.—Patent dated September 29, 1863.—The handle, fork head, and tines are rigidly secured together; the loop, which is hinged to the handle at one end and tied to the hoisting rope at the other, is secured by latches to the fork head; these latches are pivoted to the fork head, and connected by toggles to the detaching handle, by which they are withdrawn from their engagement on the loop to discharge the load.

Claim.—First, the hinge h secured to the top of the handle B and operating in combination with the latch D and with the fork, in the manner and for the purpose herein shown and described.

Second, the ring g and loop f, in combination with the toggle arms d d, catches e e, and latch D, all constructed and operating in the manner and for the purpose specified.

No. 40,099.—GEORGE P. GORDON, of Brooklyn, N. Y.—*Improvement in Printing Presses*.—Patent dated September 29, 1863.—The platen is rocked from the horizontal position in which it has received the paper, and by the motion of the crank arm and the roller in the cam groove of the cog wheel, is made to assume the vertical position in which it is locked, while the bed carrying the form is vibrated on its centre by means of the link rod attached to the cog wheel, until it delivers its pressure upon the paper on the platen and retires, allowing the latter to be rocked back again and the printed paper removed.

After the impression has been given in card printing, the drop gauge opens and the card drops into a box.

Claim.—First, locking and holding a platen securely in a stationary position, for the purposes fully described.

Second, placing the shaft of the rocking platen between the impression shaft and the vibrating bed shaft, thus causing the shafts to fall in a direct line with the connecting rods at the moment of impressions, for the purpose or purposes set forth.

Third, in combination with the shafts so arranged, the manner described of operating the rocking platen, for the purpose specified.

Fourth, the end gauge Y, constructed and operated substantially as shown; also, the combination of such end gauge Y into the drop gauge X, for the purposes herein fully described.

No. 40,100.—SAMUEL F. GREEN, of Croton Falls, Westchester county, N. Y.—*Improvement in Axle Boxes for Vehicles*.—Patent dated September 29, 1863.—The axle box is divided longitudinally and has a groove and tongue joint; the inner nut secures the boxing in the hub, while the outer nut on the end of the spindle secures the wheel on the axle.

Claim.—The combination with the two parts of the divided box D, axle A, and nut B, of the nut E, in the manner and for the purpose herein shown and described.

No. 40,101.—WILLIAM HEATON, of Centre Township, Greene county, Pa.—*Improvement in Sheep Racks*.—Patent dated September 29, 1863.—The bed of the rack has a double

inclined bottom sloping towards the sides; it also has posts at each end inclining outwardly; the feed-holders are formed of bars with prongs or rounds, which project upwardly and are connected by toggle joints to sliding fenders, which are raised or lowered in the former case to extend the capacity of the rack, and in the latter to collapse the fenders and feed-holders, to reduce the rack to a smaller compass.

Claim.—The sheep rack, provided with the double-inclined bottom E, sliding fenders O, and feed-holders G, provided with prongs I, the whole constructed, arranged, and operating substantially as herein set forth.

No. 40,102.—JAMES M. HICKS, of Boston, Mass.—*Improvement in Slate Pencil Sharpeners*.—Patent dated September 29, 1863.—The piece of metal has a surface roughened, and is then bent into a loop-shape, so as to present suitable surfaces for the pointing of a pencil applied thereto.

Claim.—The manufacture of slate pencil sharpeners or other equivalent instruments, without a separate casing or frame permanently to hold the roughened surfaces in their relative position, as set forth, by forming both roughened surfaces upon one plate or piece, which is bent in the manner and for the purposes herein described.

No. 40,103.—ALONZO HITCHCOCK, of Chicago, Ill.—*Improvement in Quartz Crushers*.—Patent dated September 29, 1863.—Three wheels are attached by axles to a triangular frame and rotate in an annular trough; the motion is derived from a sweep attached to a cup whose annular recessed lower surface fits on the upper part of the wheels, and causes them to rotate.

Claim.—The combination of the circular cap and trough and the three crusher wheels, constructed and operating substantially in the manner described.

No. 40,104.—JAMES R. HYDE, of Troy, N. Y.—*Improvement in Cooking Stoves*.—Patent dated September 29, 1863.—Behind the fire-chamber is a divided air-chamber, each division of which communicates with the open air by passages ascending from below and passing the ends of the fire-chamber; these chambers discharge air through apertures into the fire, and are covered by a removable plate.

Claim.—First, in a cooking stove having an oblong fire-chamber A with pot-holes h h' over it, and a live air-chamber D D alongside with apertures e between, and a fire-flue F extended from the said fire-chamber first over the said air-chamber, as herein described, the removable air-chamber cover i i, constructed in several parts and secured to the said air-chamber by clamps k k, as and for the purposes herein set forth.

Also, a cooking stove having two separate sub-air-chambers D D, arranged between an oven L and a fire-chamber A, and communicating with the latter by apertures e e, and with the open air by passages m m' separate from each other and from the main draught-chamber C, and provided with independent dampers n n', when a fire-flue F is extended from the said fire-chamber along the said oven, and under pot-holes h h' h' h' in a top plate G, substantially as herein described.

No. 40,105.—MILTON C. JEFFERS, of New York, N. Y.—*Improvement in Adding Machines*.—Patent dated September 29, 1863.—In this machine a series of wheels marked with numbers is employed, and they are so combined together as to indicate the result of the manipulations. The present improvement consists in combining with these wheels fixed hubs on a central shaft, the hubs having indentations, and verges or escapements attached to the wheels, which work into the said indentations and cause each wheel to turn the wheel to the left of it one-tenth the distance traversed by itself.

Claim.—The combination in an adding machine of the wheels B B, hubs C C, and verges or escapements F F, substantially as and for the purposes set forth.

No. 40,106.—A. F. JONES, of Douglass, Worcester county, Mass.—*Improvement in Registers for Account Books*.—Patent dated September 29, 1863.—This is a circular revolving bookcase, in which the books are arranged in such series as the nature and extent of the business render desirable.

Claim.—The merchant's monitor, being circular to economize room, revolving for greater convenience and to save steps, by bringing the books round to the operator, with movable cases, and alphabetically and numerically arranged, essentially as above described.

No. 40,107.—CHARLES N. JONES, of Galway, Saratoga county, N. Y.—*Improvement in Planting Hoe*.—Patent dated September 29, 1863.—A seed-planter is attached to the back of the hoe, with the sliding foot pointing downwards; by turning the hoe over, the slide may be pressed on the ground, causing the seed-cell to rise above the cap and discharge the grain.

Claim.—The arrangement of the foot E' at the lower end of the seed slide E, when the latter works in a box C secured to the handle of a hoe A, in the manner and for the purpose shown and described.

No. 40,108.—CHARLES KIRCHHOFF, of Newark, N. J.—*Alarm Chime Bells for Horses*.—Patent dated September 29, 1863.—The frame on which the bells are suspended is attached to the harness of the horse, and affords an opening for the passage of the rein ring. The clappers hang inside and out, suspended or supported, and their action is prolonged by springs.

Claim.—First, the contrivance *a a*, or its equivalent, to attach and support on or above the horse a number of bells and clappers, or their respective equivalents, connected with each other and with the contrivance, in the manner and for the purpose as specified.

Second, the combination of rein rings, or equivalents, with said contrivance, as set forth.

Third, the method to produce a peculiar harmonic prolonged alarm by governing and extending the operation of the hammers or clappers and bells by means of springs or vibrating materials, and by other devices described, and the manner in which these different parts are arranged and combined with each other, and also with the contrivance *a a*, as specified herein.

No. 40,109.—EDWARD A. LOCKE, of Boston, Mass.—*Mode of Attaching Labels to Bales, &c.*—Patent dated September 29, 1863.—The carrier has a sharp point and an oblique aperture in which the barb of an anchor pin is placed and thrust in the bale; on the withdrawal of the carrier the barb slips out and the anchor is left buried in the bale.

Claim.—The carrier *A*, when made with an end gradually tapering to a point, and preceding the anchoring device, provision being made in or on the carrier for attachment thereunto of the detachable anchor.

Also, so making the anchor that it may be attached to the side and near the point of the carrier, so as to pass easily into the bale with the carrier, and be left therein on withdrawal of the same.

No. 40,110.—THOMAS R. MARKILLIE, of Winchester, Scott county, Ill.—*Improved Washing Machine.*—Patent dated September 29, 1863.—A furnace is attached to the under part of the box to keep the suds warm. The squeezer is formed of two plates attached to pivoted arms actuated by rods connected respectively to the opposite cranks of a double crank-shaft.

Claim.—First, the combination of the furnace *C* with the bottom plate of a washing machine, in the manner and for the purposes as described.

Second, the method of operating the travelling squeezer *L*, by means of the crank-shaft *F*, pitman rod *I*, and swing arms *h* herein described, whereby the purposes set forth are effected in a simple and efficient manner.

No. 40,111.—EDWARD MAYNARD, of Washington, D. C.—*Improvement in Cartridges.*—Patent dated September 29, 1863.—The forward end of the cartridge case is slit and the tongues thus formed are pressed down upon the wad which covers the shot.

Claim.—The formation of one or more clasping or retaining tongues in the upper rim of a metallic cartridge by slitting the edge of the same, substantially in the manner and for the purpose herein set forth.

No. 40,112.—EDWARD MAYNARD, of Washington, D. C.—*Improvement in Metallic Cartridges.*—Patent dated September 29, 1863.—The string or other appliance for retracting the cartridge is so attached to the case by a loop, knot, or insertion through the side as to render unnecessary the special strengthening of that part to endure the strain.

Claim.—Combining with a metallic or otherwise cartridge a suitable retracting arm, chain, thong, or cord, in such a manner as to avoid the necessity of a distinct or unusually thick bottom thereto, substantially in the manner hereinbefore described.

No. 40,113.—GEORGE MCGREGOR, of Cincinnati, Ohio.—*Improvement in Car Seat Lock.*—Patent dated September 29, 1863.—This consists of a lock case and a sliding spring-bolt which engages with a catch on the frame of the seat; the bolt is withdrawn by a vibrating bit operated by a hollow socket key.

Claim.—The arrangement and combination of the case *A*, with lug *j*, and pin *m*, hollow key *C*, with double shouldered bit *k*, and spring bolt *B*, all constructed and operating in the manner and for the purpose shown and described.

No. 40,114.—T. CATO MCKEEN, of Dunkirk, Chautauqua county, N. Y.—*Improved Diving Apparatus.*—Patent dated September 29, 1863.—There is added to the ordinary diving dress a reservoir to contain compressed air sufficient to last the diver several hours; it is strapped to the dress and communicates with the interior of the latter by a pipe which has a faucet. Expansible bags are attached to the shoulders, which are made buoyant by inflation from the compressed-air reservoir.

Claim.—First, the employment of the independent air knapsack *B*, constructed and operating substantially in the manner and for the purpose herein shown and described.

Second, the arrangement of the expansible buoys *C*, and secondary reservoir *D*, in combination with the air reservoir *B*, and diving dress *A*, constructed and operating substantially as and for the purpose described.

No. 40,115.—WILLIAM MILLER, of Boston, Mass.—*Improvement in Guard Attachment for Locks.*—Patent dated September 29, 1863.—The key of the lock being so far rotated as to bring the bit of the key to a horizontal position, a clasp is fitted to its handle and extending into the key-hole so as to prevent the handle being rotated by gripping or other mechanism from the outside.

Claim.—The clasp *D*, constructed substantially as shown, so as to be capable of being fitted on the bore *a* of the key *C*, with one end in the keyhole *E*, as and for the purpose set forth.

No. 40,116.—A. MONNIER, of Philadelphia, Pa.—*Improvement in Separating Copper, Nickel, and Cobalt.*—Patent dated September 29, 1863.—The process consists in the treatment of the sulphates of copper, nickel, and cobalt by the use of chloride of sodium or other chloride, which is added to the solution of the sulphate, a little in excess of what is necessary to constitute equivalent for equivalent. The liquor is then concentrated by evaporation to 30° B. and the sulphate of soda allowed to crystallize; the metal is then obtained by precipitation from the mother liquor.

Claim.—The treatment of sulphates of copper, cobalt, and nickel, by means of chloride of sodium or other compound of chlorine, substantially as and for the purpose herein set forth.

No. 40,117.—JAMES MONTEITH, of New York, N. Y.—*Improved School Desk and Seat.*—Patent dated September 29, 1863.—The seat board is attached to the ends, which are pivoted so that the board can be thrown up and over towards the rear, and catching upon the back of the seat form a desk.

Claim.—So attaching the board *C* to the settee or chair by pivots *a a*, or their equivalents, that it may be brought either to a position to form a seat or turned-up back, and over to a position to form a desk, substantially as herein specified.

No. 40,118.—JAMES PERKINS and WILLIAM H. BURNET, of Newark, N. J.—*Improvement in Steam Boilers.*—Patent dated September 29, 1863.—The tubular boiler is underneath the rear half of the cylindrical boiler, and communicates therewith by vertical tubes. The boilers are parallel; the space between the forward end of the tubular boiler and the fire-bridge of the furnace is arched to correspond with the upper portion of said boiler.

Claim.—First, the combination of the cylindrical boiler *A* with the boiler *B* and short cylinders *C C* in such a manner that the position of *B* is horizontal and also parallel and perpendicular to the boiler *A*, so that the steam generated in *B* will ascend in a perpendicular line through *C C* to *A*, without obstruction.

Second, the combination of the tubular or other boiler *B*, with the horizontal partition *E*, and extension thereof *G*, substantially in the manner and for the purposes described.

Third, the combination of the boiler *B* with its setting *E G* and *G'*, substantially in the manner and for the purpose described.

Fourth, the combination of the parts *A B E F G* and *G'*, substantially in the manner and for the purposes described.

No. 40,119.—ISAAC A. PINNELL, of Galva, Henry county, Ill.—*Improvement in Water Elevators.*—Patent dated September 29, 1863.—The depression of the hand-lever forces the roller shaft out of gear with the raising wheel and brings the spring, which acts as a brake, in contact with the flange of the roller, so as to allow the bucket to descend with the desired velocity.

Claim.—The forked hand-lever *E* and brake *f*, in combination with the drum *A* and wheels *C* and *D*, constructed and operating in the manner and for the purpose herein shown and described.

No. 40,120.—WILLIAM PROCTOR and DAVID C. PAYNE, of Elkhart, Elkhart county, Ind.—*Improvement in Potato-Diggers.*—Patent dated September 29, 1863.—This machine is mounted upon two driving wheels and a fore carriage, and the digging arrangement consists of a frame armed in front with a share, and inclining downwards and forwards, being suspended adjustably by means of a segment rack and pinion on the main frame. The share is provided on each side with a rotary cutter, to sever the vines and weeds; the potatoes are raised by the share, and, with their enclosing soil, pass back to the grated incline, through the interstices of which pass the arms of revolving stirrers; they then pass to an endless apron, which delivers them to the box, a rake removing the lighter offal which may have been carried up with them.

Claim.—First, the employment or use in a potato-digger, in connexion with the ploughshare, as aforesaid, of rotary cutters *H H*, applied to each side of the ploughshare, to sever stalks or weeds.

Second, the combination in a potato-digger, substantially as described, of a series of two or more revolving rakes *J j*, to carry the potatoes backward from the ploughshare and pulverize and separate the earth, in combination with the ploughshare *G*, as specified.

Third, the combination with the aforesaid rakes *J j* and inclined open frame *I I* with a plough *G*, constructed, arranged, and operating as specified.

Fourth, the combination with the gear frame *D*, constructed and operating as described, of cogged segments *F*, shaft *f*, and lever *F'*, for raising and lowering the same.

Fifth, the endless carrying apron *K*, constructed with alternate slats *k k'* of unequal width, substantially as and for the purposes specified.

Sixth, the combination with the endless apron *K*, when constructed as described, of the rotary rake *N a*, operating in the manner and for the purposes specified.

No. 40,121.—ROBERT B. REYNOLDS, of United States Navy.—*Improvement in Breech-loading Ordnance*.—Patent dated September 29, 1863.—This consists of a breech-piece, which slides vertically from below, under the impulse of a lever and toggles, so as to form a recoil block behind the charge. The lever shaft is journaled in lobes extending down from the reinforce band of the gun, and the breech-piece is supported in its lower position by the contact of the sides of the mortise in which the toggles work, with the rock-shaft.

Claim.—The arrangement with the exterior and lower portion of the gun of the lobes *d d*, rock-shaft *C*, toggle *e g*, stop *i*, and breech-piece *B*, operating together in the manner herein shown and described.

No. 40,122.—A. H. ROWAND, of Alleghany City, Pa.—*Improvement in Buffer Springs for Railroad Cars*.—Patent dated September 29, 1863.—The springs are made of continuous straps passing around the end points and forming a bulge in the middle, which contains a double convex tongue, impelled back and forth against the pressure of the spring by the impulse on the draw-head.

Claim.—First, a bumper or buffer composed of a series of overlapping plate metal springs so arranged as to form a continuous spring, and having a bulge or swell in the middle, a smaller bulge at each end, and a contraction or neck between the bulges, when constructed and operating substantially in the manner described, for the purposes set forth.

Second, the combination of the spring *A*, double convex tongue *D*, and draw-bar *B*, when arranged and operating substantially in the manner described and for the purposes specified.

Third, the combination of the spring *A*, double convex tongue *D*, and flanges *F*, in the manner and for the purpose described.

No. 40,123.—THOMAS SHARP, of Chicago, Ill.—*Improvement in Car Wheels*.—Patent dated September 29, 1863.—The improvement consists in making the wheels with flanges on both sides, the tread between the flanges being a little wider than the rails.

Claim.—Constructing a two-flanged car wheel of a single casting, when the outside flange is placed at such a distance from the inside flange that the wheel is adjusted to the two different gauges hereinbefore described, substantially as herein specified and set forth.

No. 40,124.—AMOS SHEPARD, of Plantsville, Hartford county, Conn.—*Improvement in the Manufacture of Steel Traps*.—Patent dated September 29, 1863.—The journals or pivots of the bait plate and of the pawl are cast in one piece with the base plate, to simplify and cheapen the manufacture.

Claim.—A steel trap having its base plate or base bar *A*, projections *c*, and arms, journals, or pivots *e e* of the bait plate *B*, and the pawl or catch *C*, all cast in one piece, and of malleable cast iron, as herein specified.

No. 40,125.—ORLANDO SHEPARD, of Rochester, Lorain county, Ohio.—*Improvement in Water Elevators*.—Patent dated September 29, 1863.—The windlass drum is of a double cone shape, with a cylindrical portion in the middle. On this both ends of the rope are attached, winding on the same side and passing under the sheave of a pulley, to which the bucket is suspended. By this means the bucket comes up with a certain side to the spout, so as to be tipped over without fail.

Claim.—The double cone *C C* of the windlass, with the double rope *F F* and pulley *E*, when constructed, arranged, and operating substantially as and for the purpose set forth.

No. 40,126.—JONATHAN SMEAD, of Pawlet, Rutland county, Vt.—*Improved Automatic Feeder for Sugar Evaporators*.—Patent dated September 29, 1863.—This is designed to keep an equable height of water in the boiler, and consists of a cistern with a float operating a valve on the end of an induction pipe, and also of a syphon communicating with the cistern and the boiler. The valve is attached to the end of a lever, and the latter is vibrated by being attached to the stem of the rising and falling float.

Claim.—The combination of the adjustable float *B* and the valve *e* and its lever *C*, or the equivalents thereof, with the induction pipe *D*, the supplying cistern *A*, and the syphon *G* applied to the latter, the whole being for the purpose and to be employed substantially as specified.

Also, the combination of the valve vessel *E* and the guard *g* with the induction pipe and the valve thereof.

Also, the syphon *G*, as made, with the air vessel *k* and the cup *H*, or with either, applied to it, substantially as and for the purpose or purposes as specified.

No. 40,127.—GEORGE R. SMITH, of Dowagiac, Cass county, Mich.—*Improvement in Binding Guides for Sewing Machines*.—Patent issued September 29, 1863; antedated September 12, 1863.—The lower jaw is fixed, and the upper one is adjustable laterally and vertically, so as to serve for applying binding of varying widths to cloths of various thicknesses; a lining piece is attached to each of the jaws, and around the ends of these pieces the binding is bent with its edges against the guides, while the goods on which the binding is to be sewed passes between the lining pieces.

Claim.—The combination, in the manner herein shown and described, of the lining pieces *d d'* and guiding strips *i i* with the laterally and vertically adjustable jaws *a a'*, slides *j j*, and plate *A*, all as set forth.

No. 40,128.—ROBERT SPENCER, of Newark, N. J.—*Improvement in Saddle or Sweat Cloths*.—Patent dated September 29, 1863.—The pockets are sewed to the saddle cloth, and the latter is secured to the tree by slipping the pockets over the ends of the side plates before the pommel and behind the cantle.

Claim.—First, the use of the pockets *C C*, or their equivalents, attached to the under part or lining of the saddle, and wholly or partially covering the tree, and adjusted to be put on or off, substantially in the manner and for the purposes described.

Second, the combination of *A B* and *C*, substantially in the manner and for the purposes described.

No. 40,129.—ROBERT SPENCER, of Newark, N. J.—*Absorbing and Ventilating Sweat or Saddle Cloth*.—Patent dated September 29, 1863.—Out of the square cloth an elliptical piece is cut, which, sewed together on the cut edges, gives the required shape for the withers and back of the horse; a lining and padding being added, sweat holes are punched clear through the fabric and the edges of the perforations secured.

Claim.—First, the ventilation of the saddle cloth by means of the distinct perforations *p p p p* partially or entirely through the fabric, substantially in the manner and for the purposes described.

Second, the parts *A B* and *C*, in combination with the perforations *p p p p*, substantially in the manner and for the purposes described.

No. 40,130.—WILLIAM H. SUTTON and JAMES J. GIBSON, of Brantford, Brant county, province of Canada West.—*Improvement in Grain Dryers*.—Patent dated September 29, 1863.—A perforated metal plate is convoluted so as to form a series of concave troughs; in these parallel troughs are spiral conveyors which empty into a chute, from which the grain falls into another trough of perforated metal, with a conveyor in a position at right angles to the former set. A furnace and fan provide a circulation of hot air through the apparatus.

Claim.—First, the perforated metal plate *B*, bent so as to form a series of parallel concaves *a*, in combination with the spiral conveyors *D* and a kiln *A*, all arranged to operate substantially as and for the purpose herein set forth.

Second, the conveyor *J*, placed within the perforated tube *H*, fitted within a close or tight box *I*, and communicating with the chute *G*, in combination with a fan or other blast generating mechanism, all arranged substantially as shown, and, in connexion with the grain-drying mechanism, to operate as and for the purpose set forth.

No. 40,131.—DANIEL TAINTER, of Worcester, Mass.—*Improvement in Wool-carding Machines*.—Patent dated September 29, 1863.—The device described in the first claim is for the purpose of saving expense in drilling, cutting, or coring the holes in the top or outside flange. It consists in cutting notches or spaces in the arched pattern, so as to have an open space where it is desired to put in the poppet head stems. The other device consists of ears and projections on the wings and hooks upon the frame, whereby the former are attached to the latter.

Claim.—First, the combination with the flange *D*, when cut or cored out as described, of the peculiarly constructed arch cap piece *a*, with its bend or moulding *c*, as and for the purposes set forth.

Second, the combination of the ears *i i* and hooks or angular projections *f*, with the wings or arms *A* or *B* and hooks or notches *d'*, upon the main frame *F*, for the purpose of retaining the wings or arms *A* or *B* in their proper or relative positions, as described.

No. 40,132.—W. B. TREADWELL, of Albany, N. Y.—*Improvement in Coal Stores*.—Patent dated September 29, 1863.—This is a base-burner stove, or one in which the combustion takes place at the bottom of a body of coal which gradually descends, and the devices are explained in the claim.

Claim.—First, constructing the fire-brick *F* with horizontal arched openings *h h*, and vertical openings *h' h'* communicating therewith, substantially in the manner and for the purposes described.

Second, arranging the fire-brick *F*, with its arched openings, in such a relation to the flue *H* surrounding the supply cylinder *G*, and the descending flues *E E* surrounding the fire-pot, that either a descending or ascending draught may be obtained by regulating the single damper valve *b*, substantially as set forth.

Third, the cylindrical, flanged, metallic lining *d*, in combination with the fire-brick *F*, constructed substantially as and for the purposes described.

Fourth, the circular plate grate *K*, constructed with concentric openings through it, in combination with vertical fingers *S S* of a circularly vibrating rake, substantially as described.

Fifth, constructing the illuminating door frame with a tongue on its inner surface, and the door box *J*; with a corresponding groove on its outer edge, in combination with the nut fas-

tening *i j*, as set forth, whereby a closely fitting tongue and groove joint is obtained when the door is closed, substantially as described.

Sixth, the revolving or rocking agitator *L*, provided with projections *m m* on its sides, said agitator being arranged at the base of the supply cylinder *G*, substantially as and for the purposes described.

Seventh, in a base burning stove having a supply cylinder *G* and a flaring fire-pot *B*, interposing between said cylinder and pot the perforated fire-brick lining, when the same is arranged at the point where the combustion of the fuel takes place most rapidly, and is supported, directly or indirectly, by the fire-pot *B* and the cylinder *A*, substantially as described.

Eighth, the combination and arrangement of flue space *H*, supply cylinder *G*, chamber *B'*, flues *E E*, chamber *D*, fire-pot *B*, and arched fire-brick lining *F*, the whole operating substantially as described.

No. 40,133.—S. F. VAN CHOATE, of New York, N. Y.—*Improvement in Receiving Magnets*.—Patent dated September 29, 1863.—Explained by the claim.

Claim.—First, locating the armature or vibrator of an electro-magnet, together with the core within the coils and concentrically therewith, substantially in the manner hereinbefore set forth.

Second, in combination with an armature located within the cylinder of the spool or coils, the horseshoe magnet, so shaped that both of its ends are within the cylinder of the spool or in line of its axis, substantially as set forth.

No. 40,134.—ANTONY WELSCH, of Chicago, Ill.—*Improvement in Railway Dumping Cars*.—Patent dated September 29, 1863.—The improvement consists in bending the shaft for the friction rollers, so that it is used to brace the frame above and act as bearings for the dumping box, and also for the rollers, so that the car can be used for dumping on either sides or ends, or the dumping box removed entirely.

Claim.—As my invention in the construction of dumping cars, the bearings *H H* revolving on the end of a bent shaft, that forms the axle for the friction rollers *E E*, as and for the purposes herein described and set forth.

No. 40,135.—JOSEPH WELLER, Washington Court House, Fayette county, Ohio.—*Fountain Pen*.—Patent dated September 29, 1863.—The ink is contained in a central tube, and is admitted to the pen by the raising of a valve from its conical seat by means of a finger rod, rocking arm, and valve rod, and the lifting of the ventage pin.

Claim.—The central rod *B*, provided with a conical shoulder or stopper *b*, adapted to fit a countersink in the converging tube *a*, in combination with the rocking lever *C*, rod *D*, and helical spring *E*, when arranged to operate in the manner described.

Also, in combination with the above-described parts, the plug *i*, attached to the rod *B*, and serving to open and close an air ventage in the fountain, in the manner and for the purpose described.

No. 40,136.—ANTON WIEGAND, of Philadelphia, Pa.—*Improvement in Stopping Bottles*.—Patent dated September 29, 1863.—A sectional collar is attached to the neck of the bottle; to this is pivoted a bow which is elevated above the mouth of the bottle, and a cap screwed down upon the cork.

Claim.—The employment, for the purpose specified, of the device described, the same consisting of the collar *E*, swinging bow *D*, screw *B*, and cap *C*, constructed and applied together to a bottle, so as to operate substantially in the manner described and set forth.

No. 40,137.—SAMUEL H. YOUNG, of St. Louis, Mo.—*Improvement in Coffins*.—Patent dated September 29, 1863.—The coffin is made of wood; the lower joints are tightened with blocks, the upper with a drop rabbit joint; the boards are treated with a composition impervious to gases. Attached to the outside of the coffin is a box containing deodorizing material, through which the gases evolved in the decay of the corpse are compelled to pass, and are thereby rendered inoffensive.

Claim.—First, arranging the deodorizing chamber on the outside of the coffin body instead of within it, in the manner and for the purpose described.

Second, the combination of the external deodorizing box with the wooden coffin made air-tight, by the means herein above set forth.

No. 40,138.—WILLIAM E. ARNOLD, of Rochester, N. Y., assignor to H. G. ARNOLD and J. H. CASTLE.—*Improvement in Window Sash Locks*.—Patent dated September 29, 1863.—This lock is intended for balanced sash, one part being applied to the face of the upper sash, and the other to the top of the lower sash, in such a manner as to retain them relatively in any position, open or closed.

Claim.—The slide *D D*, or its equivalent, in combination with the tumbler *C*, and catch-box *A*, and upright *B*, substantially as herein set forth and described and for the purposes herein named.

Also, the guide *G* and stop *S*, or their equivalents, arranged with the tumbler *C*, the whole combined with the box *A*, substantially as and for the purposes set forth.

No. 40,139.—WILLIAM E. ARNOLD, of Rochester, Monroe county, N. Y., assignor to H. G. ARNOLD and J. H. CASTLE.—*Improvement in Window Sash Locks*.—Patent dated September 29, 1863.—This invention consists in such an arrangement of a box and adjustable bolt that it may operate with a combined horizontal and vertical movement, form at pleasure a right or left-hand fastener, be irremovable by pressure on the outer end, and by an adjustable joint be adaptable to any width of sash.

Claim.—The combination of the joint *B* or *B B*, nib *A*, grooves *G* and *F*, or their equivalent, for the purpose of perfecting a combined horizontal and gravity motion to the bolt, and at pleasure to form either a right or left-hand fasten or lock, the whole being made, arranged, and combined with the box, substantially as herein set forth and described, to hold the sash up or down.

Also, the notch *E* or *G*, in combination with nib *A*, or its equivalent, and joint *B* or *B B*, for the purpose of securing the bolt when down from being pushed inward or upward by any pressure that may be brought to bear upon the outer end of it, substantially as herein set forth and described.

Also, the adjustable joint *B B*, when arranged with the bolt and box, for the purpose of varying the length of the bolt to the different widths of sash, as herein set forth and described.

No. 40,140.—C. B. CONANT, of Springfield, Mass., assignor to Himself and JOHN D. EAGAR, of same place.—*Improved Machine for Turning Irregular Forms*.—Patent dated September 29, 1863.—This lathe is constructed for turning irregular forms by a pattern, all its motions being automatic, and also cutting tenons at the same operation. The pattern and blank are chucked between heads, and a guide roller follows the varying shape of the pattern, and controls in that respect the revolving cutter, which traverses the length of the blank by the action of the feed screw. The particulars of the devices for automatic action and adjustment cannot be described intelligibly within these brief limits.

Claim.—Combining the tenon machine with the lathe in such a manner that both shall be operated simultaneously, and that one shall so control the motions of the other that the operation of each shall be performed at the proper time, for the purpose of turning out complete articles on which round as well as straight work is to be done, substantially in the manner and for the purpose herein described.

Also, in combination with the vertical carriage *A'*, the adjustable tenon cutters *C'* and belt pulleys *G' H' I' K'* and *F'*, when constructed and operated substantially in the manner and for the purpose described.

Also, the arrangement of the lever *G*, with its links, connecting rods and jaws *M'*, for the purpose of opening and closing said jaws on the endless screw *N'*, which operates the tenon carriage, substantially in the manner and for the purpose herein described.

Also, the combination and arrangement of the sliding cam *12* and bolt *22*, and the devices to operate it, with the lever *K*, for the purpose of automatically closing the jaws *L* upon the screw *H*, to operate the lathe carriage at the proper time, substantially in the manner herein described.

Also, connecting the lever *R* of the polishing-wheel cutter frame *L* and lever *u* of the friction wheel *W*, by means of the adjustable rods *s* and *x y*, substantially in the manner and for the purpose described.

No. 40,141.—ALBRO S. DOW, of Cedarville, Herkimer county, N. Y., assignor to Himself and ELIJAH W. WILCOX, of same place.—*Improvement in Neck Yokes and Whiffletrees*.—Patent dated September 29, 1863.—The central clip enclosing the neck yoke is made in two pieces, divided in a line parallel to the plane of the tongue-ring; these pieces are united by screws enclosing a disk of leather, which slips over the end of the tongue.

Claim.—The combination of the leather or other packing *D* with the ring *B*, made in two parts and united by the screws *d d' d'' d'''*, or their equivalents.

Also, the combination of the tubular or cylindrical portion made in two parts, as described, with either a neck yoke or whiffletree, substantially as and in the manner set forth.

No. 40,142.—HALVOR HALVORSON, of Cambridge, Mass., assignor to CHARLES SPEAR, of Boston, Mass.—*Improvement in Projectiles for Ordnance*.—Patent dated September 29, 1863.—The projectile has a concavity in the front and rear; the latter has spiral channels in it, which terminate at the point where the cylindrical shot is diminished in circumference. A base plate, with packing, occupies the rear concavity, and the wind, in ramming home of the shot, escapes through the spiral orifices and the central channel in the shot.

Claim.—Allowing the escape of the air on the ramming home of the shot, and preventing windage by diminishing the diameter of the shot at or near its base, in combination with the packing and base plate and the air channels and openings, substantially as set forth.

No. 40,143.—JOHN N. KATZENMAYER, of New York, N. Y., assignor to Himself and WILLIAM P. MOTO.—*Improvement in the Preparation of the Roots of Plants for Useful Purposes*.—Patent dated September 29, 1863.—The invention consists in the application of the roots of certain grasses to the purpose of making brushes, brooms, and analogous articles. The grasses considered suitable are several of the *Andropogons* and other wild varieties.

Claim.—As a new manufacture, preparing or treating and utilizing, substantially in the manner herein described, the roots of plants or shrubs of the character hereinbefore referred to, for the purpose of making it available for the production of brushes, besoms, and other like implements.

Also, as a new article of manufacture, brushes, besoms, and other like implements made substantially in the manner hereinbefore described, of the roots of plants or shrubs of the character hereinbefore referred to.

No. 40,144.—GEORGE LLOYD, of Philadelphia, Pa., assignor to EDWARD BORIE and ALEXANDER MACKIE, of same place.—*Cork-Cutting Machine*.—Patent dated September 29, 1863.—The blocks of cork are clamped between the serrated faces of the opposite spindles, which are revolved by gearing, and approached and receded to grasp the block, and free it again after it has passed the cutting wheel as it rotated and revolved in its orbit.

Claim.—First, the annular revolving knife E, when the same is applied to the cutting of corks, substantially as described.

Second, in combination with the said annular knife, any desired number of spindles K and W, whereby the blocks of corks are held and turned as described, for the purpose specified.

Third, the disks I and I' on the tubular spindle A, the plates J and J' attached to the disk, the segments L and L', secured to the shaft G, which passes through the said tubular spindle A, the whole being arranged for carrying and operating any convenient number of spindles K with cog-wheels e, substantially as set forth.

Fourth, the spindles K, each being provided with a roller e, or its equivalent, and a spiral spring f, in combination with the bent plate M, or its equivalent.

No. 40,145.—J. R. MURPHY, of Pittsburg, Pa., assignor to ALEXANDER SPEER, of same place.—*Improvement in Self-Locking Window Hinge*.—Patent dated September 29, 1863.—This device is intended to lock the window blind open, and consists of a cam-shaped socket piece on the window blind and a shoulder on the pintle, so that when the blind is sufficiently rotated the shoulder drops into the notch and retains the blind in position.

Claim.—The combination with the two parts of a hinge, the shoulder i upon the pivot pin, and the cam-shaped or eccentric opening, and the shoulder formed in the wall thereof, for the purpose of locking a shutter or door back, and at the same time concealing the locking mechanism, substantially as described.

No. 40,146.—GEORGE H. PHILLIPS and WM. H. JOHNSON, of Troy, N. Y., assignors to ANSON INGRAHAM, of Centre Cambridge, N. Y., GEORGE H. PHILLIPS aforesaid, and WM. H. INGRAHAM, of Troy, N. Y.—*Improvement in Stove Grates*.—Patent dated September 29, 1863.—The grate has two bearings, one on the ring and the forward one in a slot in the stove base; both journals have a lateral bearing in lugs on the ring.

Claim.—First, a fire grate A, having two shanks or journals, of which only one b is supported by a ring D surrounding the grate, and the other one c by a bearing separate from and outside of the said ring, the latter being mounted on an annular or open base E, and connected with both of the said grate shanks by lateral bearings A h i i, substantially as herein set forth.

Second, the combination of a perforated slide g and slotted casing L with a grate A, having two supporting shanks b c and a ring D mounted on a suitable open base E, and provided with lateral bearings A h i i for both, and a supporting bearing m for only one of the said grate shanks, substantially as herein described, with or without a fixed grate shank bearing f.

No. 40,147.—JOHN ROZELL, of Brooklyn, N. Y., assignor to FELIX CAMPBELL and HENRY Y. DAVISON, of same place.—*Improved Fire Regulator*.—Patent issued September 29, 1863; antedated September 11, 1863.—This hollow piston is acted upon by the steam from below to raise a weighted lever which actuates a rotating damper in the chimney so as to regulate the draught. The lower side of the piston is packed by an elastic ring between it and a screw disk; the upper side of the piston is guided in the chamber by friction rollers, and the supporting rod reaching between the piston and the lever is pointed at each end where it impinges on its bearings.

Claim.—First, the combined hollow piston and piston rod D H E, with the cup-shaped packing f, all constructed and operating substantially in the manner described.

Second, the combination with the upper and smaller head H of the hollow piston of the guide rollers c, arranged and operating substantially as described.

Third, in combination with the hollow piston rod D, the pointed rod J, lever K, and weight L, constructed, arranged, and operating substantially as set forth.

No. 40,148.—HIRAM SMITH, of Worcester, Mass., assignor to JESSE A. LOCKE, of Watertown, Mass.—*Improvement in Machine for Drying Wool*.—Patent dated September 29, 1863.—The apparatus consists of a trough with a central longitudinal depression in which a fan is rotated. The fan extends the whole length of the trough and drives the air up through a horizontal system of steam pipes and through the perforated bottom of the tray in which the wool is spread.

Claim.—The use, in wool-drying machinery, of an elongated fan extending throughout the whole length of the air chamber and operating substantially as described.

Also, the distributing board H, arranged and operating in the manner and for the purpose substantially as set forth.

No. 40,149.—PORTER L. SWORD, of Adrian, Lenawee county, Mich., assignor to GEORGE S. TIFFANY, of Palmyra, Mich.—*Tile Rack and Cut-Off*.—Patent dated September 29, 1863.—The sliding rack is moved to and from the dies of a tile machine, carrying the belts upon which the continuous tile is received; the latter is cut by a wire which is strained in a frame hinged to move vertically in a plane transverse to the motion of the belts, and as it traverses with them cuts at a right angle.

Claim.—The combination of the sliding rack with the stationary frame, when arranged to operate substantially as and for the purpose herein specified.

No. 40,150.—JOHN L. TREAT, of New York, N. Y., assignor to Himself and MARTIN C. MILLAR, of Oriskany Falls, N. Y.—*Improvement in Cheese Presses*.—Patent dated September 29, 1863.—The pressure of the cheese upon the lower jaw is communicated by means of the downwardly projecting arm attached to the said jaw to the lever, whose upper end coming in contact with the rear end of the pivoted upper jaw presses the other end down upon the cheese.

Claim.—The combination of the three levers B F E, E2 and G g, constructed in the manner described, the first two forming clamp jaws, and the whole operating together to constitute an automatic press, as and for the purpose specified.

No. 40,151.—JOHN H. WICHMANN, of Oldenburg, Grand Duchy of Oldenburg, Germany, assignor to HENRY SCHRODER, of same place.—*Improvement in Breech-loading Fire-arm*.—Patent dated September 29, 1863.—The breech piece is hinged to the upper part of the barrel, and is vibrated upwards by the motion of an external lever and the engagement of a cam piece with a pin on the breech piece; it is locked down tightly against the rear of the barrel by means of the rotation of the cut-away shaft against the side of the hollow in the lower side of the breech piece.

Claim.—In combination with a hinged breech piece, recessed on its lower side, the cut-away shaft, and lever D, for the purpose of throwing up said breech piece to load the arm, allowing it to return to its seat, and firmly locking it there, substantially as and for the purposes herein described.

No. 40,152.—PHILIP BECKMAN, of Naperville, Dupage county, Ill.—*Improved Harness Snap*.—Patent dated October 6, 1863.—This improvement consists in the arrangement of the parts of a snap-hook; the snap, with its knob bed point; the spring attached to the shank in a reverse direction and impinging on the point of the hook, and a stop to arrest the link or ring attached, if it passes the spring.

Claim.—A snap having the spring b applied to its shank in a reverse direction and provided with a guard d and stop e, to operate in combination with said spring, substantially as and for the purpose shown and described.

No. 40,153.—GEORGE W. BILLINGS, of New York, N. Y.—*Improvement in Bullet for Fire-arms*.—Patent issued October 6, 1863; antedated September 21, 1863.—This bullet is formed with a deep cylindrical hollow extending from the rear forward around a central stem; in this is fitted a metallic plug with a chamfered shoulder when it impinges upon the side of the opening; between these surfaces, at the point of contact, is an elastic annular flange, which expands and expresses into the rifle grooves of the gun by the compression of the discharge.

Claim.—The bullet A, in combination with the plug B and the flanged ring C, substantially as described and set forth.

No. 40,154.—GEORGE W. BILLINGS, of New York, N. Y.—*Improved Process of Rotting Hemp and Flax*.—Patent issued October 6, 1863; antedated September 21, 1863.—The invention consists in treating the hemp or flax with warm liquid under pressure, and using the same liquor again, with the addition of warm water.

Claim.—The enclosing the flax and hemp in a tank with warm liquid under pressure, substantially as described and set forth.

Also, the use of the liquid from previous operations by mixing the same with warm water, substantially as described and set forth.

No. 40,155.—GEORGE W. BILLINGS, of New York, N. Y.—*Flax and Hemp Drying Frame*.—Patent issued October 6, 1863; antedated September 21, 1863.—The invention consists of three converging standards, fastened at top and at a point midway by hoops, with a loose hoop fitting nearly down upon the lower one to clamp the hanks of hemp.

Claim.—The frame A A A and hoops B B, in combination with the loose hoop C, substantially as described and set forth.

No. 40,156.—JAMES BING, of Philadelphia, Pa.—*Improved Shoe for Car Breaks*.—Patent dated October 6, 1863.—This invention consists in the method of hanging the sole upon the shoe so that it may have some lateral motion, being attached to the shoe at the upper point of suspension, and at the toe of the shoe by impingement, the shoe being attached to the rubber bar by a pin.

Claim.—First, the shoe A and sole B, both being constructed and adapted to each other substantially as described, so that the sole can have a lateral rocking movement on the shoe for the purpose specified.

Second, the combination of shoe A, sole B, clevis D, and bolt G, the whole being constructed and arranged substantially as specified.

No. 40,157.—CLARISSA BRITAIN, of St. Joseph, Berrien county, Mich.—*Improvement in Boilers*.—Patent dated October 6, 1863.—This boiler is double, consisting of inner and outer detached boilers; the inner one has a perforated bottom, and stands on feet with a flange or rim at its upper edge in contact with the inside of the outer boiler. The outer boiler is provided with a tightly-fitting cover, and a central lid or hole for the introduction of a movable steam escape pipe.

Claim.—First, the ordinary form of inner kettle E, when constructed with a perforated bottom, flange rim c, closely fitting but removable cover G and steam lid A, as an auxiliary to a potato-boiling kettle C, substantially as and for the purpose described.

Second, combining with the two kettles C and E, constructed substantially as set forth, the removable steam escape pipe D, cover C', and lid a, arranged and operating substantially as described.

Third, providing the kettle E with hooked legs d, for the purpose described.

No. 40,158.—J. CHENOWETH, of Fort Wayne, Ia.—*Improvement in Riding Saddles*.—Patent dated October 6, 1863.—This invention consists of a strip on each side attached to the pommel by a wide staple, and at the under side of the cantle to C-shaped springs, whose fast end projects under the side plate.

Claim.—A riding saddle, provided on each side with a spring E bent in C-shape, and connected at its loose end with the pommel B by means of the flat seat strip D, all in the manner shown and described.

No. 40,159.—EDGAR CHIPMAN, of New York, N. Y.—*Improved Washing, Wringing, and Munging Machines*.—Patent dated October 6, 1863.—Suspended upon standards is a pendulous semi-cylindrical suds-box to standards, on the sides of which are attached counterpoise weights. Beneath the bottom of this suds-box is a traversing bed supported by rollers journaled to the main standards of the machine.

Claim.—The combination of the counterpoised oscillating suds-box A with the roller C' and the rollers C C, or equivalent bearings, and sliding bed D, all arranged to operate in the manner substantially as and for the purpose herein set forth.

No. 40,160.—D. A. DANFORTH and D. C. PAYNE, of Elkhart, Ia.—*Improved Stump Extractor*.—Patent dated October 6, 1863.—This consists of an adjustable upright frame with self-adjusting posts on each side, oscillating, as required, upon a pivoted hinge attached to horizontal sills, and a roller above the frame, to which are attached self-adjusting arms operating as levers to raise the stump under the draught of a rope rove through pulleys and over shears. The attachment is made to the stump by a chain and a loose pear-shaped ring, the narrow part of which retains the bite of the chain, while the other part allows it to run freely.

Claim.—First, an upright oscillating frame constructed so as to move forward and backward in such a manner that the stump can be removed from its bed by the operation of the forward movement of said frame and carry the stump with it.

Second, in combination with the arms K and M and roller H the chain R, adapted to the stump by means of the loose ring Z, in the manner and for the purposes herein described.

Third, the arrangement and combination of the oscillating upright frame B with its roller H, adjustable posts E, and arms K and M, arranged and combined as herein described and for the purposes set forth.

Fourth, a stump extractor having an upright oscillating frame constructed so as to move forward and backward, operated and combined with the stationary block v, rope z, and pulleys P P P and L, on the arms K and M, for the purposes of extracting and removing from their beds stumps and trees, in the manner and for the purposes herein described.

No. 40,161.—JOHN DAVIS, of Council Hill Station, Jo Daviess county, Ill.—*Improvement in Sash Holder*.—Patent dated October 6, 1863.—Arms attached to the sash have pulleys which traverse in spiral grooves in cylinders, to which springs are applied to counterbalance the weight of the sash.

Claim.—The cylinder C, one or more, provided with a spiral groove A, in which pulleys j, on arms k, attached to the sashes, work in combination with the springs E, connected with the cylinders, and all arranged to operate as and for the purpose herein set forth.

No. 40,162.—MARTIN C. EASTERLY, of Antwerp, Jefferson county, N. Y.—*Improved Metallic Boot and Shoe Heel*.—Patent dated October 6, 1863.—This is a metallic shell secured to the heel by screws, and a follower plate closing the hollow of the shell and screwed to the latter.

Claim.—A metallic heel for boots and shoes composed of a shell A, of the proper form or shape, having a top plate a, at a short distance below the sides and back of the shell, and the latter having horizontal projections b within it, with a bevelled inner surface below them, against which a plate B, having a bevelled edge, is secured by screws c, the shell or heel A being secured to the sole by screws d', which pass through the top a, substantially as set forth.

No. 40,163.—WILLIAM A. FITCH, of Brooklyn, N. Y.—*Improvement in Ripping Instruments*.—Patent dated October 6, 1863.—This instrument is designed to run down a seam to cut the stitches; it has a sharp and a blunt projection on the end and between them a cutter; the sharper projection is introduced between the folds of the cloth where the seam is in the form of a hem, and the tendency of the rounded surface is to keep the cloth from the cutter while the latter encounters the stitches.

Claim.—In a ripping instrument the separator c and cutter e, substantially as set forth, and in combination therewith the projection b and mouth d, for the purposes and as specified.

No. 40,164.—GEORGE S. FOWLES, of New Castle, Me.—*Improvement in Apparatus for Supporting and Ventilating Wounded Limbs*.—Patent dated October 6, 1863.—This apparatus is intended to support the body and limbs of a patient, and by a bridge-support to bring a chamber of ice water in the neighborhood of the wound.

Claim.—First, the rubber L, arranged in the manner and for the purpose herein specified.

Second, the water and ice reservoir P, in combination with the rods n, rods o, the legs d, and the concave G, the whole constructed and arranged as herein set forth.

No. 40,165.—JOSEPH FREY, of Battle Creek, Calhoun county, Mich.—*Improved Cross-Cut Sawing Machine*.—Patent dated October 6, 1863.—This frame is pivoted to the standards of the machine and raised and lowered by means of a lever; it has likewise a hinged extension bar; their object is, by means of the guides which project below them to raise, lower, and preserve from lateral deflection the pitman and saw.

Claim.—The pitman guide attached to the movable arms L L, and saw guide attached to a bar A, moving on the hinge, as represented in the drawings, in combination with the lever G, for raising and lowering the same at pleasure, and also for holding the same up by bringing said lever under the cross-bar F, while adjusting the log.

No. 40,166.—ALLEN GOODMAN and LORENZO HALE, of North Dana, Mass.—*Improvement in Piano-Forte Legs*.—Patent dated October 6, 1863.—The core of the piano leg, of an octagonal or other shape, is cased with pieces, the grain of which is tangential to the circle, inscribed within the octagon or other figure bounding its sectional area.

Claim.—A piano-forte or billiard-table leg having at any desired point or points on its periphery a number of pieces of wood with their grain running circumferentially around the leg or at right angles to the axis thereof, and at or about at right angles with the grain of the pieces of wood which constitute the body or principal part of the leg, as herein set forth.

No. 40,167.—A. HAMMOND, of Jacksonville, Morgan county, Ill.—*Improvement in Moulds for Casting Chilled Rollers*.—Patent dated October 6, 1863.—The metallic middle flask, which chills and gives form to the periphery of the roller, is sustained at each end by a sand flask in which are located sockets and plates which form the flanges and journals of the roller.

Claim.—The mould composed of the cylindrical middle flask or chill A, and the two flasks B C, made with sockets e e, and plates d d, faced to fit the flanges of A, the whole combined, substantially as and for the purpose herein specified.

No. 40,168.—CHARLES A. HARDY, of Pittsburg, Pa.—*Improvement in Oil Stills*.—Patent issued October 6, 1863; antedated September 25, 1863.—The boiler is cylindrical and is heated by a bed of steam or hot water in its false bottom.

Claim.—The use of a cylindrical still, (for distilling coal oil without the direct application of a furnace,) such still having an inner or false bottom, forming a hot-air or steam space on the under side of the still, substantially as described.

No. 40,169.—DANIEL HUSSEY, of Nashua, Hillsboro county, N. H.—*Improvement in Flyers for Spinning Machines*.—Patent dated October 6, 1863.—The improvement is in the shape of the flyer, which is made, as described, with the four flexures where it bends to the head and base, and by its construction rendering unnecessary a separate base piece.

Claim.—The improved flyer, made substantially as described, viz., with the flexures c f g h in each leg, or with the same and having the legs lapped, formed, and connected at the base, substantially as specified.

No. 40,170.—GEORGE F. JOHNSON, of Marshall, Henry county, Iowa.—*Improvement in Sheep Shears*.—Patent dated October 6, 1863.—The rod or guard is attached at its back end to the bow and in the centre of the elliptic spring: it then passes along below the blades and projects a little beyond their points, keeping the blades from actual contact with the hide of the sheep.

Claim.—A sheep shears provided with a rod or guard F, substantially as herein set forth.

No. 40,171.—GEORGE W. KING, of Perth Amboy, Middlesex county, N. J.—*Artists' Easel*.—Patent dated October 6, 1863.—This consists of a standard and foot, the former having a central vertical bar and a traversing socket and lever, by means of which the platform for the picture is adjusted to any height as required.

Claim.—The application of the lever C, in combination with the grooved bars B' B'' and slides D D', substantially as set forth.

No. 40,172.—T. S. LAMBERT, of Peekskill, Westchester county, N. Y.—*Improvement in Boilers*.—Patent dated October 6, 1863.—The furnace sets on a lower level than the boiler, and the latter connects with the jacket around the former, the water being deflected by a division plate and a current established, by which all parts of the surface of the furnace are reached by the water.

Claim.—First, the application of the partition i so as to increase the surface upon which the water acts in passing from the boiler between the cylinders back to the boiler, substantially as set forth.

Second, the application of the hood C so as to increase the surface upon which the heat produced in the furnace acts, substantially as set forth.

Third, the combination of the boiler A, furnace B, and the hood C, in the manner and for the purposes substantially as set forth.

No. 40,173.—T. S. LAMBERT, of Peekskill, Westchester county, N. Y.—*Improved Hat Rack*.—Patent dated October 6, 1863.—Attached to a wall-piece or standard are pivoted brackets provided with hooks.

Claim.—The combination of the hooks D, the brackets C, and the frame B, substantially as set forth.

No. 40,174.—T. S. LAMBERT, of Peekskill, West Chester county, N. Y.—*Improvement in Cooking Stoves*.—Patent dated October 6, 1863.—The improvements in the grate-rest consist of devices to regulate the quantity of coal burnt, and the position where it shall burn most vividly, by means of a grate-rest slide and a half-grate slide; an upper slide in the oven, carrying suspended hooks for hanging up meat and slipping the suspended joints in and out; a bracket, fitting the upper back part of the stove, to sustain the reservoir; a damper in the opening immediately below the latter; and a hot closet at the back of the stove, with double sides.

Claim.—First, the application of the slide A to the bottom of the grate-rest, substantially as set forth.

Second, the application of the slide d to the half of the under surface of the grate, substantially as set forth.

Third, the combination of the grate-rest slide and the grate slide d, substantially as set forth.

Fourth, the combination of the hooks D, the slide c, and the slide-rests P, substantially as set forth.

Fifth, the application of a movable bracket to the upper back part of the stove, substantially as set forth, for the purpose of sustaining the reservoir boiler.

Sixth, the construction of the opening and slides in the upper part of the back, within an extended bracket, for admitting heat directly to the reservoir, substantially as set forth.

Seventh, the combination of the bottom and side jackets with the reflecting baker, substantially as set forth.

No. 40,175.—CARL OSCAR LUNDBERG, of Chicago, Ill.—*Improved Chair*.—Patent dated October 6, 1863.—Explained by the claim.

Claim.—The foot-frame B, when applied to a chair having a front elevation of about thirty degrees, substantially as set forth and specified.

No. 40,176.—LOOMIS G. MARSHALL, of Philadelphia, Pa.—*Improved Rock-drill*.—Patent dated October 6, 1863.—This tool is for the purpose of making an enlargement at the bottom of a hole, in order to increase the effect of a blast of powder. The end of the drill is divided into three pieces, the two outside portions being pivoted to the centre, and so shaped at their ends as to expand as they are driven into the hole.

Claim.—The arrangement of the drill itself with the blades or wings to expand, making the excavations at the bottom to hold a large quantity of powder.

No. 40,177.—ROBERT MASSEY, of Philadelphia, Pa.—*Improved Felloe Machine*.—Patent dated October 6, 1863.—This machine is adapted to cut from a plank segmental strips, to be

used in forming felloes for wheels. The felloes are cut by two reciprocating saws, whose distance apart determines the width of the felloe. The distance is regulated by sliding blocks. The bed on which the plank is clamped is caused to rotate on a central shaft, which forms the centre of circles, of which the saws describe arcs.

Claim.—First, two reciprocating saws L and L', in combination with the devices herein described, or the equivalents to the same, for holding the plank, and causing the same to move in the arc of a circle, for the purpose specified.

Second, the blocks i' i'' and i''', arranged for securing the saws, and adjusting the same on the saw-frame to suit felloes of different sizes, substantially as set forth.

Third, the reciprocating saws L and L', in combination with the table or platform M and rollers P, the whole being arranged and operating substantially as and for the purpose described.

Fourth, the adjustable and yielding arm p, when arranged in respect to the saws, and for bearing on the plank, substantially as set forth.

Fifth, the weighted arm T, with its roller u, when arranged for bearing on the plank, substantially as described, for the purpose specified.

Sixth, the rack 20, furnished with the jaws herein described, or their equivalents, for holding the plank, in combination with the sliding frame 13 and shaft 12, the whole being arranged to so operate that the rack can be moved forward definite distances, and at the same time be so turned that the plank can be moved in the arc of a circle, as described.

Seventh, the adjustable stops 17 and 18 and rack 20, in combination with the pawl 28 and the intermediate devices, or their equivalent, whereby the said stops are caused to operate the pawl and move the rack, in the manner described.

Eighth, the lever 33, arranged and operating for locking the rack, substantially as described.

Ninth, the sliding block 50, arranged and operating for maintaining the lever 33 out of gear with the rack during a portion of the movement of the machine, as set forth.

Tenth, the arm 39, sliding rod 36, its hangers 40 and 41, when arranged for operating the weighted lever 43, and through the latter and other appliances herein described, or their equivalents, for reversing the motion of the plank.

No. 40,178.—HENRY MESSER, of Roxbury, Norfolk county, Mass.—*Improvement in Caloric Engines*.—Patent dated October 6, 1863.—Explained by the claim.

Claim.—The introduction of steam into the furnace of a hot-air engine, in which pressure is maintained, when the steam is entered in immediate juxtaposition with the incandescent fuel for the purpose of wholly decomposing it into its constituent gases, and mingling them with the compressed heated air and gaseous products of combustion within the furnace.

Also, regulating the speed of hot-air engines, by automatically controlling the amount of steam admitted into the furnace, with a valve in the steam-pipe connected with the furnace, when said valve is actuated by the engine regulators.

No. 40,179.—BENJAMIN F. NEAL, of Poultney, Rutland county, Vt.—*Improvement in Curry-combs*.—Patent dated October 6, 1863.—The claim and drawing explain the invention.

Claim.—The combination of a swaged or corrugated sheet-metal back plate and single sheet-metal teeth-bars, with straight back edges, in curry-combs. The swagings or corrugations of the back plate to be of sufficient depth to brace and support the teeth-bars without side projections on them. The swagings or corrugations of the back plate to be cut through on a line with the teeth-bars, and in depth down to the surface of the back plate, and of sufficient width for the thickness of the teeth-bars, into which the edges of the teeth-bars are placed and headed down on the opposite side, within the concavities of the back plate.

Also, swaging the dovetailed groove in the back plate to receive the handle-shank between it and the teeth-bars, so that when the teeth-bars are fastened to the back plate the handle-shank is firmly secured to the other parts of the comb, without other fastening.

No. 40,180.—T. E. NORTH, of McAllisterville, Juniata county, Pa.—*Improved Washing Machine*.—Patent dated October 6, 1863.—Within the semi-cylindrical suds box is a concave, partly a corrugated washboard and partly a floor of rollers; above it, in a swinging frame, is a revolving series of rollers; and above that, again, is a rubbing surface pivoted to the swinging frame.

Claim.—The washboard A and the concave made of rollers B, combined with the swinging, revolving, rolling cylinder, the two adjustable pins N between frame H and cylinder J, and the concave top rubber M, substantially as and for the purpose specified.

No. 40,181.—LAWRENCE O'BRIEN, of Indianapolis, Ind.—*Improvement in Carding Machine*.—Patent dated October 6, 1863.—Below the main cylinder of the carding machine is a revolving endless apron which collects the waste falling from the former and returns it to the machine by means of the cylinder rotating in connexion therewith.

Claim.—The arrangement of the roll D, between the endless apron and the main cylinder A, substantially as and for the purpose herein shown and described.

No. 40,182.—F. E. OLIVER, of New York, N. Y.—*Improvement in Belt Hooks*.—Patent dated October 6, 1863.—Two wires or flexible straps of metal are looped together or to a ring, and being carried back are passed through holes, received and climbed.

Claim.—The method of uniting two or more pieces of belt, or driving band, by means of linked bars or rods, made of flexible material so as to allow of their being formed into clamps, substantially in the manner herein set forth.

Also, as a new article of manufacture, the belt-fastening device herein described, the same consisting of linked or jointed bars or rods made of a flexible material capable of being bent, substantially as herein set forth.

No. 40,183.—L. M. OSBORN, of Hamilton, Madison county, N. Y.—*Improved Mill Pick*.—Patent dated October 6, 1863.—The improvement consists in the method of supporting the blade in the head of the pick by a rigid and a yielding support acting in conjunction to retain it at any desired distance from the centre of the head; an enlarged head is made to the blade which is retained in either of the notches in the head by means of the spring support.

Claim.—First, a rigid support with lips or sides, in combination with a yielding support, substantially as described.

Second, a series of notches or indentations, substantially as described, or their equivalents, for the purpose of holding the blade at any desired distance from the centre of the head, as set forth.

No. 40,184.—W. H. PEASE, of Dayton, Ohio.—*Improved Wardrobe Bedstead*.—Patent dated October 6, 1863.—When folded, the bedstead is enclosed within a press; the opening of the doors of the latter admits of the bedstead being lowered into a horizontal position. The side rails are pivoted to the press, and the part which is vibrated within the latter is weighted by a sand-box, so as to form a counterpoise to the weight of that part extending beyond the press. The head is furnished with screws which draw upon the adjustable board to tighten the bed bottom.

Claim.—The arrangement of the sand-box P, the adjustable board b, the screws d d, and the cords or flexible slats c c, in the manner and for the purpose herein set forth.

No. 40,185.—E. L. PRATT, of Boston, Mass.—*Improved Apple-Parer*.—Patent dated October 6, 1863.—This improvement consists in so operating the rod or arm that carries the cutter head and knife that they shall clear the surface of the apple as they spring back after paring the same; for this purpose the knife arm is pushed into a depression which retains it when the cogged sector is released from the gear rotating it.

Claim.—Keeping the knife and cutter head from the surface of the apple, after the same is pared, in the manner and by the mechanism substantially as described.

No. 40,186.—WILLIAM D. RICHARDSON, of Springfield, Ill.—*Improvement in Baggage Checks*.—Patent dated October 6, 1863.—The check is printed with the various stations on the road; a punch mark is made in it to indicate the station where a certain piece of baggage is to be put off; the said check is then slipped into a check holder, the strap run through the hole securing the check in its place, and the strap attached to the baggage.

Claim.—First, as an improvement in the means of checking baggage, the denoting on two sets of pieces, of cheap material many stations, and designating by the locality of the punch mark on each piece the station at which the baggage is to be left, substantially in the manner and for the purpose herein set forth.

Second, in the construction and use of baggage checks, the within-described arrangement of the check card M, check holder A B, strap c, and hole a, relatively to the check card M, or its equivalent, for the purpose herein set forth.

No. 40,187.—W. W. ROBINSON, of Ripon, Fond du Lac, Wis.—*Improvement in Gate Catches*.—Patent dated October 6, 1863.—This consists of a latch with two prongs, one for a handle, and the other operated by a spring which closes the latch. The latch shuts against gravitating catches which rise under the impulse of the latch, and falling down behind it, secure it in position.

Claim.—In combination with the double catches C, the spring latch D, when constructed and operated substantially in the manner and for the purpose set forth.

No. 40,188.—PETER SCHILDECKER, of Pittsburg, Pa.—*Improved Egg-Beater*.—Patent dated October 6, 1863.—The eggs are beaten in a horizontal cylinder between stationary and revolving arms, the funnel on top sliding in guides so as to close the opening.

Claim.—An egg-beater, consisting of the combination of a horizontal closed cylinder, having stationary arms $\pi \pi'$, around and between which revolve a series of beaters p p', constructed and arranged substantially as described.

Also, the use of the sliding funnel π , to serve the double purpose of a door and funnel to an egg-beater, constructed and arranged substantially as described.

No. 40,189.—JOHN P. SCOTT, of Newport, Ky.—*Improved Composition for Poultrices*.—Patent dated October 6, 1863.—Equal parts by measure of ground slippery elm bark and ripe or seeded lobelia heads crushed and ground, mixed with hot water to the usual consistence.

Claim.—The poultice mixture prepared, composed, and compounded as described.

No. 40,190.—THOMAS SHARP, of Chicago, Ill.—*Improved Chills for Casting Car Wheels*.—Patent dated October 6, 1863.—This consists of a segmental chill with the required interior conformation to form the periphery of the car wheel, which in the case represented is a two-flanged wheel. The chill is divided in order to enable it to be slipped off the wheel, and the chill is sustained by a re-enforce and radial screws, the latter to prevent its expansion when the metal is poured in.

Claim.—The employment of the re-enforce B, provided with the annular ledge d, in combination with the segmental chill A A, when the latter is constructed and provided with the two grooves c c' and all the scarf joints a a', and all are arranged and operating substantially as and for the purposes herein delineated and described.

No. 40,191.—JOSIAH SHIDLER, of Knox Township, Columbiana county, Ohio.—*Improvement in Roofs of Buildings*.—Patent dated October 6, 1863.—The roof consists of V-shaped troughs lying upon the plates, with similar troughs inverted over the upturned edges of the lower tier.

Claim.—A roof composed of a series of jointless, straight-sided V-shaped troughs A A, placed side by side in combination with the notched plates y, and a second series of narrow, jointless, straight-sided V-shaped troughs B, placed in inverted positions over the edges of the troughs A A, all as herein described and for the purposes specified.

No. 40,192.—JOSEPH SINGER, of Chicago, Ill.—*Improvement in Injecting and Douching Instrument*.—Patent dated October 6, 1863.—This consists of an air pump enclosed in a tight vessel containing liquid, and so arranged as to discharge its air above the surface of the liquid; the latter communicates by a stop-cock with a flexible tube provided at its end with a clyster pipe, a rose, or any other appliance required in hydropathic or ordinary medical treatment.

Claim.—First, with an air pump thus employed, the arrangement of the pipes G H, and the valves g and k, in the manner set forth.

Second, in combination with said pump so arranged, the arrangement of the escape pipe H, extending above the surface of the liquid, as set forth.

No. 40,193.—JOHN D. SMEDLEY, of Chicago, Ill.—*Improvement in Funnels*.—Patent dated October 6, 1863.—Exteriorly the funnel is of an ordinary character; the conduit extends downwardly into the cask as far as may be desired; a diaphragm divides this conduit into an upper portion which conducts the fluid from the bowl through orifices into the cask; and a lower portion, in which is a floating bob having an upwardly projecting rod which indicates the height of the fluid in the barrel.

Claim.—First, in combination with a fluid-filling funnel, so adjusting the rod t, by means of the nut a, or its equivalent, that the cask can be filled to any desired quantity.

Second, the combination of the floor or division s of said funnel with the side passages C, for the purposes and substantially as described.

Third, the combination and arrangement in a fluid-filling funnel of the pipe t, rod d, bob i, division floor s, side passages C, for the purpose and substantially as described.

Fourth, locating the bob e, within the conduit C, of said fluid-filling funnel, and below the division or floor s, substantially as and for the purpose described.

No. 40,194.—JAMES L. SMITH, of Neoga, Ill.—*Improvement in Corn Planters*.—Patent dated October 6, 1863.—The seed-slide is operated from the driving wheel by means of a crank on the latter, and a series of connecting rods and levers; the furrow opener is under the control of the driver, who determines the depth of the furrow by the graduation of the pressure of the foot upon the bar, to which the curved braces supporting the furrow openers are hung.

Claim.—The rod g, the joint arm h, the upright j, the joint arm o, the spring s, the foot lever T, the catch I, the bar L, the curved braces H, and the furrow openers F, the whole combined and arranged as herein set forth.

No. 40,195.—JARED W. SMITH, of Middletown, Middlesex county, Conn.—*Improvement in Water Wheels*.—Patent dated October 6, 1863.—The inner side of the water case encompassing the wheel is formed of India-rubber or other flexible material. The wheels are frustums of apheres—that is, with a zone around the poles removed, and revolve in boxes at the outer ends of the arms projecting from the main shaft. The wheel case is annular, and is divided by a partition, with openings for the supply water to reach the inner channel.

Claim.—The annular case A, provided with a central partition a of concave form and its inner side, and dividing the case into two compartments b c, which communicate with each other by openings e e, in combination with elastic strip q, rotating buckets E of the wheel and the discharge openings g g, and with or without the valves F, all arranged substantially as and for the purpose specified.

No. 40,196.—SAMUEL B. SPAULDING, of Brandon, Rutland county, Vt.—*Improvement in Furnaces for Sugar Evaporators*.—Patent dated October 6, 1863.—The cast-iron frame

crowns the brick work of the furnace, and forms three flues, one main wide central flue and two narrow side flues. The frame has three levels of different heights, to accommodate the pans which empty into one another in a series.

Claim.—The above-described iron frame, in combination with the brick work and evaporating pans, substantially as set forth.

No. 40,197.—STEPHEN STENSON, of Beloit, Rock county, Wis.—*Improved Water Wheel.*—Patent issued October 6, 1863; antedated September 23, 1863.—This is to be used in a scroll divided so as to make the water strike the wheel at opposite points. The wheel has receiving buckets, which extend from the upper to the lower rims, and scoop-shaped discharge buckets underneath, discharging the water backwardly and downwardly.

Claim.—The receiving buckets A, in combination with the discharging buckets B, when constructed and operating as herein set forth and described.

No. 40,198.—C. W. STAFFORD, of New York, N. Y.—*Improvement in Incendiary Shell.*—Patent dated October 6, 1863.—This is an elongated projectile, having a fuze in front, succeeded by a charge chamber, and that by a solid central portion, which is surrounded by a charge of incendiary matter within a cylindrical casing. The projectile is guided in the bore by a bearing about the first third, and a sabot at the rear, which latter is divided by an annular cut into two flanges.

Claim.—First, the combination of the explosive chamber A', solid central core a', annular incendiary chamber C, and casing B, arranged and operating in manner substantially as and for the purposes set forth.

Second, the combination with the shell A and detachable casing B of the skeleton bearing H I J, constructed as described, and employed to temporarily secure the forward end of the casing B, and support and guide the shell within the bore.

Third, the combination with the shell A and casing B of the sabot E, adapted and employed as described, to temporarily secure the rear end of the casing and support, and guide the rear end of the shell within the bore.

Fourth, the concave expansible packing disk G, formed at its periphery with two or more divided flanges g g, and undivided toward the centre.

Fifth, the shoulders b' in the described combination with the bearing H I J, constructed and operating as and for the purposes described.

No. 40,199.—A. B. SPENCER, of Rochester, N. Y.—*Improvement in Railroad Car Ventilators.*—Patent dated October 6, 1863.—This is to be located in the roof of the car, and consists of a passage regulated by dampers for admitting the air, which passes down in contact with water, rises, and is deflected by a swinging and a distributing plate into the car, while the impure air passes out at a similar opening on the other side of the swinging plate; the respective points of ingress and egress vary according to the direction in which the car is travelling. The special devices of the water tanks and damper actuators are detailed in the third and fourth claims.

Claim.—The swinging partition E, arranged and acting in combination with the other parts of the double ventilator, so that the same ventilator will go in either direction, and perform the double function of admitting the purified air and discharging the foul air equally well either way and automatically, while the draught of ventilation is regulated and made nearly uniform thereby, substantially as herein specified.

Also, the distributing plate F, arranged and operating in combination with the swinging partition E, substantially as and for the purpose herein set forth.

Also, the ribs c c, arranged upon the bottoms of the tanks C C longitudinally with the car, when there are communicating spaces i i alternately at the ends of adjacent ribs, for the purposes set forth; and in combination therewith the jutting edges b b over the sides of the tanks, operating as specified.

Also, the arrangement and combination of the catch bars I I, levers J J I I, and connecting rods or links k k m m, for regulating the valves or dampers D D, as specified.

No. 40,200.—HENRY STEUBING, of New York, N. Y.—*Improved Apparatus for Cooling Beer and other Liquids.*—Patent dated October 6, 1863.—The apparatus consists of a can with double walls, between which is a cool-water tank with a continuous stream of cold water. The beer fills the can and overflows, running down the outside into an annular trough, from which it is drawn off by a pipe.

Claim.—The apparatus substantially as described.

No. 40,201.—JOHN VAN, of Cincinnati, Ohio.—*Improvement in Cooking Stoves.*—Patent dated October 6, 1863.—The fire-chamber is located between the oven and a roasting chamber, which latter has a drop bottom and charcoal grate under the dripping pan. The boiler plates have beneath them at their edges marginal flanges, which enter grooves in the stove top.

Claim.—First, in the described combination with the grate A A', the broiling and roasting chambers B b, having in its floor a drop charcoal grate C, the whole being arranged and operating substantially in the manner and for the purposes set forth.

Second, constructing the top and boiler plates of a cooking stove with loosely fitting marginal flanges and grooves T U V', for the objects explained.

No. 40,202.—JOHN W. VANDIVER, of Shelby county, Mo.—*Improvement in Corn Planters.*—Patent dated October 6, 1863.—The seed is dropped by an attendant who operates the slide lever. It is scattered as it falls, covered by the share, and the ground compressed by the roller. The devices are sufficiently explained in the claim.

Claim.—First, constructing the frame A, so that the longitudinal beams thereof shall form scrapers for the hinged coverer shares g, in the manner described.

Second, the combination of the hinged coverers g with the levers l and m, when arranged as described, so that a person riding upon the rear part of the frame is enabled to raise or lower the coverers on both sides of the machine independent of one another and of the runners, in the manner specified.

Third, the forked bars or valves d pivoted within the seed-conducting tubes F, and connected with the seed-distributing slides a, in combination with the metal strips or tongues e attached on opposite sides and below the valve to the inner sides of the conducting tubes F, substantially as and for the purposes set forth.

Fourth, fitting a rim or tire to the wheels of a corn planter in sections, so that it can be put on or taken off according as a flat or concave tread is needed to adapt the machine for planting in sod or old ground, in the manner and for the purposes specified.

Fifth, the detachable sod cutters N, attached by means of bolts o p to the runner C, in combination with the same and the wooden strips r in the seed-conducting tube F, in the manner and for the purpose specified.

No. 40,203.—C. C. WALWORTH, of Boston, Mass.—*Improved Tap for Cutting Screw Threads.*—Patent dated October 6, 1863.—The bits or cutters are secured in a holder, having been previously cut on a common centre, and removed from the position in which they are cut. When in the holder they are so confined that the cutting faces are the prominent parts of the whole taps, when considered with relation to the rotation of the tap in its cutting function.

Claim.—The tap constructed and operating substantially as described.

No. 40,204.—GEORGE I. WASHBURN, of Worcester, Mass.—*Improvement in Condensers for Steam Engines.*—Patent dated October 6, 1863.—The water from the supply chamber is conducted by a pipe to the water chamber surrounding the condensing tank; from this latter chamber the pipe passes to another chamber on a lower level so as to make a continuous stream through the chamber around the condenser; the water of condensation escapes by its gravity to the hot well at a distance beneath it.

Claim.—First, the use, in connexion with a steam engine of any form, of an air-tight surface-condensing tank S, surrounded wholly or in part by a water chamber A, and placed so high above the outlet of the exit pipe that the condensed water will escape by its own gravity, substantially as explained.

Second, the use of a siphon to convey condensing water to the water chamber A of a surface-condensing tank thus placed.

Third, a siphon having as a part of itself a surface-condensing tank, kept cold by the passage of water through the siphon, and kept from becoming full of water of condensation by its own elevation above the reservoir or hot well H', substantially as set forth.

No. 40,205.—GEORGE I. WASHBURN, of Worcester, Mass.—*Improvement in Breech-loading Ordnance.*—Patent dated October 6, 1863.—The force of the explosion acting against the central plug through the flexible diaphragm presses the inner ends of the sector levers so as to lock them on the hemispherical block at the rear of the bore, and cause the outer ends of the levers to throw the ring forward, and close the elastic diaphragm tightly against the rear face of the barrel.

Claim.—So applying a system of levers or other equivalent mechanical devices in combination with the breech of a breech-loading or chamber-loading piece of ordnance or other firearm, that the pressure of the explosion acting upon such levers shall tend to close the point between the breech and barrel, substantially as described.

No. 40,206.—GEORGE B. WRIGHT, of Elmira, Chemung county, N. Y.—*Improved Method of Regulating the Supply of Water in Steam Boilers.*—Patent issued October 6, 1863; antedated October 1, 1863.—When the water falls in the boiler the float by its connexions will dip the ends of the wires into the mercury cup and complete the galvanic circuit, which renders the helices magnetic, and on coming together by the motion of the pump rod they are connected: as the rod recedes the plunger is drawn up, allowing the pump to fill and to be discharged by the downward motion; the disconnection of the circuit allows the plunger to drop and stops the pumping of water.

Claim.—The combination of the electro-magnetic helix with steam-boiler force pumps, or their appurtenances, the helices being connected by conductors to the boiler or its appurtenances, in such manner that the galvanic circuit is broken or completed by the rise and fall

floats or valves attached to the boiler or its appurtenances, thus regulating the supply in accordance with the demands of the boiler, as herein described, using for that purpose the aforesaid arrangement, or any other substantially the same, and which will produce the intended effect.

No. 40,207.—WILEY S. WRIGHT, of St. Louis, Mo.—*Improvement in Charcoal Furnaces*.—Patent dated October 6, 1863.—This consists of a flaring pan setting on a base and with draught holes passing down between it and its base, through the ash chamber and up through the grating.

Claim.—First, a charcoal furnace of elongated form and with a flaring mouth, the flare being both in a lateral and longitudinal direction, and continuations of the curves of the base portion of the furnace, all in the manner and for the purpose described.

Second, an elliptical charcoal furnace provided with front and end draughts *b c c*, substantially as and for the purpose set forth.

Third, an elongated flaring charcoal furnace constructed with end draughts *c c*, substantially as and for the purpose set forth.

No. 40,208.—OLIVER D. ANNOTS, of Chelsea, Mass.—*Improved Portable Stool*.—Patent dated October 6, 1863.—The stool consists of four legs, joined at their centre to four sides of a quadrangular band or strap B, the legs turning on the sides of said strap. To the top ends of these four legs a seat of suitable material is fastened; to the top of each rear leg a movable arm D is so attached as to be capable of swinging diagonally in a plane parallel to that, in which the arm, to which it is jointed, moves. A cross band or back rest E connects the tops of the arms D, and two side bands F support them in position. The stool is easily folded by drawing the legs together, and as their tops approach, the relaxation of the side bands allows the arms to be turned backwards and to be brought down so as to lay against the sides of the legs.

Claim.—Combining folding arms, which, in connexion with bands, form a back, with the folding legs of a portable stool, substantially in the manner and for the purpose as above set forth.

No. 40,209.—JAMES BOLTON, of Chicago, Ill., assignor to the SINGER MANUFACTURING COMPANY, of same place.—*Improved Presser Foot of Sewing Machines*.—Patent dated October 6, 1863.—The object of this improvement (the device being explained in the claim) is to cause the legs of the foot-plate to maintain their parallelism when diverging from or approaching each other, instead of diverging in radial lines; the screw is a means of adjusting the gripe of the two legs upon the foot-plate.

Claim.—The combination of the legs of the frame of a presser-foot, which are grooved to hold a removable foot-plate, with the stem thereof, by means of upright connexions, so that the junction of the two sides of the frame is above the level of the foot-plate, substantially as set forth.

Also, the combination of the first part of my invention with an adjusting screw, substantially as set forth.

No. 40,210.—H. S. GOLIGHTLY and C. S. TWITCHELL, of New Haven, Conn., assignors to ENGLISH and MERSICK, of the same place.—*Improved Folding Arm-Chair*.—Patent dated October 6, 1863.—The frame is supported upon two X-shaped supports, from the upper ends of which rise the lower forward ends of the two arms and the two back posts, respectively. The chair is capable of being collapsed into a pack no longer than the longest pieces, that is, the arms.

Claim.—The combination of the standards C C, when attached to the legs *a a* below the seat, with the solid arms A A, with the upper slat of the back immovably attached to them, when the whole is constructed and fitted for use and folding substantially as herein described.

No. 40,211.—JAMES HEWETT, of Clinton, Worcester county, Mass., assignor to Himself and THOMAS ELLIOTT, of the same place.—*Improved Skate Fastening*.—Patent dated October 6, 1863.—This is a clamp for fastening the heel of the boot to the skate, and consists of a metallic strap on the runner or skate frame, with a rear projection on which is pivoted a stirrup-shaped clamp embracing the heel, which, as it descends to its normal position on the runner, is clamped more tightly by the clamp.

Claim.—The curved wire or rod A fitted in the lug or projection *a* of the strap B, in combination with the swinging heel bearing D attached to the lug or projection *a*, and the bars *i i* fitted on the ends of the wire or rod A, all being arranged substantially as and for the purpose herein set forth.

No. 40,212.—LUTHER and STOUGHTON B. HOLDEN, of Woburn, Middlesex county, Mass., assignors to Themselves, J. C. SEELYE and L. L. HOLDEN, of the same place.—*Improvement in Sewing Machines*.—Patent dated October 6, 1863.—This machine is intended especially for sewing on the soles of shoes, &c. The first feature is an elastic fork which draws the tacks by which the upper and sole were temporarily united; the second is an arched

needle-die standing above the plate, and inclined so as to adapt itself to the concavity of the sides of the shank of the shoe; the third feature is intended to retain the work between the presser and the needle-die, and consists in roughening the surfaces of those two portions.

Claim.—First, the tack-drawing device, consisting of an elastic fork, applied in combination with a sewing machine, and operated by a wedge E, or its equivalent, substantially as and for the purpose herein specified.

Second, the arched needle-die B, standing above the bed-plate of the sewing machine, and slanting transversely, substantially as and for the purpose herein specified.

Third, the combination of the grooved, toothed, or roughened surface *f* of the presser G, and the corresponding grooved, toothed, or roughened surface *g* of the needle-die B, substantially as and for the purpose herein specified.

No. 40,213.—PIERRE JAMAIN, of Bordeaux, Empire of France, assignor to Himself and JAMES M. TRIPPE, of Orange, N. J.—*Improvement in Constructing Field Fortifications*.—Patent dated October 6, 1863.—The boxes or voussoirs which support the roof of the underground casemated battery are formed of a bottom board, to which are hinged two end boards and a central brace, which, with the addition of two side-boards, constitute a truncated, elongated pyramid, of such a form as, when laid together, to form an arch to support the bomb-proof covering.

Claim.—The employment, in the construction of field fortifications and embankments, of portable voussoirs of wood, or other material, made to fold up, substantially as herein described.

No. 40,214.—ALISON MEARS, of Brashear, St. Lawrence county, N. Y., assignor to Himself and ABIEL O'DELL, of Oneida county, N. Y.—*Cheese Turning Apparatus*.—Patent dated October 6, 1863.—This consists of a pair of tongs suspended by chains attached to the upper arms, from the ends of a lever pivoted on a standard, and retained in an elevated position by a strap. The tongs embrace clamps pivoted thereto, and these clamps enclose a cheese, which, by the pivoting of the clamps, is capable of being turned over as required, without disconnecting or changing any part of the apparatus.

Claim.—First, the tongs G, in combination with the pivoted jaws J J and washers I I, constructed and operating as and for the purposes set forth.

Second, in combination with the aforesaid tongs and pivoted jaws, the pedestal A, post or upright B, lever C, ring and staple D E, chains F F, and strap K, the whole being arranged and operated substantially as herein specified.

No. 40,215.—EMANUEL J. PLEYEL, of Dallas county, Iowa, assignor to ALBERT ZIEGELE, of Buffalo, N. Y.—*Improved Horseshoes*.—Patent dated October 6, 1863.—The calks, flat-faced or sharp-pointed, are screwed into the bosses on the heel of the shoe.

Claim.—The six-sided calks L and N, with their double-shouldered screws E, constructed and combined as herein described, and for the purposes set forth.

No. 40,216.—E. L. PRATT, of Boston, Mass., assignor to GEORGE R. CARTER, of the same place.—*Improved Cutter-head for Apple Parers*.—Patent dated October 6, 1863.—The knife stock is attached to its arm at one of its ends, or opposite one end of its knife, and has a spring attached, so that it rocks on its centre in its course round the apple, commencing by cutting well into the hollow first presented, say the stalk, and finishing by cutting into the concavity of the calyx, making the whole length of the knife effective during the course of its stroke.

Claim.—Hanging the cutter-head to the arm A, substantially as described, in combination with applying to it the spring *b*, in the manner and for the purpose as above set forth.

No. 40,217.—GEORGE ESCOL SELLERS, of Hardin county, Ill., assignor to Himself and PHILIP M. PRICE, of the same place.—*Improvement in Preparing Woody Fibre for Paper Stock*.—Patent dated October 6, 1863.—The essential feature of the invention is crushing the fibre by pressure, vertical to the line of the fibre; this may be done by pressure on the end of a block and then removing the disintegrated fibre, or by working on thin laminae of wood which have been removed from the block by a cut perpendicular to the line of the fibre.

Claim.—The separating and disintegrating of woody fibre for paper-making, by pressure in the line, or nearly so, of the fibre, substantially in the manner above described.

No. 40,218.—RICHARD VOSE, of New York, N. Y., assignor to CHARLES S. S. LENOX, of Newark, N. J.—*Improvement in Car Springs*.—Patent dated October 6, 1863.—This consists of a rectangular box containing a double set of straight springs, separated by distributing plates, between which latter are interposed compensating springs. The upper and lower surfaces of the distributor are curved to correspond with the lower surface of the follower and the bottom of the box, and under pressure the springs are brought to the same curve.

Claim.—The combination of one or more straight metallic springs B B, with the peculiarly-formed interposed distributing plates C C and central compensating springs D D, substantially in the manner and for the purpose herein set forth.

When straight metallic springs B B are combined with interposed outwardly curved distributing plates C C and compensating springs D D, substantially as herein described, combining the same with an arched bearing-plate E and end or bed-plate A, substantially in the manner and for the purpose herein set forth.

No. 40,219.—THOMAS WALLACE, of Chicago, Ill., assignor to Himself, HENRY A. BALENTINE, and EDWARD F. LAWRENCE, of the same place.—*Improvement in Grain Dryers*.—Patent dated October 6, 1863.—The grain is passed through a series of compartments, in each of which it is exposed to a blast of hot air as it traverses a semi-cylindrical perforated trough under the impulse of conveyors and stirrers on a shaft operated by gearing on the outside.

Claim.—In a grain-drying apparatus the combination and arrangement of a series of conveyors, situated one above the other in separate air-tight compartments, whereby the grain is carried back and forth through a kiln, over a series of perforated inclined surfaces in a zigzag course, when a separate hot-air blast is admitted into each of said compartments, arranged and operating as and for the purposes herein described.

Second, the combination and arrangement of the perforated troughs E, the revolving shaft E, provided with the spiral b and stirrers c, and the spur-wheel B, mitre-wheels i k, shaft I, mitre-wheels e f, and shaft C, arranged and operating substantially as delineated and described.

Third, the combination of the reciprocally-arranged conveyors F F, provided with the spiral b and stirrers c, with the air-tight chambers 1 2 3 4 5, constructed and operated as herein shown and specified.

No. 40,220.—RICHARD YIELDING, of Ypsilanti, Washtenaw county, Mich., assignor to Himself and HARRISON H. TOCK, of the same place.—*Improvement in Journal Bearings*.—Patent dated October 6, 1863.—The journal is sustained on roller bearings which are enclosed in boxes whose inner annular disks afford bearings for the roller journals, which are lubricated by the oil contained in the oil-tight chambers between the said disks and the heads of the boxes.

Claim.—First, the boxes D D', constructed and employed as described, to enclose and afford bearings in the inner walls of the oil-tight reservoirs for the anti-friction wheels B B', and provides means for attaching the auxiliary axles in any desired positions.

Second, the oil-tight reservoirs F F, employed in the manner described, within the boxes D D', to afford constant lubrication to the pivots.

No. 40,221.—CYRUS CHAMBERS, of Philadelphia, Pa.—*Brick-Machine*.—Patent dated October 6, 1863.—The tempering chamber, impelling screw and forming die are in the same horizontal line and of a conical shape, the forming die being at the apex; the clay is received at the hopper on the cylindrical portion, worked by the beaters and delivered to the screw which works at the end of the same shaft, and with a gradually increasing depth of thread terminates before it reaches the die, so as to make the clay leave in a solid mass; the walls of the screw-chamber are roughened to prevent the revolution of the clay.

The clay is delivered upon an endless apron, by which it is carried to a knife working by attachment to a fly-wheel, which being controlled by the same power, makes its cuts at regular distances in the traversing mass of clay; the latter is supported at the point of impact of the knife by a movable frame underneath, which moves with the knife, and the brick as it is cut off rests upon another apron which, traversing faster than the former, soon makes an interval between the brick.

Claim.—First, arranging in the same horizontal line with each other the tempering chamber, impelling screw and forming die, so as to secure directness of action and simplicity of gearing, as described.

Second, imparting to the tempering chamber and screw case the tapering form described and shown, so as to gradually compress the clay and exclude the air in its passage to the forming die, as specified.

Third, so constructing a screw that the clay may enter it at an angular space, and be delivered in a solid mass opposite its end, and at the centre of the screw, substantially in the manner and for the purpose described.

Fourth, preventing the clay from revolving with the screw in the screw case, by roughening or checkering the interior surface of that case, substantially as described.

Fifth, the combination of a knife with a fly-wheel, for the purpose of severing a bar of clay into proper lengths for bricks, the velocity of said fly-wheel being regulated or controlled by that of the bar of clay.

Sixth, the combination of the apron a with the fly-wheel Y and knife k, all arranged for conjoint operation, substantially in the manner and for the purpose specified.

Seventh, propelling the cut-off device by means of a friction clutch, and regulating the power of said clutch by means of a yielding pressure.

Eighth, the yielding severing knife k, constructed and operating substantially as set forth.

Ninth, supporting the clay at the line of severance by a movable frame or supporting stirrup-guide L', through which the knife K is guided, as and for the purpose stated.

Tenth, moving the knife and the supporting guide L together, during the severance of the bars, at the same speed with which the bar of clay advances, for the purpose of cutting off the brick at right angles to the course of the bar, as directed.

Eleventh, driving the off-bearing apron a', at greater speed than that of the bar of clay, for the purpose of separating the brick by a sufficient interval, as described.

Twelfth, giving to the conical impelling screw a gradual increasing depth or thread, to secure uniformity between the amount of clay received by the base of the screw and that delivered at its point, as set forth.

No. 40,222.—JAMES ADAIR, of Pittsburgh, Pa.—*Improvement in Lamps*.—Patent dated October 13, 1863.—A curved or S-formed siphon-tube is fitted to the top of a lamp. The opposite end is attached to a wider tube, the upper end of which is split, forming a skeleton frame and support for the chimney, which consists of a perforated conical body, of a convex top, corrugated, with the usual opening and resting on this frame. A sliding and vibrating spur is joined to a stem, fitted into a cylindrical box beneath the cone to regulate the wick. A curved spring-latch, connected to the same stem, confines the chimney in place. Within the enlarged tube is inserted a movable wick-tube, flattened at the upper end, through which the wick passes in similar form. Other features of the invention will be understood from the claim and engravings.

Claim.—First, the manner of supplying a flame with oil at one side of a lamp, by carrying the oil up through the top of a lamp and down over its side through a pipe, or its equivalent, which is supplied with a wick, substantially as set forth.

Second, the flaring skeleton frame or support for the cone, formed by splitting the upper end of the wick-tube holder, substantially as described.

Third, covering the cone D, and the skeleton frame b, with beads, substantially as described.

Fourth, while not claiming broadly a corrugated cone, I do claim waving or corrugating spirally or obliquely the upper part of a lamp cone, substantially as and for the purposes set forth.

Fifth, making the upper portion or the whole of a wick-tube of metal wound in a spiral form, substantially as and for the purpose set forth.

Sixth, the removable bracket or feed-tube A J, in combination with a lamp-top a', substantially as described.

Seventh, the combination of the removable wick S with the removable tubular bracket A and feed wick J, substantially as described.

Eighth, the sliding and vibrating spur g, operating in the manner substantially as described.

Ninth, while not claiming the construction of the spring catch l, described, I do claim arranging it so as to be operated from the spindle or stem of a wick-adjuster, substantially as described.

No. 40,223.—ANDREW LEMUEL ADAMS, of Philadelphia, Pa.—*Improvement in Pocket-books*.—Patent dated October 13, 1863.—The pocket-books are constructed with elastic gussets or bands, applied through apertures made through the several leaves or sections of the books which are secured on the inside of the leather. Movable leaves are inserted, obviating the necessity of opening all the leaves or sections of the book at the same time. The elastic gussets or bands also constitute outside fasteners for the books when they are closed.

Claim.—The improved movable leaf, in combination with the outside fastening, the gusset or band to be made of elastic cloth or other material, as and for the purpose shown and described.

No. 40,224.—R. A. ADAMS, of Chicago, Ill.—*Tool for Graining in imitation of wood*.—Patent dated October 13, 1863.—A frame of any required size is made in two sections sliding into each other for the purpose of extension or contraction. On the face of this frame is attached an elastic plate, on which is carved the figure intended to be transferred or grained. The ordinary graining colors are distributed on oil-cloth by pressing the latter gently against the face of the tool and then applying it to the object to be grained.

Claim.—The extension and adjustable frame A A, in combination with the elastic plate, in the manner and for the purpose herein described.

No. 40,225.—ABRAM ALEXANDER, of Pittsburg, Pa.—*Improvement in Apparatus for Planing the Chambers of Cannon*.—Patent dated October 13, 1863.—To a shaft, one end of which works in a journal box, is attached a pulley or hollow box, in which a shorter or longer cutter is placed, according to the chamber of the gun being spherical or sphericoconical, the cutter protruding through an open space in the periphery of the pulley, to which a partly revolving motion is given by means of chains, attached to rods and worked by a cog wheel and two pinion wheels attached to the shaft near its outer end. One of the pinion wheels is worked upon by a small toothed wheel attached to the pinion wheel and acted upon by a double pawl. If the chamber of the gun is sphericoconical, the inner end of the cutter is attached to one end in the pulley, so that the centre of its motion is eccentric from that of the pulley.

Claim.—First, the use of a tool, consisting of a pulley or cutter holder, capable of at least a partial revolution on its axis, in the plane of the axis of the casting to be acted upon, operating as a feed motion to advance the point of the cutting tool gradually forward in a curved line toward the axis of the casting, the tool being either turned within the casting

or the casting revolved around the tool, substantially in the manner and for the purpose hereinbefore described.

Second, also the combination of a revolving or partially revolving pulley, or cutter holder, carrying a tool or cutter and attached to a shaft or other support, with suitable gearing and chains or connecting rods for giving to the cutter or tool a feed motion in the arc of a circle in the plane of the axis of the gun or hollow casting to be operated upon, for the purpose of causing the tool or cutter to traverse a spherical or sphero-conical surface by the revolution of the tool inside of the hollow casting, or of the casting around the tool, substantially as described.

Third, also the use of a revolving or partially revolving pulley or cutter holder, carrying a cutter, the centre of motion of which is eccentric to that of the cutter holder, so as to cause the point of the tool to traverse a sphero-conical surface on the revolution of the casting around the tool, or of the tool inside of the casting, substantially as described.

No. 40,226.—LEWIS J. ATWOOD, of Waterbury, New Haven county, Conn.—*Improvement in Lamps*.—Patent dated October 13, 1863.—The improvement consists in placing an adjustable slide, which supports the draught plate, upon the wick tube, so that the draught plate may be elevated or depressed within the contracted neck of the chimney as may be convenient.

Claim.—The supporter and slide grasping the wick tube and sustaining the draught plate in combination with a glass chimney having a contracted neck, so that the adjustment of the draught plate can be effected in the manner represented and for the purpose set forth.

No. 40,227.—LEWIS J. ATWOOD, of Waterbury, New Haven county, Conn.—*Improvement in Lamps*.—Patent dated October 13, 1863.—This invention consists in the peculiar arrangement of the parts in a portable hand lamp, in which the wick and tube are within the conical base of the chimney, the air being admitted through openings in the annular diaphragm or floor, upon which the hinged chimney ring is immediately superimposed.

Claim.—The combination of the several parts into a convenient, cheap and portable hand lamp, constructed as represented and for the purposes specified.

No. 40,228.—LEWIS J. ATWOOD, of Waterbury, New Haven county, Conn.—*Improvement in Lamp Chimneys*.—Patent issued October 13, 1863; antedated October 11, 1863.—The invention consists in so constructing a chimney as to dispense with the usual metallic deflector. The circular based chimney is tapered and contracted to an oval or oblong form at a suitable height relatively to the flame and again enlarged into a flattened bulb.

Claim.—The chimney *g*, with a circular base *l*, and contracted to the oval neck *2*, below the bulb *3*, for burning coal oil and similar oils supplied to a flat wick, without any separate deflector, as set forth.

No. 40,229.—SAMUEL BALSDON, of Brooklyn, Kings county, N. Y.—*Improved Composition for Lubricating Machinery*.—Patent dated October 13, 1863.—The composition is as follows: No. 2 is clarified lard; No. 3 is clarified beeswax; No. 4 is a compound of three pounds black lead ground fine, with one gill vitriol; then of No. 2, take twelve pounds; of No. 3, one and one-half pound; and of No. 4, three pounds; melt, mix, and cool gradually.

Claim.—The application of the different ingredients aforesaid and prepared as aforementioned, and in the proportion aforementioned, for the purpose of making a composition paste that is anti-friction, for axles and machinery, all substantially as set forth.

No. 40,230.—GEORGE W. BANKER, of St. Louis, Mo.—*Improvement in Oil Vessels*.—Patent dated October 13, 1863.—This invention consists in making a sliding or extension nozzle to the oil vessel, which can at will be protruded beyond the heading or boxing by which the vessel is enclosed, to facilitate pouring without waste.

Claim.—The compound sliding or extension nozzle *a b*, constructed and operating substantially as set forth, for the purpose specified.

Also, in combination with the above, the cover or shield *c*, operating as set forth, for the purpose specified.

No. 40,231.—EZRA R. BARNES, of Brookfield, Fairfield county, Conn.—*Apparatus for Holding Emery or Sand-paper*.—Patent dated October 13, 1863.—This block for holding emery or sand-paper consists of a cushion and base with end plates, around which the emery paper is stretched and there held firmly and smoothly by clamps, which grip it to the side of the block; said clamps being retained in position by spiral springs under the thumb pieces.

Claim.—First, the jaws or clasp and springs.

Second, the plates and ears for holding the jaws or clasps.

Third, the cushion over which the paper is placed.

Fourth, holding the cushion in place by placing its edges between the two sections of the base and by means of screws or any other well known mode of fastening, substantially and for the purpose set forth.

No. 40,232.—T. C. BARTLE, of Independence, Buchanan county, Iowa.—*Improvement in Sugar Evaporators*.—Patent dated October 13, 1863.—This improvement relates to the form and arrangement of the pans, the furnace, dampers and flues, together with a steam generator under the front pan to obviate the danger of scorching in concentrating sirup; also an improvement in the skimmer, the handle of which is made of wood, with a piece of cloth attached.

Claim.—First, constructing the pans as herein described and arranging them at different elevations, in the order named, for the purpose specified.

Second, the dampers H and G, when arranged and operating as and for the purpose set forth.

Third, the herein described arrangement of flues, within the body of the furnace and beneath the several pans, for the purpose specified.

Fourth, the adjustable steam generator F, when arranged and operated as and for the purpose described.

Fifth, the skimmer, constructed as herein specified.

No. 40,233.—H. F. BATCHELLER, of Sterling, Whiteside county, Ill.—*Improvement in Corn Planters*.—Patent dated October 13, 1863.—This invention consists in the construction and adjustment of a slide and rod, the former by means of straps operating the feed-roller, and the latter insuring the filling of the cells in the feed-roller.

Claim.—First, the strip F attached to the plunger and connected with the roller B by the straps G G', substantially as and for the purpose set forth.

Second, the rod J attached to the plunger D, when used in combination with the roller B, as and for the purpose specified.

No. 40,234.—EPHRAIM BEEMAN, of Owego, Tioga county, N. Y.—*Improvement in Wick Movers*.—Patent dated October 13, 1863.—The invention consists in the application of a spring to a wheel or roller, between which and another roller the wick passes, so as to prevent the friction against the sides of the tube.

Claim.—The application of the spring B and wheels or rollers C C to the wick-tube A, acting in such a manner as to take off the friction of the wick upon the inside of the wick-tube and operate wicks of various thicknesses with equal ease and certainty.

No. 40,235.—ISAAC BOLMER, of Franklin, Ohio.—*Improved Process for Treating Fruit Trees*.—Patent dated October 13, 1863.—A cone of soil is raised around the trunk of the tree, and the branches bent down and enclosed in troughs, which rest on the sides of the cone, as a means of protection to them and their fruit buds in certain seasons or inclement weather.

Claim.—The process or treatment of fruit trees, including the mode of planting, mounding, and trimming, substantially as herein described.

Also, in combination with the mounds A A, &c., and the process substantially as herein described, the use of the boxes B B, &c., arranged as and for the purpose set forth.

No. 40,236.—GEORGE W. BILLINGS, of New York, N. Y.—*Improved Method of Drying Flax and Hemp*.—Patent issued October 13, 1863; antedated September 28, 1863.—The invention consists in drying hemp, flax, &c., in the bundle in a tight chamber, by hot air under pressure, allowing the air to escape at intervals.

Claim.—The drying of flax and hemp in the bundle, in an enclosed chamber, by means of hot air under pressure, and in such manner that the vapor may be permitted to escape at proper intervals during the drying process, substantially as described and set forth.

No. 40,237.—JESSE BOWEN, of Yellow Bud, Ross county, Ohio.—*Improvement in Cider Mills*.—Patent dated October 13, 1863.—This invention consists in a peculiar construction of the rasping cylinder, in which the rasping teeth are inserted in grooves and project somewhat beyond the periphery of the cylinder, together with an arrangement of an eccentric fork-shaped arm-rod, arm, and projections, by which the fruit is forcibly pressed down with an intermittent action.

Claim.—The arrangement of the eccentric K, lever L, rod N, arm O, and projections *e*, substantially as and for the purpose specified.

Also, the construction of the rasping cylinder C, inserting the screws or rasping pins *e* in the channels or grooves *d'*, allowing their heads to project but a short distance beyond the face of the cylinder, at the same time affording a sufficient space under the heads for the free escape of pulp, as herein specified.

No. 40,238.—SAMUEL D. BROAD, of Bedford, Pa.—*Improvement in Smut Mills*.—Patent dated October 13, 1863.—This mill consists of a cylindrical chamber, whose sides are formed of vertical slats and interstices, within which revolves a cylinder with flanges around its periphery, radially corrugated and serpentine in their form; a fan in a lower cylinder acts upon the grain as it passes from the smutting cylinder into a spout, and elevates and discharges the dust while the grain escapes at a lower orifice.

Claim.—The employment of the serpentine and radially corrugated plates *j*, in combination with the vertically ribbed and slotted cylinder C, pipes H, fan E, and spout J, operating together as herein shown and described, for the purpose set forth.

No. 40,239.—JAMES and DANIEL BUDD, of Albany, N. Y.—*Improvement in Pumps*.—Patent dated October 13, 1863.—This pump consists of a single cylinder or barrel, in which traverses a reciprocating piston; the water is alternately discharged at either end into passages which meet in the air-chamber, and is prevented from running back by ball valves on appropriate seats in each passage; the water is discharged from the summit of the air-chamber, and the cylinder and passages are so compactly organized as to be cast in one piece.

Claim.—First, the combination with an ordinary pump barrel and piston of ports or channels, and a valve chamber under the arrangement and for operation, substantially as hereinbefore shown and described.

Second, the arrangement hereinbefore described, in relation to the pump barrel, of ports or channels and a valve chamber, so that the same may be cast in one piece, substantially as herein set forth.

No. 40,240.—C. W. CAHOON, of Portland, Me.—*Improvement in Lamps*.—Patent dated October 13, 1863.—The improvement consists in a stiffening stay or additional plate beneath the shank of the vibrating plate, which constitutes the chimney holder, and in a sliding bolt over the hinge of vibration of the chimney holder, by which when the bolt is dropped the holder is fast, and by raising which partially the holder is freed, so as to be vibratable, thus uncovering the wick-tube for cleansing, trimming, &c.

Claim.—The combination of a sheet metal chimney holder with a stay for the shank thereof, substantially as herein set forth.

Also, the combination of a sliding bolt with the vibratable chimney holder of a lamp, substantially as herein set forth.

No. 40,241.—CHARLES W. CAHOON, of Portland, Me.—*Improvement in Lamps*.—Patent dated October 13, 1863.—The clamp support of the chimney holder is fastened by means of a tooth and recess to secure it from turning upon the burner, and with tongues to prevent it from lateral displacement; the burner is surrounded with a perforated and corrugated plate, and it is inserted into the collar of the lamp with a check-screw to limit the distance to which it can be entered.

Claim.—The combination of the clamp support of the chimney holder with the burner by means of a tooth and recess to prevent the support from turning upon the burner, substantially as set forth.

Also, a perforated corrugated air-chamber for a lamp, constructed substantially as set forth.

Also, the combination of the chimney holder with two tongues to bear against the opposite sides of the burner, or some part secured thereto, and prevent the bending of the chimney holder laterally by the unscrewing or screwing in of the burner, substantially as set forth.

Also, the combination of the burner which is connected with the collar of the lamp by a screw-thread with a stop, which limits the distance to which the burner can be screwed into the collar of the lamp, substantially as set forth.

No. 40,242.—JOHN CAPELL, of Dansville, Livingston county, N. Y.—*Improvement in Grain Sieves*.—Patent dated October 13, 1863.—The improvement consists in making the perforated sheet metal of a corrugated form, with the openings in the valleys, or when it is inclined transversely to the line of direction of the corrugations, with the openings on the steps.

Claim.—A grain sieve or perforated separator having a waved surface, substantially as and for the purposes herein described.

No. 40,243.—OTIS N. CHASE, of Boston, Mass.—*Improvement in Corn Harvesters*.—Patent dated October 13, 1863.—The machine is driven along a row of corn in such a manner as to bring a cutter fastened near the ground against one row of stalks which pass between guides, which conduct the row or hill back to rollers until it passes behind a spring; the rollers, rotated by the driving wheel of the machine, now drag the stalk downwards, but the incompressibility of the ears prevents them from passing, and they are torn off and left behind, from whence they fall to other rollers that tear off the husk and release them, so that they fall down the incline into the bag or receptacle.

Claim.—First, the frame B of the harvester provided with the driver's platform B in the front, and the attendant's platform B' in the rear, and with the gathering rollers *f f*, and the conduit *l*, to conduct the harvested material into receptacles near said platform B', substantially as described and for the purposes set forth.

Second, the spring guide beam D, or its equivalent, in combination with the inclined rollers *f f*, substantially as described.

Third, the combination of the spring *s*, or its equivalent, with rollers *f f* and beam D, substantially as described.

Fourth, the cutter *y* attached to the frame B, in combination with the rollers *f f*, substantially as described, for the purposes specified.

No. 40,244.—SAMUEL M. CHESNEY, of New York, N. Y., and JOHN C. BROWN, of Brooklyn, N. Y.—*Improvement in Apparatus for Sizing and Finishing Skirt Wire*.—Patent dated Octo-

ber 13, 1863.—The covered wire is passed under a roller in a size bath, then up and between two rollers, to remove superfluous moisture, thence over the nearest cylinder, thence over the polishing surface, and so on, describing the Figure 8, until it is passed off the machine, dried and finished.

Claim.—First, the combination of the heated cylinders E and F with the heated polisher I, when the same are constructed and arranged to polish and finish both sides of the skirt or other wire, in the manner substantially as herein specified.

Second, the combination of the adjustable rolls *a1 a2* and *a3* with a sizing bath, in the manner and for the purpose specified.

Third, the adjustable polisher or finisher, when the same is arranged to finish both sides of the covered wire at one operation, substantially as herein specified.

Fourth, the grooved rolls, *a2* and *a3*, when combined in the manner described, for the purpose specified.

Fifth, the arrangement described for taking the wire from the reel, sizing, finishing and re-reeling, at one and the same operation.

No. 40,245.—ABSALOM CRANE, of Altoona, Blair county, Pa.—*Improved Sausage Stuffer*.—Patent dated October 13, 1863.—This machine is continuous in its delivery of sausage meat when properly charged, as it has a discharging spout at each end, and a piston which traverses under the impulse of a screw back and forth in the cylindrical meat chamber, one end being emptied while the other is being filled.

Claim.—The employment of the two delivery tubes D D, in combination with a piston B, operated by means of a screw C in a sausage stuffer, so that delivery will be effected during both the forward and backward motions of the piston, substantially as described and set forth, for the purpose specified, whether the adjustable sheath E be used or not.

No. 40,246.—EDGAR CHIPMAN, of New York, N. Y.—*Improved Washing Machine*.—Patent dated October 13, 1863.—A semi-cylindrical suds-box is placed upon rockers, and from its sides rise standards, to which are attached counterpoises so as to maintain more readily a rocking motion. Within the box in journal bearings is a fluted roller, which rubs and presses the clothes as they are dashed back and forth.

Claim.—The semi-cylindrical rocking suds-box A, in combination with the arms *g g* and adjustable weights or counterpoises C C, arranged to operate in the manner substantially as and for the purpose herein set forth.

Also, the fluted roller D, hung or placed within the suds-box A, so as to rotate freely therein, when said roller is used in connexion with the counterpoised suds-box A, as set forth.

No. 40,247.—WILLIAM CROOKS, of St. Paul, Minnesota.—*Improvement in Gauges for Railroad Tracks*.—Patent dated October 13, 1863.—The instrument consists of a sill-piece with two shoulders to set down between the tracks as a gauge of distance; upon this is an upper bar hinged to the sill at one end, and the other working by a slot on an arc-shaped standard, which is graduated in degrees; this forms a gauge for elevation of the outer rail in curves.

Claim.—The combination of the bar F, the arc *a*, and hinge *d*, in the manner and for the purpose set forth.

No. 40,248.—MELANCTHON W. DANKS, of Fulton, Oswego county, N. Y.—*Improved Head-blocks for Saw-mills*.—Patent dated October 13, 1863.—This is a substitute for the ordinary screw, and consists of a chain propelled by a lever and chain-wheel connected with the movable boxes. The coupling arrangement of the second claim is designed to connect two head-blocks by means of a shaft.

Claim.—First, the combination and arrangement of the chain C with the chain-wheel *e* and the movable boxes K, when the whole is arranged, constructed, and operated in the manner substantially as and for the purpose set forth.

Second, the combination and arrangement of the female coupling P, sleeve *q*, ears S, hand-wheel *r*, groove *t*, and knuckle-joint, or their equivalent, constructed and arranged relatively with each other, to operate as and for the purpose described.

No. 40,249.—HIRAM S. DENISON, of Coleraine, Franklin county, Mass.—*Improvement in Shaping Wood for Ox-bows*.—Patent dated October 13, 1863.—The bow blank is placed on the carriage between the standards, so as to extend between the cutter cylinder and the roller; the carriage is then moved forward under the required adjustments by the operator, so as to expose the wood to the action of the revolving cutter.

Claim.—The roller, or its equivalent, and the broad plate standard or standards, as combined with or used in connexion with the patterns, carriage, and the cutter-wheel, and constructed and made to operate therewith, substantially as described, in order that a crooked piece of wood, or ox-bow blank, may have imparted to it, while being reduced, the forward and lateral movements necessary to its proper reduction, as hereinbefore specified.

No. 40,250.—JOHN B. DOUGHERTY, of Rochester, N. Y.—*Improvement in Barrel Hoops*.—Patent dated October 13, 1863.—Explained by the claim.

Claim.—First, the mode herein described of forming the lock of a barrel hoop, said lock consisting of two notches cut across the entire width of the hoop, in the manner described.

Second, cutting the hoop splints from a block or board having the position of the locks marked across its face, in the manner described.

Third, leaving the outer end of the hoop the full thickness of the material used, and riveting or nailing it to the other end of the hoop, in the manner and for the purpose set forth.

No. 40,251.—DANIEL A. DRAPER, of East Cambridge, Mass.—*Improvement in Self-acting Bottle-stoppers*.—Patent dated October 13, 1863.—The stem is fastened into the spherical bottle-stopper by means of cement.

Claim.—As an improvement in bottle-stoppers, attaching the ball or valve A to its stem B, by means of fusible metal, in the manner substantially as set forth.

No. 40,252.—MATTHEW EASTERBROOK, Jr., and E. A. BRONSON, of Geneva, Ontario county, N. Y.—*Improvement in Machine for Peeling Willows*.—Patent dated October 13, 1863.—The lower feed-rollers are driven by hand and a band, and the upper rollers by traction from the lower; the willows are fed singly by placing the tips in the funnel-shaped feed hole, which is hung below the bite of the rollers, and are then passed through the V-shaped notch of the scraper, and thence to the discharge rollers, which run a little faster than the feed-rollers which bruise and loosen the bark to be removed by the scraper.

Claim.—First, the combination of a scraper S in willow-peeling machines with feed and discharge rollers R and R', substantially in the manner specified, when said rollers have a yielding or elastic periphery, as set forth.

Second, the construction, arrangement, and operation of the scraper S, substantially as shown in figures 1 and 3, and for the purposes set forth.

Third, the construction of the feed and discharge rollers R and R' of willow-peeling machines, with a vacant space under the rubber-ring r, substantially in the manner and for the purpose described.

Fourth, the feeder-guide G, constructed, arranged, and operating substantially in the manner and for the purpose set forth.

Fifth, the relative arrangement of the feed and discharge rollers R R' with the scraper S, the latter being below a direct line between the bite of the front and that of the rear rollers, substantially as shown and for the purpose specified.

Sixth, driving the discharge rollers R' faster than the feed-rollers R, so as to insure the drawing of the willow up through the V-shaped notch of the scraper, as and for the purpose specified.

No. 40,253.—ABRAM FAUCKBONER, of Schoolcraft, Kalamazoo county, Mich.—*Improvement in Fences*.—Patent dated October 13, 1863.—This fence is made of boards secured together by upright battens; the panels are attached by arms which slip between the battens in the intervals of the boards, and are there pinned or nailed; the fence is supported by cross-stakes passed between the upper two boards and driven into the ground; a transverse notched piece lying on the lower board, and attached to the stakes.

Claim.—The rails A, battens B C and D, in combination with the arms E and stakes F F' and G G', the several parts being constructed and arranged as and for the purpose specified.

No. 40,254.—ACHILLE A. FELDTRAPPE and RENI DUTPOY, of Paris, empire of France.—*Improvement in Buttons*.—Patent dated October 13, 1863.—Explained by the claim.

Claim.—A button of porcelain or other material, without either a projecting shank or any hole in its face, but having a hole or tunnel extending transversely through the back part of its body, substantially as herein specified.

No. 40,255.—LYSANDER FLAGG and GEORGE D. BRIGGS, of Pawtucket, Providence county, R. I.—*Improvement in Constructing Toy Watches, Lockets, &c.*—Patent dated October 13, 1863.—The case of the toy watch and the ring handle are swaged in one piece, the half ring is duplicated, and the upper half bent over the lower and soldered.

Claim.—First, as a new article of manufacture, a toy watch or locket, the case A of which is made out of one piece, with the handle B in the manner herein shown and described.

Second, a handle B produced by folding one section a over the other section b, as and for the purpose set forth.

No. 40,256.—A. T. GARRETSON, of Mount Pleasant, Henry county, Iowa.—*Improvement in Sighting Small-arms*.—Patent dated October 13, 1863.—The mirror is so attached to the stock of the gun that it may be in line with the sights, and set at such an angle that the beam of light which passes from the object over the sights of the gun may be reflected to a place of safety and the gun sighted from an unexposed position.

Claim.—The combination and arrangement of the adjustable mirror M with the front and back sights a' b', substantially as described, and for the purposes set forth.

No. 40,257.—SILAS GRENNELL, of Mokena, Will county, Ill.—*Improvement in Grain Drills*.—Patent dated October 13, 1863.—This seeding machine is mounted upon wheels carrying

a seed-box with a slide operated by a lever and a projection on the shaft, the seed falling upon an inclined distributing board, which is vibrated by means of an attachment with a pinion driven by a spur rim on the driving wheel.

Claim.—The combination and arrangement of the slide M, hole e, in the bottom of the seed-box or hopper L, lever N, attached to slide, the shaft H, with projection b attached, spring O and the vibrating board or chute E, all applied to the mounted frame A, as and for the purpose herein set forth.

No. 40,258.—STEPHEN HARRISON, of Saint Michaels, Talbot county, Md.—*Potato Separator*.—Patent dated October 13, 1863.—This is for sorting potatoes into different lots in respect of size, and delivering them at different spouts. The potatoes are placed in a revolving slot cylinder which is inclined on its axis, and those which pass the intervals are again sorted on an inclined sieve, which has a lateral vibratory motion, allowing the smallest size to fall through, while the middle size is delivered at the end.

Claim.—The revolving screen i, inclined in one direction, in combination with the vibrating screen j, inclined in an opposite direction, constructed and operating substantially as and for the purposes set forth.

No. 40,259.—J. W. HJERPE, of Stockholm, Sweden.—*Improvement in the Manufacture of Friction Matches*.—Patent dated October 13, 1863.—This invention consists in the preparation of a match compound of chlorate of potassa, chromate of potassa, sesquioxide of iron, (or an equivalent,) glue, and pounded glass, and a rubber compound of sulphuret of antimony, chromate of potassa, oxide of iron, sulphate of iron, glue, and pounded glass. The latter compound being spread on a surface for a rubber, will ignite the former by friction without being itself ignited; the former compound is not ignited by ordinary friction, nor by friction on itself or its own kind.

Claim.—First, the application of certain ingredients, substantially such as herein specified, for the purpose to obviate the employment of phosphorus or other dangerous substances in the preparation of friction matches.

Second, the method of so preparing friction matches as to require a specially prepared rubber substantially as herein described.

No. 40,260.—LEWIS HEYL, of Columbus, Ohio.—*Adhesive Tags for Filing Papers*.—Patent dated October 13, 1863.—A strip of fabric with an adhesive surface is applied to the paper, and the fold of the former has a loop connected to it by which the paper is retained in the folio or cover.

Claim.—As a new article of manufacture, paper files consisting of strips of tape or other suitable material, having one or both surfaces coated with gum or other adhesive substance, and having loops or rings, woven or otherwise, introduced with the edge or fold, as and for the purpose specified.

No. 40,261.—THEODORE HEERMANS, of Mitchelville, Sumner county, Tenn.—*Improvement in Granaries*.—Patent dated October 13, 1863.—This consists of horizontal and vertical troughs placed in a granary, in connexion with exterior openings, to admit of the ventilation of the grain. The troughs are laid with the open side downward, and the holes through their sides are upward and inward.

Claim.—First, the horizontal troughs, with or without holes, constructed and used substantially as set forth.

Second, in combination with the horizontal troughs, the vertical troughs, as described.

Third, inclining the holes or openings in the troughs upwards and inwards, as and for the purposes recited.

No. 40,262.—OTTO HOEPFNER and CHAS. SCHNEFF, of Philadelphia, Pa.—*Improved Apparatus for Cooling Malt Liquors*.—Patent dated October 13, 1863.—The invention consists of an arrangement by which a blast of air from a fan case is conducted to a covered vessel or beer cooler.

Claim.—The arrangement and combination of an enclosed fan, with a covered cooler, arranged and combined as herein described, and for the purposes set forth.

No. 40,263.—MANLEY HOWE and HENRY R. STEVENS, of Boston, Mass.—*Improvement in the Manufacture of Dye Colors*.—Patent dated October 13, 1863.—The invention consists in incorporating dye colors with the requisite quantity and quality of mordants, to fix the colors upon fabrics or fibres, the object being to enable the uninitiated to practice the art.

Claim.—First, as a new article of manufacture, dye colors in powder, having incorporated with them the mordants in kind and quantity requisite, substantially as hereinbefore set forth.

Second, combining with dye colors in powder mordants reduced to powder, substantially as set forth.

Third, mixing dye colors and mordants, when either or both of them are in a liquid condition, and then drying and afterwards reducing the same to powder, substantially as set forth.

Fourth, the combination with dye colors and mordants, when mixed in a liquid or pasty state, of starch or other similar absorbent, substantially as hereinbefore set forth.

No. 40,264.—RICHARD G. HUNT, of New York, N. Y.—*Improvement in Wooden Sieves for Gas Purifiers*.—Patent dated October 13, 1863.—The solid wood is slotted so as to form a grating for the support of the lime, and is strengthened by means of portions of wood which are left to brace the slats transversely of their length.

Claim.—In a slotted wood sieve suitable for gas purifiers, the combination of two or more sets or series of slots and bars secured and combined together by solid wood connexions in the middle part of the sieve, substantially as described.

Also, the bevelled shape of the solid wood connexion *a* between the bars, substantially as described.

No. 40,265.—JOHN F. JONES, of Rochester, N. Y.—*Machine for making Paper and Paper Boards*.—Patent dated October 13, 1863.—By this arrangement of cylinder moulds they deliver their webs of pulp one upon another for the purpose of being pressed together to form a board, which is passed continuously through the drying and calendering apparatus to the place where it is cut into sheets, or delivered at intermediate points in several sheets of lesser thickness. Each of the vats has an arrangement of troughs, spouts, and valves, by which the supply of pulp is regulated and the back-water carried off; the pulp in the latter is collected in a save-all with a reticulated revolving cylinder, a coucher for receiving it from the cylinder, and a scraper to deposit it in a receptacle. Further devices are described in the claim.

Claim.—First, the arrangement and combination of two or more cylinder moulds, vats, felts and press rolls, substantially as herein described, whereby, in the same machine, any desired number of continuous webs of pulp of indefinite length may be either deposited one upon another for the continuous manufacture of boards, or may be kept separate from each other for the manufacture of several continuous distinct sheets of paper.

Second, the combination with such a system of cylinder moulds, vats, felts and press rolls, of a series of guide rolls *n n* for separating the several webs of pulp as they are delivered from the press rolls, substantially as herein specified, in the manufacture of paper.

Third, the combination of such a system of cylinder moulds as herein above specified, and a continuous series of drying cylinders and calendering rolls, in such manner that the manufacture of boards or of several webs of paper may be carried on by a continuous process, substantially as herein described.

Fourth, the arrangement of the several spouts *G E J*, pipes *c m* and *j*, valve *l2*, and self-acting feed-gate *d*, in combination with each other and with the several vats, substantially as and for the purpose herein specified.

Fifth, the save-all, composed of a vat, a cylinder mould, a coucher and a scraper, combined and applied in connexion with one or more paper-making machines, substantially as herein specified.

Sixth, the combination of press rolls, illustrated by *M7 M7 M7*, in figure 1, to obtain two pressures from three rolls, as herein described.

Seventh, the employment of calender rolls on the top of drying cylinders, substantially as herein described, to equalize the water in the board and make it of uniform dryness as it passes over the dryers, and partially effect the glazing and calendering process while the board is being dried.

No. 40,266.—H. H. and J. F. G. KROMSCHROEDER, of Princess Terrace, Regent's Park, Middlesex, London, subjects of the King of Hanover.—*Improvement in Gas Meters*.—Patent dated October 13, 1863; patented in England October 22, 1862.—The measuring drum is formed of two concentric cylinders, and the annular space between is divided into a series of similarly measuring compartments by partitions; the water-line in the meter is below the upper part of the inner cylinder, and gas is admitted into said cylinder above the water-line; through this cylinder the gas is admitted into the compartments through openings immediately below the junctions of the partitions with the cylinder; in the outer cylinder is an outlet above each partition. The inner cylinder is buoyed up by a float in its interior.

Claim.—The combination, in a gas meter, of an annular measuring drum with an internal float to buoy up the drum in the liquid with which the meter is filled, substantially as described.

Also, the combination of an annular measuring drum and float, constituting a floating measuring drum, with a lever frame connecting the axis of the drum with fixed necks or axes which are in line with the axis of one of the wheels of the counting apparatus, so that the floating measuring drum acts uniformly upon the counting apparatus notwithstanding its rise or fall, substantially as described.

Also, the combination of an annular measuring drum and float, constituting a floating measuring drum, with the lever frame and with an adjustable inverted vessel and pipe connected with the supply chamber, so that the position of the measuring drum is controlled by the pressure of the gas in the supply chamber, substantially as described.

Also, the annular measuring chambers of the annular measuring drum, constructed substantially as described.

No. 40,267.—G. KUENNE, J. N. COLE, and D. F. RATH, of Fond du Lac, Wis.—*Improvement in Horse-Powers*.—Patent dated October 13, 1863.—The teeth on the lower face of the horizontal master wheel gear into a pinion on a shaft which has a screw gearing into two worm wheels which have each two sets of teeth, one, the radial, gearing into the screw, and the other on their lower faces gearing into pinions on a shaft which runs through the machine and from which the power is taken.

Claim.—The combination of the master or driving wheel *B*, screw *E*, and pinion *c*, on shaft *D*, wheels *F F*, provided with two sets of teeth *d e*, and the pinions *G G* on the shaft *H*, and with or without the wheel *I* and pinion *g*, for communicating motion to shaft *J*, all arranged substantially as and for the purpose herein set forth.

No. 40,268.—TAYLOR D. LAKIN, of Hancock, Hillsboro' county, N. H.—*Improved Water Wheel*.—Patent dated October 13, 1863.—The wheel is formed of two annular plates, one directly over the other, and with tangential buckets placed between them. A central vertical gate is placed loosely on the wheel and within the circle of buckets; this gate has vertical plates which correspond with the openings between the buckets, and the gate is operated by the governor so as to regulate the water supply orifices.

Claim.—The construction and arrangement of the plates *o* and the inner ends of the buckets *i* in the manner herein shown and described, so that the said plates, when open, will form inward continuations of the buckets, all as set forth.

No. 40,269.—HENRY A. LEE, of Worcester, Mass.—*Improvement in Moulding Machines*.—Patent dated October 13, 1863.—The stuff is fed by rollers to the rotating cutters; the various adjustments are detailed in the claim.

Claim.—First, securing the adjustable journal box *n* of the feed-roller shaft *F* to the stirrup *f* and spring *g*, for the purpose of making said feed-roller yielding to the unequal thickness of the lumber, substantially in the manner herein described.

Also, in combination with the adjustable rests *C* the spirally-grooved feed-roller *D*, for the purpose of pressing the lumber against said rests while it is fed forward, substantially as herein set forth.

Also, in combination with the vertical cutter heads *R* the boxes *m o*, hanger *n*, shafts *p q* and *7*, adjusting and set screws *8 9*, for the purpose of adjusting said cutter heads horizontally and vertically, without arresting the motion of the machine, substantially as herein set forth.

Also, in combination with the yielding cross-bar *S*, press-shoe *w*, and its rollers *14*, substantially in the manner and for the purposes set forth.

Also, securing the press-bars *S* and *z*, in front and to the rear of the horizontal cutting cylinder *T*, to the adjustable frame *S* of said cutting cylinder, so as to enable the operator to adjust them simultaneously, substantially as herein described.

Also, the concave *g'* in the bed-plate *B*, and under the cutter cylinder *T*, to prevent the cutters from striking the bed-plate while operating on the edges of the lumber.

Also, the adjustable hanger *U*, secured to the press-bar *z*, and when constructed and operated substantially in the manner and for the purpose set forth.

Also, the arrangement of the pulleys *z* and *z'* with the belts for driving the shaft *q* of the cutter heads *R R*, by means of which I am enabled to throw off either of the two belts without interrupting the motion of the machine, and whereby said pulleys and belts are so arranged as not to interfere with the operator or the free passage of the material from the machine.

Also, in combination with the press-bar *s*, the India-rubber springs *a'*, and boxes *11* and *t*, and screw *12*, for the purpose of making said bar yielding, and for adjusting its position to and pressure upon the lumber, substantially in the manner and for the purpose set forth.

No. 40,270.—GIDEON LEIGH, of Clinton Station, Hunterdon county, N. J.—*Improvement in Grain Drills*.—Patent dated October 13, 1863.—The seed slide, with its stirrers attached, is reciprocated by means of an elbow joint connexion with a rod from a crank on the axle of the roller.

Claim.—The cranks *g*, rod *k*, and elbow lever *i*, connecting the axle *C* of the rollers *B* with the seed slide *D*, and constructed and operating in combination with the stirrers *K*, in the manner and for the purposes shown and described.

No. 40,271.—SAMUEL D. LILLEY, of Ripley, Brown county, Ohio.—*Tobacco Fork*.—Patent dated October 13, 1863.—This is a fork with two pairs of tines, for the purpose of elevating and placing tobacco sticks on racks in barns, for the purpose of drying the same.

Claim.—A tobacco fork, constructed and operating in the manner and for the purpose herein set forth.

No. 40,272.—GEORGE MANN, JR., of Ottawa, La Salle county, Ill.—*Improved Water Gauge for Steam Boilers*.—Patent issued October 13, 1863; antedated September 25, 1863.—This consists of a vertical tube connected above and below with the boiler, and having on one side in a vertical series a number of holes covered with glass cups to indicate by their contents the

height of the water in the boiler. A float is so arranged in the said tube in connexion with a lever and valve as to blow off steam when the water falls below a certain point.

Claim.—First, the cups B B, attached and secured to the tube A by means of the caps t t, screws n n, and yoke C, the whole combined substantially as herein specified.

Second, the float D, and valve t, applied within and in combination with each other, and the gauge tube A, to operate substantially as and for the purpose herein specified.

No. 40,273.—MELVILLE MCCLAIN, of Pemaquid, Lincoln county, Me.—*Improved Means for Attaching Booms to Masts.*—Patent dated October 13, 1863.—The invention consists of a metallic clamp or collar fitting closely around the mast and having two projecting flanges which enclose an exterior collar which is hinged or jointed to the boom; a block with friction rollers prevents the friction between the two collars.

Claim.—First, the combination and arrangement of the interior collar B, and exterior collar C, with the boom E, and the mast A, substantially as and for the purpose set forth.

Second, the combination and arrangement of the hinged joint D with the boom E, and the exterior collar C, substantially as and for the purpose set forth.

Third, in the combination and arrangement of the friction rollers h h with the metallic box H, and the collars B and C, substantially as and for the purpose set forth.

No. 40,274.—JOHN FREDERICK PARKES, of Detroit, Mich.—*Improvement in Machine for Jointing Shingles.*—Patent dated October 13, 1863.—The shingle is placed on the table with its but resting against the stop piece and with the edge projecting under the guard; the table is then brought down, which makes a clean edge to the shingle or stave perpendicular to the but.

Claim.—First, the combination of the hinged or falling table B" B" with the circular saw A", as described.

Second, bringing the middle of the shingle or barrel heading, or nearly so, first to the saw.

Third, the use of the guard or gauge piece E".

Fourth, the whole machine, constructed substantially as and for the purposes set forth.

No. 40,275.—OBED PECK, of Windsor, Vt.—*Improvement in Attaching Bits to Braces.*—Patent dated October 13, 1863.—A falling jaw is pivoted to the brace and a tooth engages with a notch in the bitt; the position of the jaw is maintained by a sliding collar.

Claim.—The jaw C, hinged to the brace or handle, or connected therewith by a joint, in combination with the collar D, provided with the annular inclined plane c at its lower edge, and the pin d attached to the brace or handle, substantially as and for the purpose set forth.

No. 40,276.—FRANCIS A. PRATT, of Hartford, Conn., assignor to PRATT, WHITNEY & Co., of same place.—*Improvement in Apparatus for Attaching Pumps to Barrels.*—Patent dated October 13, 1863.—The rigid suction pipe of the pump has points on the end to penetrate the sides of the barrel to keep it from slipping, and has a conical sleeve which has on its outer surface a thread to hold it firmly to the bung-hole, the pipe within the sleeve being firmly secured by a clamp screw.

Claim.—The employment, in combination with the suction pipe of a pump, of a tapering sleeve c and a screw clamp d, or their respective equivalents, so constructed and arranged as to secure the said pipe in the bung-hole of a barrel, substantially in the manner hereinbefore specified.

Also, forming the end of the suction pipe into one or more sharp points, in combination with a clamp for securing the said pipe in the bung-hole of a barrel, substantially as and for the purpose hereinbefore set forth.

No. 40,277.—GEORGE F. QUICK, of Moorestown, Burlington county, N. J.—*Improvement in Apparatus for Hatching Poultry.*—Patent dated October 13, 1863.—The heated air and moisture from the drum and tank are imparted to the eggs in the perforated drawers by means of the pipes which lead to the chambers.

Claim.—The arrangement of the devices of water tank A, drum B, pipes C C, chambers D, perforated drawers G, and chicken-house H, when arranged and combined as herein described and for the purposes set forth.

No. 40,278.—ABRAHAM RAMSDALL, of Moscow, Hillsdale county, Mich.—*Improved Rotary Engine.*—Patent dated October 13, 1863.—Two disks with pistons revolve in cylindrical casings; the slide valves are operated by means of the engagement of their rods with an eccentric cam groove in wheels attached to the rotating shaft.

Claim.—The inclined planes E E, with the eccentric bows c c thereon, the valves in the steam-chest as arranged and operated by the lever L with its connecting parts, the steam-chest with its system of valves as described, and the pistons and casing, the whole combined, constructed, and operating as described.

No. 40,279.—LEWIS RAYMOND, of New York, N. Y.—*Improved Valve for Life-Boats.*—Patent dated October 13, 1863.—This consists of a spherical ball valve placed within

casing in the shell of a life-boat so as to discharge the water from said boat when the pressure of the water on the outside is temporarily relieved.

Claim.—The combination of the shell of the boat, ball valve, and jacket, substantially as described, the whole constituting a self-voiding boat.

No. 40,280.—GILBERT RICHARDS, of Cummington, Hampshire county, Mass., and LEVI ALEXANDER, of Sherburne Falls, Franklin county, Mass.—*Improved Apparatus for Washing Dishes and other like Furniture.*—Patent dated October 13, 1863.—The apparatus consists of a tub with a central vertical shaft provided with buckets, revolving within the creel or frame, in which the dishes are placed on their edges, in such a position as to receive upon their surfaces the current of water thrown centrifugally by the buckets.

Claim.—The arrangement of the wheel or buckets G, within the chamber that contains both the dishes, &c., and the washing water, so that by rotating said wheel or buckets a continuous stream of water shall be jetted or thrown against them whilst the dishes or other articles remain stationary, substantially as described.

No. 40,281.—J. J. RIDER, of Wilton Junction, Muscatine county, Iowa.—*Improvement in Corn Planters.*—Patent dated October 13, 1863.—The runners of the sled mark the rows, and the reciprocating seed slides are moved by means of treadles and a strap which actuate a lever pivoted on a standard below the seat and attached to the seed-slide bar. The corn is covered by forks at the end of the runner.

Claim.—The combinations of the treadles P P, straps N N', operating lever L, and slide bar K, or their equivalents, with each other, and with the slides H H and seed-boxes G G, substantially in the manner and for the purpose herein set forth.

Also, when slides H H are placed within the seed boxes G G of a corn planter, and actuated by means of treadles P P, substantially as described, combining said seed boxes with markers or runners A A, and covering forks c c, substantially in the manner and for the purpose herein set forth.

No. 40,282.—E. C. ROBERTS, of Salem, Washtenaw county, Mich.—*Improvement in Fruit Houses.*—Patent dated October 13, 1863.—This house is constructed with double walls and roof, the interval being filled with a non-conductor. The fruit chambers within are pyramidal, with sliding door entrances facing the centre of the hall in which they are placed.

Claim.—First, the construction of the chambers I I J, when used in a building for the purpose and in the manner and form described.

Second, the combination of the chambers I I J, with a double-walled and double-roofed house, constructed in the manner and form substantially as herein described.

No. 40,283.—E. P. RUSSELL, of Manlius, Onondaga county, N. Y.—*Improvement in Harvester Finger.*—Patent dated October 13, 1863.—A countersunk hole is made in the finger plate, and the latter being placed in the flask, the metal forming the finger is cast to it, filling the countersunk hole, and attaching them firmly together.

Claim.—Securing the steel plate B to the finger A by means of the countersunk hole c, into which the metal forming the finger is cast.

No. 40,284.—A. A. SAGE, of Memphis, Macomb county, Mich.—*Improved Device for Raising Yeast.*—Patent dated October 13, 1863.—This consists of a pan to contain yeast located in a tepid bath, which is surrounded by a hot bath, and then enclosed by a double wall and a cover.

Claim.—An apparatus or device for raising yeast, composed of the case or vessel A, provided with double walls, in connexion with the cups or vessels C D, placed within A, and all arranged substantially as specified.

No. 40,285.—LEVI S. SCOFIELD, of Belmont, Suffolk county, Mass.—*Improvement in Hoop Skirts.*—Patent dated October 13, 1863.—Explained by the claim.

Claim.—The application of the auxiliary dorsal strap e, when so applied as to connect and fasten together the main tape c, diverging taper d d, and waist-band a, substantially as set forth.

No. 40,286.—HENRY J. SEYMOUR, of Troy, N. Y.—*Improvement in Moulding Machines.*—Patent dated October 13, 1863.—The supplementary curved bed forms a guide for the material to be cut.

Claim.—The employment or use, in a machine for cutting mouldings, of a supplemental curved bed, either concave or convex, corresponding in curvature with the curvature of the article on which the mouldings are to be cut, and placed in such relation with the cutters as to serve as a guide for the work or article to be operated upon, substantially as herein described.

No. 40,287.—HENRY D. SMITH, of New York, N. Y.—*Improved Belt-Cutting Machine.*—Patent dated October 13, 1863.—The guillotine knife is worked by means of a pitman from

a wrist wheel; the strip of leather, after it is cut, is jerked up by a rocking gauge plate under the impulse of a cam catching against the chain. The under side of the slide beam is furnished with stamps, points, or punches, to impress the leather, if required.

Claim.—First, the rocking or movable gauge plate, or its equivalent, for the purpose of throwing off the strips as they are cut.

Second, the combination of the movable gauge plate with the packing π and stationary plate forming a groove O for the reception of the knife.

Third, combining the cutting with the embossing, stamping, or marking operations, so that they are effected simultaneously.

No. 40,288.—ROBERT SMITH, of Brooklyn, N. Y.—*Improvement in Pendulum Sight for Ordnance.*—Patent issued October 13, 1863; antedated September 28, 1863.—The vibrating frame is pivoted to the base, and carries the pendulum sight, which is suspended therefrom; the frame forms a guide for the graduated sight staff, by which the gun is adjusted to the required elevation.

Claim.—The construction of the pendulum in the manner herein shown and described, so that unimpeded vision or sighting may be had through or across the pendulum, as set forth.

Also, the combination with the said pendulum of the adjustable graduated sight staff D, substantially in the manner herein shown and described.

Also, the combination of the frame B, staff D, and pendulum C, with the base A and the adjusting devices, all in the manner herein shown and described.

No. 40,289.—DAVID I. STAGG, of New York, N. Y.—*Improved School Seat and Desk.*—Patent dated October 13, 1863.—The back remains stationary; the seat is attached to arms which are pivoted to the standards, and is capable of being vibrated upwards and backwards, so as to form a desk for the seat behind it.

Claim.—The arrangement of the seat desk board D with the arms C, plates d , and back B, in the manner herein shown and described, so that when the board D is turned down for a seat, its inner edge will pass under the back B, all as set forth for the purposes specified.

No. 40,290.—ALLEN S. SWEET, Jr., of Detroit, Mich.—*Improvement in Supports of Locomotives upon Car Trucks.*—Patent dated October 13, 1863.—The first part of the improvement relates to the method of supporting the locomotive upon its centre-bearing truck, and the second to the guiding or swivelling of the truck by the cross chains, which connect the rear ends of the truck to the rear of the locomotive frame.

Claim.—First, mounting a locomotive upon its truck through the aid of one or more cams N N', arranged to roll transversely to the motion of the trucks, substantially as represented, and having their bearing surfaces formed substantially as described, and for the purpose herein set forth.

Second, the within-described arrangement of chains I and J, connecting the rear end of the truck frame C to the locomotive frame A, substantially in the manner and for the purpose herein set forth.

No. 40,291.—DAVID SWEETMAN, of Homer, Cortland county, N. Y.—*Combined Nippers and Pincers.*—Patent dated October 13, 1863.—To the sides of the pincer jaws are attached nipping blades.

Claim.—The combination of the handles A A, jaws $a a$, hammer B, and nipper blades C, the whole being arranged to operate substantially as and for the purpose explained.

No. 40,292.—NATHAN THOMPSON, of Abbey Gardens, St. John's Wood, Middlesex, England.—*Improved Device for Stopping Bottles, &c.*—Patent dated October 13, 1863; patented in England November 18, 1862.—A hinged cover is made to surround the mouth of the bottle, and a screw, passing through a socket, bears down upon a cap over the opening.

Claim.—The combination of a cap carrying a stopper and a screw acting thereon with the neck or mouth of a bottle or other vessel by means of double flanged pieces hinged together and to the cap, which double flanged pieces, when closed together, enter a groove in or under a ring on the neck, or around the mouth of the bottle or vessel, and also come over the edge of the cap so as to confine the same, substantially as herein described.

No. 40,293.—NATHAN THOMPSON, of Abbey Gardens, St. John's Wood, Middlesex, England.—*Improvement in Closing Bottles, &c.*—Patent dated October 13, 1863; patented in England November 18, 1862.—This consists of a cover whose lower edge has flanges which project into a groove in the neck of a vessel. In the upper surface of the cover is a socket occupied by a screw which fastens down upon a disk and elastic packing on the upper surface and over the mouth of the bottle.

Claim.—The combination of a cap carrying a stopper and a screw acting thereon with the neck or mouth of a bottle or other vessel by means of a flanged strip of metal connected with the bottle or vessel and under which the edge of the cap enters; and also by means of

a flange on the cap, which enters a groove, or under a projecting ring in the neck or around the mouth of the bottle or vessel, the whole contrivance being substantially such as is described.

No. 40,294.—WILLIAM TURTON, of Brooklyn, N. Y.—*Improvement in Hot-air Registers.*—Patent dated October 13, 1863.—This is an improvement on the inventor's former patent of March 16, 1852, in respect of making the bearings of the rack independent of the supports of the register fans, and giving the latter pivotal support, with liberty to play up and down in the slots in the sides of the rack.

Claim.—Suspending the slotted rack E (constructed with open slots and connected with fans A, which have travelling studs or teeth $f f$) by means of firm supports arranged above the base of the rack and on both sides of the actuating part G, so that the base of the rack has no frictional contact with the register box, substantially as set forth.

No. 40,295.—FRANZ SCHILLING, of Fort Delaware, Del.—*Improvement in Breech-loading Ordnance.*—Patent dated October 13, 1863.—The invention consists in the peculiar construction of the closing piece and the device for drawing out and for fastening it. The closing piece is of a slightly conical shape, with a portion removed in a plane parallel to the axis, and it is introduced from below through an orifice perpendicular to the axis of the gun; it is fastened in position by a screw collar which engages in a threaded socket in the under side of the piece, and when withdrawn sufficiently far for the introduction of the charge from the rear its further progress is checked by a chain.

Claim.—The closing piece d of the shape specified, with arm e , screw k , collar m , in connexion with chain g , substantially as herein described.

No. 40,296.—JEPHTHA A. WAGENER, of Pultney, Steuben county, N. Y.—*Improvement in Sewing Machine.*—Patent dated October 13, 1863.—The two levers, one controlling the feed and the other the vibratory motion of the looping needle, are operated by a single cam wheel and furnished with adjusting devices, which are detailed in the claim.

Claim.—First, in a sewing machine combining the working parts C E F G H and J, arranged and operating as described, the use of a frame or foundation composed of the parts A B $b b$ and $a a$ cast in one solid piece in their respective positions as shown in Figures 4 and 6, for the purposes described.

Second, in a sewing machine having the vibrating levers G, H, and E arranged to operate as described, the construction of the laterally adjusting plate n applied to the rear end of the change bar H for the purpose of adapting the machine to work with different-sized needles, substantially as described.

Third, a tapering flat-pointed looping needle J, constructed with positive angles $o o$ and three or more holes $s s s 2$ through its flattened end, whereby this needle is adapted to work well with fine or coarse thread; and can also be set to compensate for any change in the length of the lower needle J, substantially as described.

Fourth, the helical tension spring d , applied to the needle bar C and arranged in a horizontal or inclined plane for the purpose of giving the desired tension to the upper thread, said spring being constructed substantially as described.

Fifth, in a machine operating as described, and having the three pivot points $g 2$, j , and i , lever E G, and change bar H, the adjusting slotted plate n , spring K, and cam wheel F, operating as described for the purpose of giving the required lateral movements to the looping needle J, substantially as set forth.

No. 40,297.—ELHANAN W. WAKEFIELD, of San Francisco, Cal.—*Improved Medicine for Curing Foot-rot in Horses, &c.*—Patent dated October 13, 1863.—The first preparation is a wash to be applied hot. It is compounded of quicksilver, verdigris, and concentrated lye, of each half a pound; oil of organum, one quarter of a pound; oil of tar and powder, of each a pound; salt, two pounds; water, two gallons.

The second is a salve to follow the wash. It is compounded of castile soap, beeswax, rosin, of each one-half pound; lard, two pounds; brown sugar, one pound.

Claim.—The preparation and use of the medicine herein described for the purpose set forth, or any preparation substantially the same which will produce the intended effect.

No. 40,298.—THOMAS WALLACE, Jr., of Ansonia, New Haven county, Conn.—*Improvement in Corset Buses.*—Patent dated October 13, 1863.—The improvement consists in making an enlargement or attaching a cap or shield on the end of the steel strip to prevent it from working through the fabric.

Claim.—The employment in corsets of metallic strips which have their ends enlarged, for the purposes substantially as herein set forth.

No. 40,299.—H. B. WEST and C. A. KELLOGG, of Elyria, Lorain county, Ohio.—*Improvement in Hand Corn Planters.*—Patent dated October 13, 1863.—The seed cylinder, which has a vibratory reciprocating motion by means of the lever and rod, discharges the seed into several channels, by which it is distributed in the ground.

Claim.—None of the individual parts, but the combination of the seeding cylinder *a*, having the cell *D* in but one instead of several divisions, lever *f* and rod *g*, with the seed-dividing and distributing device *C H*, when the whole are constructed and arranged to operate in the manner and for the purpose herein set forth.

No. 40,300.—EDWARD WHITELEY, of Cambridge, Mass.—*Improvement in Cooking and Steam-Heating Apparatus*.—Patent dated October 13, 1863.—This is a cooking apparatus and steam generator with oven and boiler arrangements united in one apparatus. The grate in the main fireplace has hollow bars and sides, and a water vessel above it, which all communicate with the boiler. Other details of relative position and adjustment are referred to in the claim.

Claim.—The fire-pots *B*, *Q*, and *U*, in combination with the steam generator *C* and the flues *T*, *K*, and *J*, commanded by suitable valves or dampers, arranged and operating in the manner and for the purpose substantially as herein described.

Also, the horizontal water vessel *F* resting on the fire-pot, and not connected with the top plate *P*, constructed and arranged in the manner substantially as set forth for the purpose specified.

Also, in combination with the water grate *D* and water vessel *F*, as described, the fire-pot *B*, surrounded by water and connected with the steam boiler *C*, operating in the manner described for the purpose set forth.

Also, placing the hot-water tank or boiler *E* in a horizontal position above the fire, and so as to form a support for or on one side of the flue *K*, in the manner substantially as set forth.

Also, the partition *S*, with its opening *m*, arranged and operating in the manner substantially as set forth for the purpose specified.

Also, using the stay rods *l* as runners or ledges for the oven shelves, substantially in the manner set forth.

No. 40,301.—ELIPHALET WHITTLESEY, of Mullica, Atlantic county, N. J.—*Gardener's Stool*.—Patent dated October 13, 1863.—The stool is attached to the foot, and carried by the same, leaving the hands free.

Claim.—The construction and use of a stool so constructed as to be attached to the foot, thus making it portable while leaving the hands free, substantially as set forth in the above specification.

No. 40,302.—SIMON WING, of Boston, Mass.—*Improvement in Photographic Card Mounts*.—Patent dated October 13, 1863.—The metallic plate is inserted into the perforation of a card of the same thickness as the plate, and an ornamental face card is fastened on the front and a fly-leaf at the back, thus placing the picture in a frame.

Claim.—The combination of a card *D* (perforated and of the same thickness as the metallic plate pictures to be inserted) with an engraved or face card *A* and fly-leaf *b*, making a card mount for metallic plate pictures, as herein shown and described.

No. 40,303.—MANUEL WITMER, of South Pekin, Niagara county, N. Y.—*Machine for Grinding and Polishing Lenses*.—Patent dated October 13, 1863.—The basin or grinding bed rotates horizontally, and the lens is suspended over it on the end of a shaft, which is supported in a frame and is held down with the required pressure by a spring. The frame is supported on a carriage, which has a reciprocating and lateral motion, by means of a crank attachment beneath, and the shaft itself has a rotating motion by the friction of a wheel located thereon, inside of a circular opening in the frame. The rim retains the water for moistening the grinding material.

Claim.—Grinding and polishing the lens upon the basin *L*, when the basin has a turning motion, and the lens has an independent revolving motion of its own, and a vibrating longitudinal and lateral motion, produced by the reciprocation of the carriage, in such a manner that said lens travels in a new part over the surface of the basin at each revolution, substantially as herein set forth.

Also, in combination with the outer channel *u*, the rim *r*, arranged substantially as and for the purpose herein specified.

Also, the combination and arrangement of the jointed frame *H*, bow *M*, carriage *E*, and adjusting spring *N*, substantially as herein set forth.

Also, the special arrangement and construction of the whole machine, substantially as described.

No. 40,304.—WILLIAM H. ANDREWS, of New Haven, Conn., assignor to Himself and CHARLES H. HURD, of New Rochelle, N. Y.—*Improvement in Window Slat Fastener*.—Patent dated October 13, 1863.—This fastener consists of a catch, fastened by screws to the frame, and bearing against the end of one of the slats with sufficient force to hold all the slats in any desired position. When the slats are closed, the spring or catch springs over the edge of the lowest one so as to hold them all shut. By pressing back the spring the slats are released, so that they may be opened at pleasure.

Claim.—The spring or catch *D*, secured to the frame *A*, in combination with the slats *B B*, as hereinbefore set forth.

No. 40,305.—OLIVER H. BLOOD and F. C. TREADWELL, Jr., of New York, N. Y., assignors to OLIVER H. BLOOD.—*Improvement in Needle Wrappers*.—Patent dated October 13, 1863.—This improvement consists in combining within the ordinary needle paper a case, formed by a wide transverse indentation of a piece of thick paper, through the shoulders of which, exposing the middle of the needle in the said indentation, the needles are driven and securely fastened, being further protected by the ordinary wrapper.

Claim.—The improved needle wrapper, having a needle holder directly combined with it, substantially in the manner and for the purposes hereinbefore described.

No. 40,306.—I. HAMILTON BROWN, of Boston, Mass., assignor to S. S. BUCKLIN, of Brookline, Mass.—*Improvement in Machine for Pegging Boots and Shoes*.—Patent dated October 13, 1863.—In this machine the knife and its rod are made in one piece, and secured to the plunger so as to avoid the jarring loose under the strain and severe blows of the hammer; the knife is actuated by a projection on the periphery of the plunger, which, traversing the slot *G*, impinges upon the spiral spring and depresses the knife rod; the same projection, in its upward motion, elevating the knife rod by impingement against the projection, and, bringing the edge of the knife against the peg strip, cut off a peg for the next downward movement, the peg strip being supported against the wall of the peg trough by a spring.

Claim.—The method herein substantially described of uniting and securing the knife rod to the plunger, whereby the knife and its rod may be made in a single piece for the purpose set forth.

Also, the construction of the knife rod and its arrangement relatively to the plunger so as to effect the bearing of the pin upon the spring, substantially in the manner and for the purpose set forth.

Also, in combination with a knife that splits off the peg upon its upward motion, supporting the peg strip by the upper wall of the peg trough and holding it there by a spring beneath it as set forth.

No. 40,307.—JOHN COOK, of Paterson, N. J., and ALBA F. SMITH, of Norwich, Conn., assignors to JOHN COOK.—*Improvement in Steam Engines*.—Patent dated October 13, 1863.—The object is to proportion the quantity of water pumped to the boiler to the amount of steam used. The stem of the steam valve and the plunger of the pump are continuous. The reciprocating motion is given to them by the eccentric rod and link, which latter embraces a pin on the plunger rod. The throw of this plunger rod is modified by means of the hand lever and its connexions, which raises or lowers the link and varies the motion of the plunger.

Claim.—First, simultaneously varying the throw of the pump plunger *M* and of the valve *K* by the single hand lever *J*, or its equivalent, substantially in the manner and for the purpose herein set forth.

Second, giving a variable throw to the pump plunger *M* and valve stem *L*, which are rigidly connected and arranged, substantially in the manner and for the purposes herein set forth.

No. 40,308.—SETH S. DREW, of Dixon, Lee county, Ill., assignor to A. D. and H. J. DREW, of same place.—*Improved Mode of Cutting Boots*.—Patent dated October 13, 1863.—The pattern will be best understood from the illustration; the seams at the sides joining the backs and fronts are dispensed with and the pattern so cut as to make the seam in front.

Claim.—The boot pattern herein described when the leg piece is cut with vertical edges, to form a vertical seam directly up the front of the boot leg as specified.

No. 40,309.—R. B. KILLEN, of Canton, Stark county, Ohio, assignor to C. AULTMAN & Co., of same place.—*Improvement in Teeth for Threshing Cylinders*.—Patent dated October 13, 1863.—The tooth has a straight screw shank entering the cylinder radially, and a flange at right angles to the shank which is secured to the periphery of the cylinder.

Claim.—A tooth for threshing cylinders having a screw shank *B*, and a foot or brace *B'*, through which a screw is passed into the wood of the cylinder, the whole being constructed and united to the cylinder in the manner and for the purpose substantially as set forth.

No. 40,310.—PHILIP POINTON, of Trenton, N. J., assignor to Himself, JAMES FORD and CHARLES LEAKE, of same place.—*Improved Crockery Stilts*.—Patent dated October 13, 1863.—This is an improvement on the said assignee's patent No. 39,356, and consists in providing a cover for the ware, with lugs or other devices to connect it to the stilts.

Claim.—The above described cover, substantially as specified for the purposes set forth.

No. 40,311.—GEORGE REHFUSS, of Philadelphia, Pa., assignor to C. S. PATTERSON, E. PINCUS, H. HART, M. MOORE, A. MITCHELL, and H. H. REED, all of same place.—*Improvement in Sewing Machines*.—Patent dated October 13, 1863.—The improvement consists in the arrangement of the parts forming the stitch, which are the reciprocating needle, the looper and the hooked loop holder; the detail of their motions cannot be given within the limits of this abstract, but the result is, that loops of the under thread are lapped over the edge of the fabric, interlocked by the upper thread, and secured by the same to the fabric.

Claim.—The combination of the reciprocating eye-pointed needle F, the looper N, and loop holder R, the whole being arranged and operating substantially as and for the purpose specified.

No. 40,312.—THEOPHILUS S. SMITH, of Lowell, Mass., assignor to Himself and ANDREW W. SMITH.—*Improved Curb Bit*.—Patent dated October 13, 1863.—The cheek bars are connected by a rigid cross-bar and are pivoted upon the bar to which the check rein and headstall hangers are attached, so that a draught upon the curb rein does not rotate the hangers or twist the straps connected thereto, nor do they interfere with the action of the curb.

Claim.—The improved curb bit as made, with the cross-bar A so applied to the cheek levers B B as to be capable of revolving the rein, in manner and for the purpose substantially as described.

Also, the bit as so made, and having an auxiliary cross-bar C arranged with respect to the cross-bar A, and extended from one cheek lever to the other, substantially in manner and for the purposes or objects as specified.

Also, the arrangement of the headstall and check rein hangers, with respect to the cheek levers B B and cross-bar A.

No. 40,313.—HENRY STANLEY, of St. Johnsbury, Caledonia county, Vt., assignor to STANLEY and TARBLE.—*Improvement in Flour and Grain Elevators*.—Patent dated October 13, 1863.—A fan and case are so located between the millstones and the cooling receptacle as to receive the meal by a spout from the former, and drive it through a spout to the latter, where it is driven up into a hollow cone, and distributed over the cooler, from which it descends to the bolt.

Claim.—First, the combination of the conducting trough or tube F and tube H with a rotary fan confined within the casing E, and operated substantially as specified—employed to elevate or convey flour or grain to the cooling or airing receptacle.

Second, in combination with the aforesaid conducting tubes F and H, rotary fan and casing E, the receiver I J M, operated as described and partially covered with gauze or other porous material, for cooling and airing the article being treated previous to passing into the bolt L.

No. 40,314.—JAMES T. WATSON, of Richmond, Wayne county, Ind., assignor to Himself and CHARLES W. WOOLIN, of same place.—*Improvement in Gate Hinges*.—Patent dated October 13, 1863.—The wing or vibrating part of the hinge is attached to the gate by means of a cap which sets over it and a set screw in the said clamp.

Claim.—Holding the wing B to its place by the cap D and set screw E, as described and for the purpose set forth.

No. 40,315.—JOHN WATSON, Jr., of Louisville, Ky., assignor to Himself, JOHN P. LACKSTEDER and FRANK LACKSTEDER, of same place.—*Improvement in Grates*.—Patent issued October 13, 1863; antedated October 2, 1863.—This consists of a box to be placed so as to rest upon the top of the grate and be supported by the arch of the flue; it extends out into the apartment, and has an inner plate which extends to the back of the flue, the effect of which is to divert the heat from its direct passage up the chimney, and cause it to circulate in the box and heat the apartment.

Claim.—The box A, provided with an open side a and a plate B, arranged substantially as shown, or in an equivalent way, so as to be capable of being applied to a grate, to form a portable or removable heat-radiating device, as herein set forth.

No. 40,316.—J. B. EDGELL, G. P. MARTIN, H. C. KELLOGG, and E. A. ALEXANDER, of Quasqueton, Buchanan county, Iowa.—*Improvement in Grain Drills*.—Patent dated October 13, 1863.—The seed slide is operated so as to reciprocate in its place at the bottom of the seed box by means of a spring and projections on the inner face of the wheel which act alternately on the pivoted lever.

Claim.—The arrangement of the vibrating laterally adjustable slide F, having V recesses d, with the bottom b, spring H, lever I, and hinged bar H, in the manner herein shown and described.

No. 40,317.—HORATIO ANDREWS, of Fredonia, N. Y.—*Improvement in Scrapers*.—Patent dated October 20, 1863.—The object of this improvement is to construct a scraper which shall be more easily managed in difficult situations, as, for instance, in stony ground. It runs near the ground on wheels, journalled on crank axles, which are also journalled under the bed of the scraper, and, to facilitate its removal when not in use, has a draught pole with points of attachment to the bed of the scraper and the draught chain.

Claim.—First, the journal boxes c at the bottom of the box A, in combination with the crank axle C and wheels B, constructed and operating in the manner and for the purpose substantially as set forth.

Second, the employment or use of the draught pole E with a forked end d' and hook f, in combination with the box A, chain d, and double tree D, all arranged and operating as and for the purpose specified.

No. 40,318.—ISAAC BANISTER, of Newark, Essex county, N. J.—*Improved Semi-Liquid Wax, for Sewing Thread*.—Patent dated October 20, 1863.—The object of this invention is to provide a material which shall be more readily applied than the ordinary warm wax, and this is done by treating pitch at not above 150° Fahr. with naphtha, in the proportion of six of the former in summer and five in winter to one of the latter, and manipulating to the consistency desired.

Claim.—The compound semi-liquid wax, when made substantially in the manner and for the purpose herein above specified.

No. 40,319.—JOHN H. BEADLE, of New York, N. Y.—*Improvement in Breast Pumps*.—Patent dated October 20, 1863.—The invention consists in the employment of an elastic hemisphere setting upon a flanged disk on the cap, the upper part of the same being furnished with a cap containing a valve, acting in combination with the diaphragm and protected by some oiled cotton in an appropriate chamber.

Claim.—First, the employment or use of the elastic hemisphere E, in combination with the flanged disk D, and cup A, constructed and operating in the manner and for the purpose substantially as herein shown and described.

Second, the valve e, constructed of a strip of oiled silk or other suitable material, and operating in combination with the diaphragm E and cup A, in the manner and for the purpose set forth.

Third, the chamber d in the disk D, arranged to contain some oiled cotton and to protect the valve e, substantially in the manner specified.

No. 40,320.—J. F. BIRCHARD, of Milwaukee, Wisconsin.—*Improved Slides for Extension Tables*.—Patent dated October 20, 1863.—This invention consists in an arrangement of double-grooved bars and slides, made with separate adjustable groove bar and bolts, securing greater immunity from becoming jammed by swelling, and giving a greater range of extension with a given length of slide.

Claim.—The combination of the bars B when double grooved as shown, with the slides A, when made with separate adjustable grooved bars a a and pieces b b, and adjusting bolts c, all in the manner herein shown and described.

No. 40,321.—JOHN BOWDLEAR, of Roxbury, Norfolk county, Mass.—*Improvement in Naval Architecture*.—Issued October 20, 1863; antedated October 14, 1863.—The nature of this invention consists in making longitudinal grooves in that part of the vessel's hull under water, tapering out at the stem and stern to nothing, so as to secure steadiness and prevent the vessel from rolling; also, constructing the ribs of the vessel and the projecting folds with reference to a grooved or furrowed sheathing.

Claim.—First, the constructing a ship's bottom with the series of peculiarly shaped grooves or channels and ridges or folds as described, said grooves or channels being undercut and tapering each way from the amidships to the stem and stern, respectively, as set forth.

Second, constructing the ribs of a vessel with the curved portion f and series of projecting folds g g, &c., for the purpose of receiving and serving as a backing to a grooved or furrowed covering or sheathing as described.

No. 40,322.—HENRY W. BOWEN, of Providence, R. I.—*Improvement in Machine for Separating from the Stalk and Twisting Woody Fibres*.—Patent dated October 20, 1863.—This improvement consists in a combination of machinery by which the fibre of wood is manipulated automatically; being, by a series of movements, twisted so as to loosen the fibres; a fibre raised so as to admit of its being gripped by the fingers and stripped from the stalk, and eventually twisting it and making it suitable for spinning or other useful purpose.

Claim.—A combination consisting of the following elements or their mechanical equivalents, viz:

First, machinery for holding and revolving the stalk, with an intermittent motion.

Second, machinery for raising the end of a fibre in order that such may be seized by the nippers or mechanism by which such fibre is to be stripped from the stalk.

Third, machinery for seizing the fibre and stripping it from the stalk.

Fourth, machinery for twisting the fibre or fibres, the whole being to operate together, substantially as hereinbefore described.

And furthermore, a combination consisting not only of the above-mentioned elements, but machinery substantially as specified, for drawing the fibre or fibres in manner and with respect to the twister as hereinbefore explained.

No. 40,323.—LEVI BROWN, of Pontiac, Erie county, Mich.—*Improvement in Beehives*.—Patent dated October 20, 1863.—The invention consists in making the orifice of the bee entrance adjustable by shutters folding laterally in the tunnel, in a hollow opaque button, by which the ventilating opening is darkened without closing, and in an embracing or overhanging frame, in which the comb slats are secured so as to hold them firmly in their relative places and distances from each other and the sides of the hive.

Claim.—First, the arrangement of adjustable shutters D, in the bee entrance C, in combination with the holes b, substantially as and for the purpose specified.

Second, the hollow opaque button *g*, in combination with the ventilating opening *f*, substantially as set forth.

Third, the overhanging parts of extensions *b'* of the top and bottom parts of the frame arranged relatively to the notched bars and to the sides of the hive, substantially as and for the purpose herein set forth.

No. 40,324.—CHARLES T. CHESTER, of New York, N. Y.—*Improvement in Dial Telegraphs*.—Patent dated October 20, 1863.—The invention consists of a circuit-breaker actuated by clock-work and controlled by a balance-wheel; in a combination of the above with the needle of a dial telegraph; in a combination of the above with dial keys; in the combination of the needle of the dial telegraph with the escapement actuated by the clock-work, shifting from the armature lever pallet of the receiving magnet to the pallet of the balance-wheel, which controls the action of the circuit-breaker.

Claim.—First, the circuit-breaker, in combination with a train of clock-work whereby it is actuated, and a balance-wheel whereby its uniform action is secured, substantially as described.

Second, the combination of the needle of a dial telegraph with a circuit-breaker actuated by clock-work and regulated by a balance-wheel, substantially as described.

Third, the combination of dial keys with a circuit-breaker driven by clock-work and regulated by a balance-wheel, substantially as described.

Fourth, in combination with the needle of a dial telegraph, the shifting escapement wheel, constantly connected with and actuated by a train of clock-work, when arranged to shift from the armature lever pallet of the receiving magnet to the pallet of a balance-wheel, controlling and regulating the action of the mechanism for opening and closing the circuit, substantially as and for the purpose described.

No. 40,325.—EDGAR CHIPMAN, of New York, N. Y.—*Improvement in Crushing Presses*.—Patent dated October 20, 1863.—Upon a bed-plate with raised ways or edges is a semi-cylindrical roller with standards rising from each end, carrying a counterpoise weight to make it roll more effectually. These ways are formed of longitudinal wedge-shaped pieces, which, sliding on their inclined edges, vary their height. To the sides of the vibrating box are bearings, which rest upon the ways and support the box from contact with the bed, if desired. Buttons on the ends of the box being rotated may support the box tilted up on its edge.

Claim.—First, the cylindrical or semi-cylindrical head or block *A*, provided with the sliding or adjustable weights *C* fitted on arms *a*, in connexion with a bed *E*, all arranged substantially as and for the purpose herein set forth.

Second, the bearings *D* attached to the sides of the head or block *A*, in connexion with the ways *F* on the bed *E*, for the purpose specified.

Third, the ways or guides *E*, constructed of two longitudinal adjustable parts *c c*, substantially as shown, in combination with the counterpoised head or block, for the purpose specified.

Fourth, the buttons *G* attached to the bearings *D*, and constructed substantially as shown, for the purpose of holding the block in an inclined position when tilted or turned on either end as set forth.

No. 40,326.—JOHN S. CLARK and WASHINGTON HARRIS, of Philadelphia, Pa.—*Improvement in Fire Doors for Stoves*.—Patent dated October 20, 1863.—The fire door is provided with a register, circular or otherwise, and openings with panes of mica, so that the latter can be exposed at will by the motion of the register.

Claim.—The arrangement of the mica in the fire or feed door of a stove provided with a movable disk or slide and suitable openings, so that the said mica can be either covered or exposed, as occasion may require, without opening the said door, substantially as described for the purpose specified.

No. 40,327.—W. J. CLARK, of Southington, Hartford county, Conn.—*Improvement in Bolts*.—Patent dated October 20, 1863.—The invention consists in swaging the square shank of the bolt by convex dies in such a manner as to force metal from the sides to the corner of the shank, to make it fill a larger hole, and one which will be readily traversed by the thread on the other portion of the bolt.

Claim.—The bolt substantially herein described, constituting a new article of manufacture, as herein set forth.

No. 40,328.—LYMAN B. CRITTENDEN, of Cincinnati, Ohio.—*Improvement in Pumps*.—Patent dated October 20, 1863.—In this pump the piston-rod is hollow and communicates with a reciprocating cylinder which traverses by guide-rods upon a lower cylinder like a sleeve. The piston-rod is prolonged some distance into the upper cylinder to which it is attached, forming an annular air-chamber, and just below its orifice is a ball-valve and seat, which, as the piston and cylinder are depressed, rises and admits the passage of water upward. On the top of the lower cylinder is a seat and ball-valve answering the same purpose as the usual lower valve in the stock of an ordinary suction pump; these ball-valves have a cover over

them to prevent displacement. Two of these pumps are operated by the attachment of their pistons to a walking-beam, and below these pumps are two others, when rendered necessary by the depth of the well, the lower one working in the same way by a yoke attachment to the upper, and discharging into a basin from which the water is removed by the upper pumps.

Claim.—First, the combination of a hollow piston-rod *C*, reciprocating cylinder *B*, and air-chamber *D*, substantially as described.

Second, in combination with the walking-beam *F*, the cylinders *B1 B2 B3* and *B4*, and hollow piston-rods *C1 C2 C3* and *C4*, with their curves and basin, substantially as described.

Third, the combination of the hollow piston-rod *C*, reciprocating cylinder *B*, and stationary cylinder *A*, substantially as described.

Fourth, in combination with the third claim, the guide-rods *e*, and collar *f*, substantially as described.

Fifth, in combination with reciprocating cylinders *B1* and *B3*, the rods *p' p'*, arranged and operating substantially as shown.

Sixth, the combination in a ball valve of a wood or metal cover, substantially as described.

No. 40,329.—G. B. DAVIS, of Chicago, Ill.—*Improvement in Filters and Coolers*.—Patent dated October 20, 1863.—The lower part consists of a water-chamber surrounded by ice, and that enclosed in a double wall. Above is a water-chamber with a central filter, through which the water passes to reach the lower chamber.

Claim.—The filtering chamber *E*, provided with the stopper *G*, of cork or other suitable substance, in combination with the ice-chamber *B*, and cold-water chamber *C*, the latter being provided with an opening *c* in the top to receive the stopper *G*, and all arranged as and for the purpose specified.

No. 40,330.—MUNSON C. CRONK and SIDNEY W. PALMER, of Auburn, Cayuga county, N. Y.—*Improved Washing Machine*.—Patent dated October 20, 1863.—This machine consists of a tub-shaped receptacle with a false bottom, having on its upper surface radial ribs; a central standard rises from this false bottom, and around it an upper disk provided with ribs is caused to vibrate in contact with the clothes which are between the ribbed disks, under the impulse of a lever suitably connected with the moving disk, which has hinged flaps for the examination and removal of clothes.

Claim.—The fulcrum *U*, the lever *H*, the collar *L*, the ribs *a a*, the buttons *P P*, the hinged sections *B B*, the false bottom *c*, the upright *D*, the whole constructed and arranged substantially as herein set forth.

No. 40,331.—JOHN DAVIS, of Alleghany City, Pa.—*Improvement in Railroad Car Couplings*.—Patent dated October 20, 1863.—The point of the tongue enters the bevelled space on the draw-head of the other car and forces aside the pivoted jaw, which returns by a spring and catches behind the enlarged head of the protruding tongue. The uncoupling is effected by unhooking the supporting cord and allowing the tongue to drop.

Claim.—The arrangement of the flexible jaws *b* and *c*, coupling tongue *m*, recess *j*, stop *g*, springs *h b* and *r*, and chambers *B a* and *w*, the whole being arranged, constructed, and operating substantially as herein described and for the purpose set forth.

No. 40,332.—JOHN DAVIS, of Alleghany City, Pa.—*Improvement in Railroad Car Brakes*.—Patent dated October 20, 1863.—The cessation of the traction upon the draw-heads brings the brakes into action and the wheels are relieved from the brakes before the drawing power of the locomotive reaches the car. The pressure of the brakes is due to the springs, and it is relieved by the draught of the locomotive upon the draw-heads. The brakes are kept off the wheels by drawing on a cord, raising a piece so that a recess is caught by a pawl. The springs act upon the brakes by means of a central wheel and connexion with the brake bars.

Claim.—The arrangement of the bars *e* and *f*, guide-plates *d*, brakes *c*, springs *s*, levers *p* and *q*, rods *j k m* and *n*, swivel plate *5*, pieces *0 7*, and braces *v*, the whole being constructed, arranged, and operating in the manner and by the means herein described and for the purpose set forth.

No. 40,333.—WILLIAM DAVIS, of Tamaqua, Schuylkill county, Pa.—*Musical Instrument*.—Patent dated October 20, 1863.—The invention consists in the combination and arrangement of two or more horizontal bows operating at right angles across two or more sets of strings, arranged with their stops and couplers, so as to produce the sounds of the harp and violin by the operation of keys set in a finger-board.

Claim.—The arrangement of two or more horizontal sliding bows operating upon two or more sets of strings, with their levers *I*, keys *E*, lifters *N*, coupler *i*, treadle *F*, and crank *G*, with fly-wheel *H*, arranged, combined, and operated as herein described, for the purpose of producing the musical sounds of the harp and violin.

No. 40,334.—C. T. DAY, of Newark, N. J.—*Improvement in Lamps*.—Patent dated October 20, 1863.—The burner of the lamp is prolonged at its lower end, forming a tube which

extends below the collar; on the outside of the tube are spiral grooves which, as the burner is rotated, are traversed by pins on the inside of the collar, and the burner thereby raised so as to expose a hole above the collar through which the nozzle of the feeder may be inserted and the lamp filled without detaching the burner.

Claim.—The combination with the burner C and socket A of the tube D, opening g, spiral grooves e, and pins f, substantially in the manner herein shown and described.

No. 40,335.—WILLIAM DENKMANN, of Philadelphia, Pa.—*Improvement in Steam Engines.*—Patent dated October 20, 1863.—The cylinder is provided with a plurality of steam-generating chambers, into which boiling water is injected in the form of spray in regular succession and in advance of the time in which the cylinder is opened to receive the steam, so as to enable each cylinder to regain its maximum heat, whereby the steam becomes superheated. The devices refer to the spray-injecting nozzle and pump, and the peculiarly constructed rotary cylindrical valve and case.

Claim.—First, combining and arranging the screens b with pumps C and steam-generating chambers B, substantially as described, for the purpose of injecting water, in the form of spray, uniformly upon the surface of the chambers.

Second, the combination and arrangement of the valve case E and valve F with the cylinder A and a plurality of steam-generating chambers B, for the purpose of transmitting the steam from the chambers into the cylinder, substantially as described.

Third, constructing the rotary valve F with the induction opening 13, in connexion with the exit openings 14 15 16 and 17, when combined with and arranged to operate in relation to the case E and cylinder A, for the purpose of supplying the latter with steam, substantially in the manner above described.

Fourth, constructing the valve F with the openings 18 19 20 and 21, in connexion with the openings 22 23 24 and 25, substantially as represented, when made to operate in connexion with the passages e f of the cylinder A and the openings 11 and 12 of the case E, in exhausting the steam from the cylinder, substantially as described.

No. 40,336.—WM. R. DINGMAN, of Stuyvesant Falls, Columbia county, N. Y.—*Improvement in Paper Presses.*—Patent issued October 20, 1863; antedated October 11, 1863.—The loose paper in bundles is deposited on the lower jaws of the press; the hand-wheel is revolved, causing the upper jaws to descend upon the paper and compress it to the degree required; the twine is then placed around the compressed bundle in the intervals between the jaws and tied; the upper jaws are attached by shanks to a sliding frame which is moved by bevel gearing from a hand-wheel.

Claim.—First, constructing and employing a press with a series of jaws or corresponding upper or nether metallic plates J J J J J and L L L L L, all disconnected, so that while the paper is being subjected to the required pressure it may be easily tied into reams or bundles.

Second, the arrangement of the standards k k k k k with their plates L L L L L, operating in combination with i i i i i with their respective plates J J J J J, substantially in the manner and for the purpose herein set forth.

Third, the combination and arrangement of the several parts and devices employed to operate the sliding frame B, or their equivalents, substantially as and for the purpose herein set forth.

No. 40,337.—EDWARD S. FARGO, of Dixon, Lee county, Ill.—*Improvement in Platform Scales.*—Patent dated October 20, 1863.—The beams supporting the platform are suspended from four levers, the large ends of which are suspended from the frame of the apparatus; the small ends of the levers are connected to the respective ends of the double lever, by means of which the effect of the weight on each lever is combined on one point, which is itself suspended from a weighted and graduated lever, where the result is read off.

Claim.—The combination and arrangement of the levers F F G G with the double or jointed levers H H', the rod d, and scale beam L, all arranged and operating substantially as and for the purpose herein delineated and described.

No. 40,338.—W. T. FRY, of Philadelphia, Pa.—*Improvement in Flasks and Bottles.*—Patent dated October 20, 1863.—A screw collar is cemented to the neck of the bottle, and upon it is screwed a cap packing down an elastic cushion on to the lip of the bottle.

Claim.—The neck A of the bottle and the cap C, both being constructed, adapted, and cemented to each other and arranged for the reception of the screw cap E, all substantially as set forth.

No. 40,339.—E. A. GOODES, of Philadelphia, Pa.—*Improved Stair Rod Fastening.*—Patent dated October 20, 1863.—This consists of two levers, each with two cam-like projections applied to the fastening of a rod for confining a narrow carpet, and the addition thereto of a bracket for confining a broad carpet.

Claim.—First, the levers B and B', with their cam-like projections c c, constructed and applied to stair rods, substantially as and for the purpose described.

Second, in combination with the said levers B and B', and their cam-like projections c c, the brackets E, applied to the stairs, substantially as described, for the purpose specified.

No. 40,340.—ANDREW HUNTER, of Solano county, Cal.—*Improvement in Grain Separators.*—Patent dated October 20, 1863.—The grain is fed from a hopper to the upper end of a shoe, or parallel shoes, which have a series of perforated riddles adapted to retain larger grain than the kind under treatment; these pass off at the end of the last riddle in this shoe, while the smaller fall through on to a riddle whose meshes are of such a size as to clean out the smaller offal which fall on to the bottom board; the grain on the riddle and that on the board are respectively diverted to the right and to the left to two receptacles; the shoes have a longitudinal reciprocating motion derived from a double crank shaft.

Claim.—The arrangement of the screens E F G H I K, with the plate P, for the purpose of more thoroughly separating the grain to be cleaned from grain of larger size, substantially in the manner and for the purpose described.

Also, affixing to the lower shoes the strips R and similar strips T in a reversed position on the bottom of the shoe under the screen M, for the purpose of guiding the grain into the hopper U, and chaff or small seed into the hopper V.

Also, the arrangements in grain-cleaning machines of trays or shoes in two or more sets in combination with the reversed cranks and connecting rods, in the manner and for the purposes set forth.

No. 40,341.—SAMUEL J. KELLY, of Pemberton, Burlington county, N. J.—*Improvement in Grates.*—Patent dated October 20, 1863.—The movable central section of the grate is supported by a flange at the front top bar, and at the back by a bevelled bar resting in a recess.

Claim.—In combination with the plates A A a a, grate bars B, and bar C, the movable section A' B, supported at front by means of the flange a', and at back by the bevelled bar D, resting in a corresponding recess E E in the bar C, when the said movable section extends completely around from the front and top to the lower and rear part of the grate, and all the parts are constructed and arranged in the manner and for the purposes specified.

No. 40,342.—JACOB KILLIAN, of Marshall, Marshall county, Iowa.—*Improvement in Portable Fences.*—Patent dated October 20, 1863.—The panels are made of three rails, and the pickets are sprung against alternate sides of the central rail and the outer rails and nailed in position. The rails are secured to the posts, to which are attached base boards to lie on the surface of the earth and steady the fence.

Claim.—The pickets D attached to the rails A A' A'', by bending the same alternately in reverse directions around the central rail A'', and securing the same alternately to opposite sides of the top and bottom rails A A' in connexion with the posts B, attached to one or more of the rails and provided with horizontal bars C or rods E, substantially as and for the purpose herein set forth.

No. 40,343.—WILLIAM KITSON, of Lowell, Mass.—*Improvement in Fire Extinguishers.*—Patent dated October 20, 1863.—Fire among the cotton reaches the train, and, exploding the charge, drives the weight from the shelf, which draws down one end of the lever, and elevating the other, removes the plug and lets on the water.

Claim.—The employment for admitting water to a cotton or other bin, to extinguish fire therein, of a valve or cock, which is opened by means of a weight which is set free for the purpose by the ignition of gunpowder or other explosive material, operating substantially as herein described.

No. 40,344.—JOHN L. KNOWLTON, of Bordentown, Burlington county, N. J.—*Improved Soring Machine.*—Patent dated October 20, 1863.—This is intended for sawing timber in curved or bevelled form, such as ship timber. The gate or sash is placed between guides attached to a graduated ring fitted between friction rollers, and with a concentric sector rack and a pinion, so that the saw while in operation may be adjusted from an inclined to a vertical position, or vice versa, to suit the kerf required. The saw is driven by a crank pulley and pitman, and a slide which is attached to the gate.

Claim.—First, the attaching of the saw-frame or sash H to a ring C, fitted with friction rollers D and turned or adjusted by means of the sector rack E and pinions F, or their equivalents, substantially as and for the purpose set forth.

Second, operating the saw-frame or sash H through the medium of the slide i, pitman J, and crank pulley K, all arranged substantially as described.

No. 40,345.—THOMAS S. LAMBERT, of Peekskill, Westchester county, N. Y.—*Improvement in Thill Couplings for Carriages.*—Patent dated October 20, 1863.—The improvement consists in the method of fastening in the bolt that passes through the eyes of the jack and gooseneck, which is by means of pivoted caps attached to the sides of the jack falling over and engaging in grooves in the bolt, or lying fair against its end to prevent its accidental displacement.

Claim.—The combination of the caps D' D, either or both, in combination with the bolt F, in the manner and for the purposes substantially as set forth.

No. 40,346.—JAMES LEWIS, of German Flats, Herkimer county, N. Y.—*Improvement in Switches for Telegraphs*.—Patent dated October 20, 1863.—This invention does not admit of a brief description. The springs, as arranged in the apparatus, are practically so many terminations of electrical conductors, and the bars serve to form connexions between said springs; the latter having been suitably and variously arranged on the surface of a cylinder, may be made to form any desired connexions between such two or more of said springs as may have been previously provided for.

Claim.—First, the barrel or cylinder 5, Figures 1, 4, and 8, and its connecting bars I to XVIII, (as many as may be necessary,) or their combined equivalent, when arranged to operate against springs *a*, *r*, *n*, and *c*, or their equivalents, in the manner and for the purpose hereinbefore set forth.

Second, the springs *a*, *r*, *n*, &c., Figures 1, 2, 3, and 10, or their equivalents, (as many as may be necessary,) when arranged to act against a barrel 5 and its connecting bars I to XVIII, or their combined equivalent, substantially in the manner and for the purpose hereinbefore set forth.

Third, the alternate arrangement of the springs *a*, *h*, *r*, *g*, *n*, *h'*, *b*, as shown in Figure 2, when used for the purpose substantially as set forth.

Fourth, the notches 13, with the inclined surfaces each side thereof on the springs *a*, *r*, *n*, &c., Figures 1, 2, 3, 9, and 10, when arranged and used substantially in the manner and for the purpose set forth.

Fifth, the mode described of limiting the upward movement and of preventing the lateral movement of the springs *a*, *r*, *n*, &c., by means of the slot 11 in the end of each spring, and the hook-headed nail 10, in connexion therewith, or their equivalent, when used substantially in the manner and for the purpose set forth.

Sixth, the combination and use of (first) the barrel 5 and its connecting bars I to XVIII, or their combined equivalent, with (second) the springs *a*, *r*, *n*, &c., or their equivalents, for the purpose substantially as set forth; together with (third) a suitable dial and index for making said barrel, connecting bars and springs, or their combined equivalent, practically available for the purpose set forth.

No. 40,347.—JOHN D. LYNDE, of Philadelphia, Pa.—*Improved Soda Water Apparatus*.—Patent dated October 20, 1863.—The aerated water and the gas in the larger fountain are admitted by distinct pipes into the measuring chamber, from which they are conducted by a pipe and a cock to charge the smaller fountain; the requisite proportion of gas in the latter is adjusted by the valve-stopper with its water and gas connecting passages.

Claim.—The measuring chamber B, the fountain D, and the improved valve *f*, all constructed and operated substantially as described; also the construction and arrangement of the cock C, as described, by means of which I am enabled to introduce through hole *h*, water or gas at a given pressure at will.

Also, the combination of the fountain D with the valve-stopper, and its use in connexion with the apparatus, constructed substantially as described, for the purpose of being filled and charged with aerated water or any liquid to be held and discharged under pressure.

No. 40,348.—CHARLES MAYER, of New York, N. Y.—*Improvement in Trunks*.—Patent dated October 20, 1863.—This trunk has triple sides and a double bottom, the sides being connected by slotted screw clamps, so that the middle part of each side slides between the inner and outer parts, and the trunk can be enlarged in height, a separate receptacle being formed between the two bottoms.

Claim.—A trunk A having triple sides *a*, *b*, *c*, and two bottoms *d* *d'*, said sides being connected by slotted screw clamps C, substantially as and for the purposes herein shown and described.

Also, the cavities *h* in the brackets of the clamps C, as described, to prevent the screws from slipping when the trunk is set.

No. 40,349.—CHARLES MCBURNEY, of Roxbury, Norfolk county, Mass.—*Improved Strap for Drop Presses*.—Patent dated October 20, 1863.—Explained by the claim.

Claim.—The improved strap or belt for drop presses composed of several plies of canvas cut diagonally and cemented together with vulcanized India-rubber, as set forth.

No. 40,350.—JAMES MCINTYRE, of New York, N. Y.—*Improvement in Fuze for Explosive Shells*.—Patent issued October 20, 1863; antedated October 14, 1863.—The fuze powder is divided from the charge by a ball-valve, which blocks the mouth of the connecting passage, and is shaken from its seat by the concussion of the projectile in the act of striking.

Claim.—A ball or block cemented upon a tube or opening communicating with the interior of the projectile, and surrounded with fuze powder, as set forth, so that the explosion of the projectile will take place when the said ball or block is shaken off its seat by the projectile striking any object, as specified.

No. 40,351.—WILLIAM MILLER, of Boston, Mass.—*Machine for Pegging Boots and Shoes*.—Patent dated October 20, 1863.—The machine is held with the lip of the tube

against the sole of the boot; the upper end of the spindle is struck, forcing down theawl, and driving a peg mad into the sole by the previous operation, while the cutter cuts off a peg from the peg wood. The spring elevates the spindle, and by a connexion the pawl is made to turn the ratchet wheel and feed the machine along the requisite distance. The elastic cord presses the follower so as to force the peg just cut against the stop, ready for the next downward stroke.

Claim.—The arrangement of the elastic cord N, and pulley O, with the tube K, and follower M, in the manner herein shown and described.

Also, the combination of the adjustable box D, and collar C, with the tube A, spindle B, and spring E, in the manner herein shown and described.

Also, the arrangement of the feed wheel J, with the tube A, and the awl, peg-driver and cutter, in the manner herein shown and described, so that said feed wheel will revolve on a plane vertical with said parts, all as set forth.

No. 40,352.—ISAAC G. MORGAN, of Ithaca, N. Y.—*Improved Capstan or Windlass*.—Patent dated October 20, 1863.—The capstan is rotated by the engagement of its toothed perimeter with a worm screw which is rotated by one or the other of the bevel wheels on the respective ends of its shaft; these wheels are engaged by a larger and a smaller wheel respectively, and the shaft of the hand-wheel is inserted in either according to the required power or speed.

Claim.—The application of the screw and endless nut, in connexion with the bevel wheels, socket-bar and hand-wheel, to a ship's capstan, boat, windlass, or rudder, or to any machine where great power is required, substantially as set forth and described; procuring power on the one hand, and velocity on the other.

No. 40,353.—OSCAR F. MORRILL, of Chelsea, Suffolk county, Mass.—*Improvement in Aero-Vapor Burner*.—Patent dated October 20, 1863.—The method of conducting the induction or supply tube over the foraminous plate by an arch, by which it is heated, and then downwardly and up into a mixing chamber, is described in the claim and represented; the heat conductor is for the purpose of keeping up the vaporizing temperature.

Claim.—The improved aero-vapor burner, as not only constructed with the fluid vaporizing conduit D, arranged so as to extend across or over the foraminous cap A, and into the chimney C, and from thence to pass downward and afterward into the air and vapor mixing chamber B, but as having that portion of the conduit which is situated immediately over the said cap provided with the tubular arch D' (or its equivalent) to project upward within the chimney, the same being for the purpose or purposes as hereinbefore specified.

Also, the improvement of the extension of the conduit D downward through the caps A, and within the air and vapor mixing chamber, in manner substantially as specified.

Also, the combination of the heater or heat conductor F with the aero-vapor burner, and the conduit D, applied thereto, substantially as described.

No. 40,354.—JOSEPH NASON, of New York, N. Y.—*Improved Steam Pressure Regulator*.—Patent dated October 20, 1863.—This device, to be influenced by the pressure of steam, is intended to actuate a damper in a flue or a valve in a steam passage so as to regulate the action of the engine. It consists of a coil of pipe, open at one end and closed at the other, and partially filled with mercury, and is connected by arms to a hub which runs freely on a shaft; a steam pipe from the boiler enters the closed end of the coil above the mercury, and its displacing pressure on the latter causes the coil to revolve and wind the strap on the volute, which motion is communicated by any mechanical device to a damper or valve.

Claim.—First, the employment of the rotating coil E, dense fluid F, connexion I, leading from the vessel in which the pressure is to be regulated, and connexion K, leading to a damper or valve adapted to control such pressure, the several parts being arranged substantially in the manner and for the purpose herein set forth.

Second, in connexion with the above described rotating coil, the employment of the volute J, or equivalent means of inducing a self-adjusting variable force opposing the pressure of the steam, substantially as and for the purpose herein set forth.

No. 40,355.—CESAR NEUMANN, of New York, N. Y.—*Improvement in Hoop Skirts*.—Patent dated October 20, 1863.—The waistband is rendered elastic by the interposition of portions of elastic material; a number of the upper courses have an expanding arrangement of sliding clasps at points corresponding to the elastic portions of the waistband.

Claim.—The employment of the self-adjusting waistband A, with elastic straps *a* *a'*, in combination with bustle rings B B', provided with sliding clasps *b* *b'*, arranged in relation to the strips *a* *a'*, and tapes D, in the manner and for the purpose substantially as shown and described.

No. 40,356.—SANDFORD W. NORTHROP, of Albany, N. Y.—*Improvement in Sawing Machines*.—Patent dated October 20, 1863.—This is intended for splitting timbers into two equal parts, the feed rollers adjusting themselves on each side at equal distances from the central

line in the direction of the saw, or at a proportionate relative distance as may be required. The feed rollers are carried by the reciprocating slides which are actuated by the crank shafts, the latter being connected by a rod by which the movements of the two sets of devices are made simultaneous and uniform.

Claim.—The arrangement of the reciprocating slides B B', carrying the feed rollers C, in combination with the rock shafts D D', arms b b', and set screws c c', and with the rod E, connecting the cranks d d', the whole constructed and operating in the manner and for the purpose substantially as shown and described.

Also, making the rod E, adjustable toward and from the centre of the rock shaft D, as described, so that the motion of the slides B B' can be brought in any desired relation toward each other, and the timber cut in two or more parts as specified.

Also, the hand screw F, in combination with the slides B B', and rock shaft D, constructed and operating as and for the purpose set forth.

No. 40,357.—JAMES A. PELTON, of Middletown, Middlesex county, Conn.—*Improvement in Moulding Artificial Teeth.*—Patent dated October 20, 1863.—The upper part of the mould is made in two separate divisions, so as to enable the teeth to be removed from the lower part of the mould, which forms the concave side of the block and is formed in one piece. The teeth are cast six on a block representing the front set.

Claim.—First, the application of a mould, substantially as above described, to the formation of a set of six front teeth, in one continuous, curvilinear block.

Second, as an article of manufacture, the production of six artificial teeth, corresponding to the six front teeth of the human jaw, with the gum attached, in one continuous, solid, curvilinear block, by means of a mould, substantially as above described.

No. 40,358.—EDWARD FAVRE PERRET, of Locle, Switzerland.—*Improvement in Watches.*—Patent dated October 20, 1863.—This is peculiarly applicable to the central or independent seconds-hand watch and consists in so connecting the seconds hand to the train that the former may be stopped without affecting the latter. The seconds wheel of the train is free to revolve around the staff on which the hand is placed excepting when a collet or clutch sliding on the staff connects the train with the latter. To stop the motion of the hand the pressure on the clutch is withdrawn by the manipulation of a forked lever.

Claim.—So combining the seconds hand with the fourth or seconds wheel that the seconds hand can be stopped and permanently held or started at pleasure, without affecting the movements of the seconds wheel, substantially as set forth.

No. 40,359.—O. M. POND, of Independence, Buchanan county, Iowa.—*Improvement in Grain Drills.*—Patent dated October 20, 1863.—The improvement consists of a stationary and a hinged lip which form the bottom of the seed box; the latter is moved by a lever which opens it to an extent graduated by a nut on the bolt. A bar with stirrers keeps the grain from clogging and is moved by the engagement of a pin on its end, with a cam groove on the hub of the wheel.

Claim.—First, the stationary lip D', and hinged lip D, in combination with the vibrating rake I, arranged and operating as and for the purpose specified.

Second, the adjusting nut C, bolt B, spring E, and nut F, in combination with the lever G, arranged as and for the purpose described.

No. 40,360.—HASKELL PREBLE, of Machias, Washington county, Me.—*Improved Washing Machine.*—Patent dated October 20, 1863.—This consists of a rotating cylinder with a corrugated periphery, and a reciprocating pressure board which is moved towards the said cylinder by means of a weighted L-shaped lever and a connecting rod.

Claim.—The arrangement of the sliding carriage D, rod E, levers F G, and weight H, with the pressure board C, and cylinder B, in the manner herein shown and described.

No. 40,361.—CHRISTIAN REICHMANN, of Philadelphia, Pa.—*Improvement in Lamp Shade Supporter.*—Patent dated October 20, 1863.—Explained by the claim.

Claim.—As an improved article of manufacture, a lamp shade supporter with springs a' b', and projections c, cut at one operation in a single piece out of sheet metal and then bent in annular form with its ends secured by the piece f, and slots e e, or other fastening which will admit of the expansion and contraction of the supporter, substantially as and for the purpose herein set forth.

No. 40,362.—SWEN ESKILL SANBORN, of Philadelphia, Pa.—*Exploding Torpedoes, Mines, &c.*—Patent dated October 20, 1863.—The hammer which strikes the percussion cap is placed in connexion with clock machinery so that the trigger is released after an interval of such duration as may be predetermined upon. The devices are to be found in the claim.

Claim.—First, the employment or use for the purpose of exploding torpedoes, &c., of an apparatus, substantially such as herein described, whereby the time when the explosion will take place can be determined and adjusted beforehand with perfect accuracy.

Second, the notched disk V, lever W, arm z, stop u, cam Y, trigger K, and hammer I, in combination with a clock movement, constructed and operating in the manner and for the purpose substantially as set forth.

Third, the application of the notched disk V to the index hand U, moving on the dial-plate C, substantially as and for the purpose specified.

No. 40,363.—LEOPOLD SANDERS, of New York, N. Y.—*Improvement in Hoop Skirts.*—Patent dated October 20, 1863.—This is a method of attaching the hoops to the tapes to prevent them from moving out of their relative position. Metallic clasps encircle the hoop and their points are thrust through the tape and clinched; the cord is passed through a hole in the clasp around the hoop and back through the hole.

Claim.—The braids or cords c in combination with the clasps D, the above parts being applied to the tapes B, and all arranged as and for the purpose herein set forth.

No. 40,364.—MILO SAWYER, of Cincinnati, Ohio.—*Improved Machine for Coating Oil-Cloth.*—Patent dated October 20, 1863.—The cloth passes from the roller on which it is wound over a cylinder which forms the bottom of the paint box, thence past two lateral spreading beams and a scraper which smooths the painted surface; it then passes over a cylinder with an elastic cushioned surface acting as a tractive force to draw the cloth past the series of operating surfaces just described.

Claim.—The application of an adhesive, elastic or tractive cylinder, which draws the cloth through the machine or under a scraper, for the purpose of coating cloth in long pieces, as herein above described, thus obviating the necessity of stretching it in frames, or cutting it in short pieces.

No. 40,365.—S. C. SCHOFIELD, of Freeport, Stephenson county, Ill.—*Improvement in Grain Drills.*—Patent dated October 20, 1863.—A pivoted frame which has an intermittent vertical motion derived from pins on the driving which comes in contact with a rear extension bar of the frame, has upward projecting pins which are armed with leather disks, and pass through the holes in the bottom of the seed box to prevent clogging; by means of a cord the driver elevates the disks against the holes and stops the feed. The ploughs are lifted from the ground by a lever which depresses the front end of the pivoted plough beams.

Claim.—First, the employment or use of the rods k attached to the vibrating frame E, and passing through the perforated plate d, and bottom of the seed box D, the rods k being provided with leathers j, and all arranged to operate as and for the purpose set forth.

Second, the arrangement and combination of the bar G with the bars n p attached to it, standards g, teeth or ploughs H', lever I, and bar s, all arranged as shown, to admit of the adjustment of the teeth or ploughs, as set forth.

No. 40,366.—EDWIN SPRAGUE, of Alleghany City, Pa.—*Improvement in Heaters.*—Patent dated October 20, 1863.—A central pipe rises through the furnace and a heating chamber around the furnace discharges into the pipe before it reaches the receiving chamber; a branch pipe from the latter to the chimney diverts the heated air from its passage upwards into the room.

Claim.—The arrangement of the pipe e, register o, chamber z, pipe y, receiving chamber k, branch j, damper r, and vessel t, the whole being constructed, arranged, and operating substantially as herein described and for the purpose set forth.

No. 40,367.—RICHARD H. SPRINGSTEAD, of Constantine, St. Joseph county, Mich.—*Improvement in Cultivators.*—Patent dated October 20, 1863.—This machine is mounted on wheels, and the two ranks of teeth are attached to standards depending from pivoted frames, which are elevated out of the working depth by means of an L-shaped lever, pivoted at its angle to a standard on the frame. The rear ploughs, or those next to the corn row, are capable of lateral motion by the longitudinal motion of their bar frame, under the impulse of a lever.

Claim.—The arrangement of the lever C, sliding bar F, its attached teeth H, and their hinged bar E, with the hinged bar I, its attached teeth, lever k i, and standard J, all in the manner herein shown and described.

Also, the arrangement with the hinged bars E I, axle C, and wheels B, of the guards b c, all operating together in the manner herein shown and described.

No. 40,368.—W. G. STERLING, of Bridgeport, Fairfield county, Conn.—*Improvement in Lamps.*—Patent dated October 20, 1863.—Surrounding the wick tube is a perforated plate under the burner; above the plate is a cap, on which is a skeleton bridge or flame spreader, the ends of which are attached to the cap, it being divided above so as to leave a narrow space in the centre for the flame to pass through; the wick tube is surrounded by a perforated tube, leaving an intervening space.

Claim.—The combination of the skeleton bridge H with the tube G, and also in combination with the disk L, to operate substantially as described.

No. 40,369.—CHARLES SÜSSNER, resident in United States; a citizen of the Kingdom of Great Britain.—*Improvement in Filters*.—Patent dated October 20, 1863.—This filtering apparatus is intended to be used under pressure, and the improvement relates to the method of cleansing the filtering materials and the plates enclosing them; it consists in the employment of movable or adjustable diaphragm plates, and in the arrangement of the filtering chambers and the inlet and outlet pipes or orifices.

Claim.—The arrangement of the two filters or filtering chambers C C' with reference to the inlet and outlet pipes extending therefrom and to the chamber B and its outlet pipe d, in the manner and for the purpose substantially as set forth.

Also, the movable diaphragms c c', made to slide in the filtering chamber for packing or loosening the filtering material, substantially as described.

No. 40,370.—EBENEZER STEVENS, of London, England.—*Improved Machine for Making Dough, Paste, &c.*—Patent dated October 20, 1863.—Patented in England December 24, 1862.—This machine is as fully described in the claim as the space will permit.

Claim.—The dough-mixer, hereinbefore described, composed substantially of prongs secured to a cranked axis or bar, so that it may be readily withdrawn from the dough when the axis is uppermost.

Also, the combination of a stationary frame to support the gearing by which the dough-mixer is worked with a removable mixing vessel, in such manner that the connexion of the gearing with the dough-mixer in the mixing vessel may be disconnected to permit the dough to be conveyed in the mixing vessel to any part of the bakery, substantially as herein set forth.

Also, the combination of the dough-mixer with a flour-hopper and flour-agitators, or their equivalent, whereby the flour thrown in mass into the flour-hopper is delivered gradually to the mixing vessel during the mixing of the dough, substantially as herein set forth.

Also, the combination of the flour-hopper and its agitators, with variable slides to regulate the discharge of flour to the mixing vessel beneath, substantially as herein set forth.

Also, the combination of the flour-hopper and the mixing vessel with a dusting board between the two, to distribute the flour into the mixing vessel, substantially as herein set forth.

Also, the combination of the flour-agitators, or other moving appurtenances of the flour-hopper, with the dough-mixer, by a removable connexion, so that the former may be thrown out of gear when the flour is exhausted, substantially as herein set forth.

Also, the combination of the dough-mixer with change gearing, so that it may be moved rapidly when the dough is thin, and more slowly when the dough becomes tough, substantially as herein set forth.

Also, the combination of the dough-mixer with duplex gear, at the two ends of the machine, so that an equal motion is communicated to both ends of the dough-mixer simultaneously, substantially as herein set forth.

Also, the combination of the driving-spindles of the dough-mixer, at the two ends of the machine, with one shifting lever, so that both driving-spindles can be simultaneously withdrawn from the dough-mixer, substantially as herein set forth.

Also, the combination of a mixing vessel, fitted with a mixer, with a jacket forming a double bottom, to permit the temperature of the mixing vessel to be varied by the application of water or steam, substantially as herein set forth.

No. 40,371.—GOTTFRIED THULEMEYER, of New York, N. Y.—*Improvement in Furnaces for Re-burning Bone-black*.—Patent dated October 20, 1863.—In this furnace there are two fireplaces, with tall retorts of a horseshoe form in their horizontal cross section, so as to expose a large thin stratum of bone-black to the influence of the fire; the retorts are arranged in two rows between the fires, rest upon the bottom plate of the furnace, and are steadied by a horizontal dividing plate midway of their length. The heated products pass through apertures in the dividing plate to a flue in the side walls, into horizontal flues to the end of the furnace, and up the inclined flues to the chimney.

Claim.—First, the horseshoe-shaped retorts C, arranged in the furnace A, in the manner and for the purpose substantially as herein shown and described.

Second, the partition plate E, when made whole or in sections, and provided with apertures b, in combination with the retorts C and furnace A, all constructed and operating substantially as and for the purpose set forth.

Third, the arrangement of one or more series of retorts C between two fireplaces B B', in combination with the particular plate E, side flues d e, and end flues f, all constructed and operating in the manner and for the purpose substantially as specified.

No. 40,372.—JOHN E. VANSANT, of Louisville, Ky.—*Improvement in Manufacturing Tin Cans*.—Patent dated October 20, 1863.—The tin is cut out and bent on the ordinary tinners' machine; it is then placed on the former, and this is inserted in the loop clamp, the edges of the tin being uppermost; the movable jaw is then caused to approach the stationary one, which laps the clamp band firmly around the tin, and the edges of the latter are soldered together.

Claim.—The stationary and movable jaws A C, provided with the loop clamp D and operated through the medium of the levers E G, or their equivalents, in combination with the former H, all arranged to operate as and for the purpose herein set forth.

No. 40,373.—EUGENE VINCENTI, of Parma, Italy.—*Improvement in Signal Apparatus for Railways*.—Patent dated October 20, 1863.—In this device there is a local battery and a travelling battery, the respective negative poles of which communicate with the earth; the travelling battery carries an alarm furnished with an electrical detent; bars or rods communicating with a conducting wire are placed at intervals along the line, so that when a train passes them they come in contact with a spring piece on the locomotive. The contact spring and signal wire receive currents from their respective batteries, travelling and local, and as long as their currents proceed from similar poles of their respective batteries the alarm is silent, but when the nature of the current in one is changed the connexion will be perfected and the alarm will sound.

Claim.—Arranging and combining apparatus, substantially as hereinbefore described.

No. 40,374.—THOMAS J. WADLEIGH, of Sutton, Merrimack county, N. H.—*Improvement in Water Elevators*.—Patent dated October 20, 1863.—The windlass has two loose drums, to each of which a bucket is attached, the rope following a spiral groove cut in the drum, each of which is provided with a gear engaging in a wheel connecting the two; a tumbling latch between the two is so arranged, in connexion with a lever on each drum, that by a continuous rotary motion the buckets are alternately raised and lowered, being emptied on reaching the top and freed to run back while the other commences its upward motion.

Claim.—The two drums C C placed loosely on the shaft B, connected by gears, as shown, and provided with levers I I, in combination with the locking device for alternately connecting the drums to the shaft, the same consisting of the pivoted button and plate H and the shoulders or projection f at the inner ends of the drums.

Also, the particular manner of operating the levers I to unlock or detach the drums from the shaft B, to wit, by means of the spiral grooves c c in the drums C, with the ropes or chains d working thereon, substantially as described.

No. 40,375.—ANTON WELLER, of Albany, N. Y.—*Improvement in Heaters*.—Patent dated October 20, 1863.—The air is admitted through a chamber around the ash-drawer and passes up between the fire-box and an enclosing cylinder into contracted tubes to the chamber under the perforated cap; the heat circulates around these tubes, dives down to a chamber in the base, and thence passes to the smoke-stack or chimney.

Claim.—The series of contracted air-passages c' c' c', formed and applied as specified, when combined with the fire-pot A, hollow base D, ash-pit B, chambers E F, cylinders H I, cap J, and flue G, all constructed, arranged, and operating in the manner and for the purposes herein shown and described.

No. 40,376.—ALONZO H. WOOD, of Boston, Mass.—*Improvement in Gas Blow-pipes*.—Patent dated October 20, 1863.—The water is contained in a reservoir in the base, through which the gas is admitted; it is heated by wires which conduct the heat downward from the flame into which they project; air is admitted to the reservoir in graduated quantities by means of a cap with holes above the collar on the reservoir.

Claim.—The employment, in a gas blow-pipe, of one or more reservoirs for containing water or other volatile substance, and provided with a means of heating the same, so as to produce vapor to commingle with the gas and flame for the purpose of intensifying the heat, substantially as described.

Also, the cap F provided with holes f, and so arranged as to control the admission of air through the holes e, in the manner and for the purpose substantially as herein described.

No. 40,377.—LEONARD AMES, of Wanbeck, Wis., and MELVILLE MILES, of Pepin, Wis., assignors to LEONARD AMES.—*Improved Paddle Wheels*.—Patent dated October 20, 1863.—To the radial arms B and C are flat boards attached, carrying a series of wedge-shaped blocks D. The outer edges of the boards and the outer and inner ends of the blocks are rounded, preventing concussion and jars usually attending the operation of the ordinary paddle wheel.

Claim.—A paddle wheel having its floats or blades constructed of a flat board C with a series of parallel blocks D attached to it at right angles to said blocks, beyond the board, being of wedge-shape in their transverse section, substantially as and for the purpose set forth.

Also, having the outer edge of the boards C rounded as shown at a, and also the outer and inner ends of the blocks D rounded as shown at b d, for the purpose specified.

No. 40,378.—DAVID BEASLEY, of Boone county, Ind., assignor to Himself, JOHN SIMMONS, and JAMES STRAIN, of Montgomery county, Ind., and by them assigned to THOMPSON C. BARTLE, of Independence, Iowa.—*Improved Sugar Evaporator*.—Patent dated October 20, 1863.—The invention consists in the combination of pans, rising and receding, each with a water pan or damper, which may be placed under it on occasion, as in drying sugar, shifting sirup, or leaving the pan temporarily empty.

Claim.—The combination and arrangement of the evaporating pans B C D and water dampers E E E, for the uses and purposes substantially as set forth.

No. 40,379.—WILLIAM DARKER, Jr., of Philadelphia, Pa., assignor to JOSIAH B. THOMPSON, of the same place.—*Improvement in Skirt Wire*.—Patent issued October 20, 1863; antedated October 10, 1863.—Providing the wire with a woven covering is the feature of the invention.

Claim.—Skirt-wire with a woven covering as a new manufacture, substantially as described.

No. 40,380.—CHESTER DUNHAM, of Bedford, Cuyahoga county, Ohio, assignor to Himself and WILLIAM HESTON, of same place.—*Improvement in Field Rollers*.—Patent dated October 20, 1863.—The invention consists of a frame supported on two rollers which have an interval between them; a rear carriage attached to the preceding by a universal joint, and supported by a roller, occupies and rolls the intervening space between the tracks of the preceding rollers.

Claim.—The rollers D D, fitted in frames C C, attached to the box A, or a suitable frame, as shown, in combination with the roller H, attached to a box G, or a suitable frame, which is connected to the frame or box A, of the rollers D, by a universal joint E, all arranged as and for the purposes herein set forth.

No. 40,381.—EDWARD M. JUDD, of New Britain, Hartford county, Conn., assignor to HUBERT L. JUDD, of same place.—*Improved Curtain Fixture*.—Patent dated October 20, 1863.—The pin has a mortise for the insertion of the end of the tape, and a shoulder against which the metallic end of the curtain-roller rests.

Claim.—The pin *d*, formed with the mortise *l*, for receiving the tape, and with the shoulder 2, for securing the metallic end *c* to the roller *a*, as specified.

No. 40,382.—THOMAS S. LAMBERT, of Peekskill, N. Y., assignor to JUSTUS O. WOOD, of Southfield, N. Y.—*Improvement in Coverings for the Head*.—Patent dated October 20, 1863.—The improvement consists in attaching a piece of sand-paper to the hat or cap as a convenience for striking a match.

Claim.—The application within a covering for the head, or to any part of wearing apparel, of sand-paper, or its equivalent, substantially as and for the purpose described.

No. 40,383.—TRUMAN G. OAKLEY and WILLIAM R. FINCH, of Brooklyn, N. Y.—*Improvement in Apparatus for Stretching Hat Bodies*.—Patent dated October 20, 1863.—The block is divided, and each half is pivoted to a point in the beam above; they are driven apart so as to stretch the hat by means of a rotating cam and returned by a spring.

Claim.—The two blocks B B, attached to the pivoted arms C C, and operated through the medium of cam H, and spring D, or their equivalents, substantially as and for the purpose herein set forth.

No. 40,384.—RICHARD A. TOOKER, of New York, N. Y., assignor to Himself and Wm. B. BRADBURY, of Bloomfield, N. J.—*Improved String-bearing for Piano Fortes*.—Patent dated October 20, 1863.—The bearing consists of a screw with a slotted head in which the string is placed, being secured therein by a nut.

Claim.—The string-bearing, composed of a screw having its head slotted for the reception of the string or strings and a screw-thread, or such slotted head fitted with a nut, for the purpose of securing the parts of the head upon the string or strings, substantially as and for the purpose herein specified.

No. 40,385.—OWEN G. WARREN, of New York, N. Y., assignor to JOSHUA BARNES, of same place.—*Improvement in Projectiles for Fire-arms*.—Patent dated October 20, 1863.—This is a chamber to occupy the rear end of the bore of the gun to contain the charge, or so much of it as is not contained in the hollow base of the ball. Its object is to sustain a part of the shock and admit of a lighter gun or heavier charge. It is to be made partially of wound wire or other mode of securing toughness, and may have a recoil-cushion behind it.

Claim.—The combination of the false powder-chamber and the hollow shot, to hold all the charge, and to sustain the greater part of the shock of the explosion, in the manner described.

No. 40,386.—JARVIS WILLIAMS, of Boston, Mass., assignor to EDWARD T. TROFITTER, of same place.—*Improvement in Grinding and Smoothing Shot and Shell*.—Patent dated October 20, 1863.—The shell is laid on a concave seat formed by two concave rollers on a sliding adjustable carriage, and is presented to the surface of a rolling wheel. The rollers are made in two pieces so as to facilitate the turning of a heavy shell horizontally.

Claim.—First, the adjustable frame F, provided with the concave rollers G G, in combination with any suitable grinding or polishing wheel D, substantially as set forth and for the purpose described.

Second, making the rollers G in two parts, capable of turning in opposite directions, substantially as and for the purpose described.

No. 40,387.—OLIVER ALLEN, of San Francisco, Cal.—*Improvement in Bomb Lance*.—Patent dated October 27, 1863.—A tube, hollowed to receive a charge of gunpowder, is fitted

to a lance-head, adapted to be fired from a gun. In the breech is inserted a fuze, the plug containing which terminates near the end of the tube against a metallic non-combustible diaphragm, through which the fuze passes into a guard-chamber within a metallic cap, constructed with a vent-hole to communicate with the bursting charge.

Claim.—The improved bomb-lance, as having the perforated fire-proof or non-combustible diaphragm *a*, and a wooden or combustible fuze plug C, placed within it and arranged and combined with the fuze D and the guard chamber *b* thereof, substantially as described.

No. 40,388.—JULIUS BAUR, of New York, N. Y.—*Improved Alloy of Copper, Zinc, and Aluminum*.—Patent issued October 27, 1863; antedated October 23, 1863.—It is designed to make an alloy of great toughness, hardness, and durability, and consists of copper, 14 to 16 parts; zinc, 10 parts; aluminum, $\frac{1}{3}$ to 3 parts.

Claim.—The within described composition or alloy produced by mixing together the ingredients herein specified, substantially as and about in the proportions herein set forth.

No. 40,389.—JOHN BRIGGS, of Louisville, Ky.—*Improvement in Locomotive Boilers*.—Patent dated October 27, 1863.—This improvement refers to the construction of the water and steam chamber, and to a device for strengthening the flat plates forming the water jacket at the back of the fire, and consists of a water and steam drum placed directly over the tubular boiler and the fire, dispensing with the horizontal crown plate, and permitting the entire occupation of the barrel with water; also, of a method of connecting the plates of the water jacket by tubular stay rods and nuts, by which a draught of air is admitted to the fire, and the plates supported and strengthened.

Claim.—First, the combination with a tubular-fired boiler of the water and steam drum C, placed directly over the tube cylinder, in the manner and for the purposes set forth.

Second, the hollow stay bolts M M, adapted and employed in the manner herein described to serve the combined purposes of strengthening the straight parts of the shell and admitting a draught of air from the front to the fire, when used in combination with the register N, and all arranged in the manner herein described.

No. 40,390.—JOHN BRIGGS, of Louisville, Ky.—*Improvement in Trip Hammers*.—Patent issued October 27, 1863; antedated October 11, 1863.—This invention consists of an adjustable device, affording a horizontal bearing for elevating the hammer in a vertical plane to any height without lateral pressure, and an improved construction of fly-wheels, which act also as cams.

Claim.—First, the employment or use of parallel rollers or bearings K, interposed between the wedges H and hammer shaft D, for raising the latter to variable heights in a directly vertical plane.

Second, the wheels G secured to the shaft E near the hammer shaft D, and serving the combined purposes of cam and fly-wheels.

No. 40,391.—JOHN BRIGGS, of Louisville, Ky.—*Improvement in Steam Boilers*.—Patent issued October 27, 1863; antedated October 17, 1863.—This improvement consists in devices for securing a large heating surface, without tubular or return flues, for attaching cylindrical boilers, and for superheating the steam in the cupola. These are accomplished by additional transverse cylinders beneath the main cylinder, connected by a coupling formed of two convex plates. The steam cupola is placed in a chamber, through which the volatile results of combustion pass to the chimney.

Claim.—First, a steam boiler composed of one or more main horizontal cylinders, with two or more transverse cylinders projecting downward into the furnace or flues, when the said transverse cylinders are formed of unequal depth or width, so as to receive more direct and full contact of the products of combustion, substantially as herein described; and this whether the said transverse cylinders be connected to the main cylinders directly by means of the coupling L L', or through the medium of water legs.

Second, the coupling L L', constructed of two convex plates, connected by bolts and flanges, and employed in the manner and for the purposes herein set forth.

Third, the transverse steam drum or cupola G, casing H, and flues I and J, arranged and employed in combination with the boilers A A, in the manner and for the purposes specified.

No. 40,392.—JOHN BRIGGS, of Louisville, Ky.—*Improved Apparatus for Condensing Steam and Elevating Feed Water*.—Patent issued October 27, 1863; antedated October 20, 1863.—This is an apparatus in which water is elevated by the force of exhaust steam, and the steam afterwards condensed by contact with the said water. A reservoir is placed in communication with the exhaust pipe of a steam cylinder, and midway of the connexion a pipe enters, which has access to the body of water from which the supply is drawn; near this latter point is a valve opening upwards, and at the other end, where it enters the exhaust pipe it is deflected in the direction of the reservoir.

Claim.—The deflected water pipe G' and steam pipe E E, when combined with the exhaust port of a steam engine, in the manner and for the purposes herein specified.

No. 40,393.—JOHN BRIGGS, of Louisville, Ky.—*Improved Apparatus for the Propulsion of Vessels*.—Patent issued October 27, 1863; antedated October 11, 1863.—The invention consists in appliances for imparting motion to a vessel by the expulsion of steam, smoke, &c., in a forced current beneath or upon the water, and in a device for giving direction to said current by which any required motion is attained.

Claim.—First, the combination of the smoke flues F F with the steam pipes I I, whereby the products of combustion from the furnace are mingled with the steam before the ejection of the latter beneath or upon the water, substantially as set forth.

Second, the revolvable or reversible pipes G G, provided with horizontal mouths H H, which may be presented in either direction, so as to eject the steam either forward or backward, as explained.

Third, the casings K K, with apertures *k k'* at front and rear in the described combination with the pipes G H, for the purposes set forth.

No. 40,394.—JOHN BRIGGS, of Louisville, Ky.—*Improved Apparatus for the Discharge of Bilge Water and the Ventilation of Vessels*.—Patent issued October 27, 1863; antedated October 20, 1863.—This apparatus consists of a cylinder, with the rear open, placed within the stern of a vessel and under water, so that the motion of the vessel through the water will tend to produce a vacuum in it, of which advantage may be taken to remove bilge-water, steam, smoke, exhaust steam, &c., by pipes connecting suitably with those matters.

Claim.—An apparatus substantially as described to be applied to the stern of a vessel for the removal of bilge-water, steam, smoke, foul air, or other fluids.

No. 40,395.—ROBERT BROWN, of Frederick, Md.—*Improvement in Harvesters*.—Patent dated October 27, 1863.—The frame of this machine, to which the tongue is attached, has a short axle on each side, on which the draught wheels revolve; within this is a swinging frame hinged to a rod on the main frame, and to the rear of the inner frame the cutter bar is attached. The guards on the cutter bar are made open below and towards the rear, so as to facilitate the discharge of anything that works in under the knife, which has clearers on its under side, to remove such matter from the slot of the guard.

Claim.—In combination with the angular side bars I of the main frame A and the inner hinged frame E, the two short wheel axles K, when constructed and arranged substantially in the manner and for the purposes herein described.

Also, in combination with the open guard fingers having spaces *m* under and to the rear of the cutting edges of the blades, the clearers *p* at the lower side of the blades, when said clearers operate above the spaces *m*, and when constructed and arranged substantially in the manner herein described.

No. 40,396.—THOMAS H. BURROWS, of Chicopee, Hampden county, Mass.—*Improvement in Explosive Projectiles*.—Patent dated October 27, 1863.—This projectile has two chambers divided by a diaphragm, into which a tube is set projecting to the rear, and perforated with holes communicating with the rear chamber, which is filled with alternate layers of explosive and inflammable material; towards the rear of the projectile are projecting flanges, which afford attachment for a packing of felt. A fuze shield is screwed into the neck of the rear chamber, which has an orifice for the fuze, and closes the rear end of the rear chamber.

Claim.—First, the arrangement within a projectile for ordnance of alternate layers of gun-powder and of an inflammable material, which is capable of setting fire to bodies on which it falls, substantially as herein specified.

Second, the perforated fuze tube B applied in combination with the two chambers *a* and *b* and the fuze shield C, substantially as and for the purpose herein specified.

No. 40,397.—EDWARD COTTY, of Washington, D. C.—*Improvement in Artificial Arms*.—Patent dated October 27, 1863.—These improvements consist in the construction of the elbow joint, whereby the position of the forearm and stump can be varied, and by this variation the fingers shut and open; in an arrangement by which the rotatory motion of the hand is secured; in the arrangement of a guide pin and spring located in the forearm, near the wrist, which is made to assist in the action of bending and stretching the arm; in the manner of attaching and guiding the pins which operate the flexor rods of the fingers under the impulse of the forearm rods in the flexure of the elbow; in the rocking arrangement of the rods in the fingers, which, on the flexure of the elbow, cause the fingers to shut; and in the construction of the fork holder, which is inserted into the palm of the hand, and consists of four elastic flaps, which clasp the end of the fork shank.

Claim.—First, the elbow joint *b b*, when constructed substantially as described hereinbefore, with the rods O O and slides *s s t t*.

Second, the ring *d* fastened to the straps *c c* surrounding and holding the lower portion *e* of hand *f*, and allowing the latter to be turned around its axis, as specified above.

Third, the spring *l* around pin *m*, in combination with cross-piece *k* and disk *i*, assisting the bending and stretching of the arm, constructed and arranged as hereinbefore described.

Fourth, the disk *i*, with the two curved guide holes *s s*, for the reception of pins *n n*, forming the bottom plate of rods *w w*, being constructed and arranged as shown in the several figures, and as described above.

Fifth, the rods *w w* moving the levers *x x* on the inclined axes *y* and *z*, being adjustable on the bottom plate or disk *i*, as described within, in combination with rods *d d* & *8 8* and levers B B, arranged as specified and for the purpose set forth.

Sixth, the construction of fork holder *u*, consisting of four elastic laps 1 2 3 and 4 and the screw 5, for the purpose specified hereinbefore.

No. 40,398.—WILLIAM E. DAVIS, of Brooklyn, N. Y.—*Improvement in Lifting Shovels*.—Patent dated October 27, 1863.—A lip or finger on the end of the handle, or at the side of the blade of the shovel, affords the means of removing the stove lid or cover.

Claim.—The new article of manufacture, substantially as described, consisting of a combined shovel and lifter.

No. 40,399.—ROYAL E. DEANE, of New York, N. Y.—*Improvement in Cooking Stoves and Ranges*.—Patent dated October 27, 1863.—The cylindrical grate has a portion of its periphery open and a portion closed, and is capable of rotation so as to expose either to the front. The top plate is supported by a bar from the rear of the range, which is hollow and protected by a circulation of water inside.

Claim.—First, the combination with a cooking range of a reversible grate, constructed and operated substantially as and for the purposes specified.

Second, the employment of an independent support for the top or hot plate, consisting of the cross-bar or its equivalent, as described, when constructed essentially as set forth, and protected by a circulation of water within, substantially as and for the purposes specified.

No. 40,400.—HENRY J. DREW, of Dixon, Lee county, Ill.—*Improvement in Platform Scales*.—Patent dated October 27, 1863.—The improvement consists in the arrangement of the cross levers which cross transversely below the platform, and which are connected to the ends of the side platform levers. The cross levers are linked where they meet under the centre of the platform to another lever, which is pivoted to a cross-bar of the frame, and at its other end is connected to the scale-beam.

Claim.—The employment or use of the levers D D E, in combination with the levers B B, arranged in connexion with the platform frame C and scale-beam F, substantially as and for the purpose herein set forth.

No. 40,401.—MINOR H. FOWLER, of New York, N. Y.—*Improvement in Lanterns*.—Patent dated October 27, 1863.—This is an improvement in the method of attaching the lamp to the lantern, which is by spring-pieces attached to the base, and which catch over an inwardly projecting flange on the lower edge of the lantern, thumb-pieces projecting through slits in the base for the purpose of detaching the said catches. The peculiar construction of the spring-piece is described in the first claim.

Claim.—First, the spring catches I, constructed in the manner herein shown and described by slitting a strip of metal longitudinally, employing one side as the spring attachment, turning the other side up into form for the thumb-piece and bending the connecting end into form for the catch or latch, so that the said latch, thumb-piece, and spring attachment may all be formed of a single piece of metal, as specified.

Second, the combination of the springs I I, cylinder *e*, and rock shaft G, with the band D, and slot or opening *g*, all in the manner herein shown and described.

No. 40,402.—GEORGE GARDNER, of Clarksville, Hunterdon county, N. J.—*Improvement in Veneer Cutting Machine*.—Patent dated October 27, 1863.—The bolt from which the veneers are to be cut is keyed in a frame or gate, which slides in oblique guides, bringing the edge of the bolt against the knife, which is set in a stock on the edge of a sliding table.

Claim.—The combination of the gate F sliding in a vertical plane between oblique guides *h i*, and carrying the bolt H; the bed or table B sliding horizontally on the side-pieces *a a*, the stock C, formed with a throat *e*, and attached to the forward edge of the table B; and the knife D fixed obliquely in the stock C; when all the said parts are constructed and arranged in the manner and for the purposes herein shown and explained.

No. 40,403.—N. H. GRAY, of Cleveland, Ohio.—*Improvement in Steam Ploughs*.—Patent dated October 27, 1863.—The spades are attached in pairs on the ends of arms by means of (in each case) a stationary stud on the arm and by keys; they receive their effective motion, which is a downward entering and a backward lifting motion, by means of a compound crank composed of disks and interposed wrists; each of the latter operating an arm and its two attached spades, and so arranged that they work consecutively and constantly offer an equal resistance. A drag-rake or harrow trails behind with independent teeth and adjustable weight.

Claim.—First, the arms H' and blades K and M, when constructed and arranged substantially as specified.

Second, the combination of the arms H', as constructed with the compound crank figure 5, as and for the purpose herein set forth.

Third, attaching the arms H to the crank wrist by means of the stationary stud I, removable cutter K, and wedge L, or their equivalents, substantially as shown.

Fourth, the drag V V, constructed and operating substantially as specified.

No. 40,404.—T. F. GRIFFITH, of Dansville, Livingston county, N. Y.—*Improvement in Churns*.—Patent dated October 27, 1864.—This churn has two vertically reciprocating dashers attached by rods to the rocking lever, which is pivoted to the standard on the churn lid. The rod attached to the lower perforated dasher passes through a mortise in the upper dasher, which is concave at its lower side, having perforations at right angles to the line of its motion reaching from the concavity within to the chamfered edge on its upper side.

Claim.—The combination of the head F, constructed as shown and described, with the head G, and operating as and for the purposes set forth.

No. 40,405.—JOHN HAFER, of Bedford, Pa.—*Improvement in Stoves*.—Patent dated October 27, 1864.—A number of hollow cones are placed one above another in the radiator above the fire-pot; they are closed at their vertices, and in them the heat circulates and escapes around their edges.

Claim.—The combination of two or more right or oblique cones, the vertex of each cone being closed within the radiator, arranged substantially as described for the purposes set forth.

No. 40,406.—THOMAS HANSBROW, of Sacramento, Cal.—*Improved Amalgamator*.—Patent dated October 27, 1863.—This consists of an annular pan with a central cavity, through which passes a vertical shaft having a rotating arm, on which are vertical shafts, having on their lower ends mullers acting on the bottom of the pan, and above, on the same shafts, pinions, which gear into a circular stationary rack on the pan, thereby giving a planetary motion to the mullers.

Claim.—First, imparting to the muller or mullers C a sun and planet motion, in the manner and for the purpose substantially as described.

Second, the central stationary toothed rim E, in combination with the rotary arbor D, pinions i mullers C, and pan A, all constructed and operating substantially as and for the purpose set forth.

Third, the set screw d in combination with the hinged pan A, constructed and operating as specified.

No. 40,407.—C. H. HAYWARD, of Stoneham, Middlesex county, Mass., and DANIEL E. HAYWARD, Melrose, Middlesex county, Mass.—*Improvement in Treating Waste Rubber*.—Patent dated October 27, 1863.—Explained by the claim.

Claim.—Boiling waste rags of fibrous material and rubber in an acid or alkali, for the purpose of destroying the tenacity of the fibres of the rags, so that the rubber may be re-ground, and so that the material will not blister when re-used, as described.

No. 40,408.—DANIEL E. HAYWARD, of Melrose, Middlesex county, Mass.—*Improvement in Boots and Shoes*.—Patent dated October 27, 1863.—Explained by the claim.

Claim.—A new article of manufacture, an India-rubber sole for boots and shoes that is to be sewed thereon, and that has a channel therein for the stitches to lie, and be protected in said channel, being formed along the edge of the sole by the moulds in which it is formed and vulcanized, substantially as herein described.

No. 40,409.—DANIEL E. HAYWARD, of Melrose, Middlesex county, Mass.—*Improved Heel Stiffener or Counter for Boots and Shoes*.—Patent dated October 27, 1863.—Explained by the claim.

Claim.—A new article of manufacture, a heel stiffener or counter of India-rubber and its compounds which is shaped and vulcanized in the mould in which it is formed, and made and operating as set forth for the purpose described.

No. 40,410.—HENRY HOLCROFT and C. S. SMITH, of Chester Valley, Pa.—*Improvement in Safety Attachments to Railroad Car Trucks*.—Patent dated October 27, 1863.—This is intended to obviate danger in case of the breaking of an axle, and consists of boxes partially enclosing the axle and wheel to sustain the broken parts in case of fracture.

Claim.—The employment or use of the shells or cases E attached to the truck A, and provided with the boxes F, and arranged in relation with the wheels B and axles C to operate as and for the purpose herein set forth.

No. 40,411.—ROBERT HOSKIN, of Brooklyn, N. Y.—*Improved Composition for Oil Cloth*.—Patent dated October 27, 1863.—Explained by the claim.

Claim.—A composition or plaster for oil cloth, composed of whiting and ochre, or equivalent or analogous substances, in about equal proportions, and mixed to the proper or desired consistency with glue dissolved in milk.

No. 40,412.—C. F. HUNTER, of Adrian, Lenawee county, Mich.—*Improvement in Devices for Holding Bits in their Sockets*.—Patent dated October 27, 1863.—The bit having the usual notched recess on its shank is inserted into the socket and there retained by a pivoted dog which is engaged with the notch or retracted by means of a sliding ring which rocks it on its centre.

Claim.—A socket for holding boring tools, constructed to operate with a sliding ring working in combination with a dog as described, said dog having inclined planes as above described and set forth.

No. 40,413.—MOSES JOHNSON, of Colbrook, Coos county, N. H.—*Improvement in Invalid Bedsteads*.—Patent dated October 27, 1863.—The adjustments of this bedstead consist in making it in two parts divided by a horizontal plane through the middle of the posts, so that the upper or sacking part lies upon the lower or post part, each being provided with side and end rails and head and foot boards, the latter being hinged to the lower part so as to fold back when the upper portion is in its place. The sacking runs clear through from head to foot, and an auxiliary portion is attached to an elevating frame supported by cord from a staple in the ceiling; an arrangement of suspensory cords and shaft admits of the bedstead being tipped or raised.

Claim.—The invalid bedstead as made with the divided posts A, and the separate mattress and sacking frames arranged and combined therewith, substantially as specified.

Also, in combination with the bedstead so made, the auxiliary head and foot boards B C, applied to the mattress frame, in the manner and so as to operate substantially as described.

Also, the mode of making and applying the sacking, viz., in two parts p q, one being applied to the elevator frame, and the other being fixed to the sacking frame and extending underneath the elevator D, and hooked to and connected with the head board d, as and for the purpose specified.

Also, the combination of the tipping hooks t t, or their mechanical equivalents, with the bedstead, and their windlass or shaft F, the whole being constructed and so as to operate substantially as described.

No. 40,414.—WILLIAM H. KELLY, of Lysander, Onondaga county, N. Y.—*Improvement in Cultivator Teeth*.—Patent dated October 27, 1863.—The tooth is made of a piece of an irregular hexagonal shape, and is then bent into a curved form and set on the standard with one of its sharpened points downward.

Claim.—The tooth, or, as it is sometimes called, the point, of the form and shape and constructed essentially as above described.

No. 40,415.—A. KLINE, of Philadelphia, Pa.—*Improved Stopper for Jars and Bottles*.—Patent dated October 27, 1863.—The central core has a conical shape, and on it is an annular elastic ring which sets upon a shoulder in the neck of the jar; by forcing down the core the ring is packed tightly against the sides of the opening.

Claim.—A stopper for fruit jars and bottles, consisting of the core A, and the ring a', constructed and arranged together in combination, substantially as described and set forth.

No. 40,416.—WILLIAM KLOENNE, of New York, N. Y.—*Improvement in Device for Releasing Animals from Stalls*.—Patent issued October 27, 1863; antedated October 1st, 1863.

—The halter ring of each horse is engaged by a sliding bolt which traverses in a socket and is actuated by a spring; the upper ends of the pins on these bolts pass into slots in a sliding bar which runs the length of a whole range of stalls, and by which bar the detaining bolts of the whole series are withdrawn simultaneously. Each bolt is capable of being withdrawn by pulling on the rear end of it.

Claim.—The arrangement of a spring bolt A, moving in a case B, and catching in a socket C, in combination with the slotted bar F and pin b, constructed and operating as and for the purpose described.

Also, the combination of a series of bolts A with pins b, and slotted bars F, provided with a handle G, substantially as and for the purpose specified.

No. 40,417.—PETER LOCKIE, of Rochester, N. Y.—*Improvement in Artificial Legs*.—Patent dated October 27, 1863.—The invention consists in providing the foot of an artificial leg with a tension device attached to the foot and to a spring suspended from a bridge-piece in the shell of the leg; this tension is so adjusted as just to support the foot, to avoid the unnatural motion and noise of the more rigid attachment.

Claim.—The employment or use of the adjusting lever or standard f fixed to the foot, in combination with a suitable spring or springs, for the purpose of regulating the position of the foot B, substantially in the manner specified.

No. 40,418.—A. S. MARKHAM, of Monmouth, Warren county, Ill.—*Improvement in Corn-Planters*.—Patent dated October 27, 1863.—As the machine progresses the first wheels smooth the ground, the cutters cut through the weeds in the path for the share to turn the seed furrow. The depth is regulated by adjusting the forward part of the frame. The nicks in the lids of the seed boxes enable the driver to range the rows so as to drop the seed in check rows. The other devices are sufficiently described in the claim.

Claim.—First, the wheels H, secured in the front part of the frame G, by means of adjustable axes e, in combination with the rotary counters S and furrow shares T, all arranged to operate as and for the purpose herein set forth.

Second, the particular arrangement of the furrow shares T with the coulters, to wit: the former having an oblique position relatively with the latter, so as to leave a V-shaped space between them, in which the seed-conveying tubes P' are placed.

Third, providing the plates O with perforations m, substantially as shown, to admit of the escape of dust and fine foreign substances from the seed-boxes M.

Fourth, the self-adjusting scrapers F attached to the shaft D, which is provided with a lever E, and all arranged as and for the purpose set forth.

Fifth, providing the lids A* of the seed-boxes M with notches a*, substantially as and for the purpose specified.

No. 40,419.—Suspended.

No. 40,420.—JOHN W. MIDWINTER, of Port Washington, Monmouth county, N. J.—*Improved Tar Mops*.—Patent dated October 27, 1863.—The threads are bound in a wisp and the pointed end of the staff entered at the centre between the threads, tightening the band; the end of the staff is then battered down and a nail carrying a washer is driven in endways.

Claim.—The mop, when constructed and its parts arranged relatively to each other substantially as specified.

No. 40,421.—THOMAS J. MAYALL, of Roxbury, Mass.—*Improved Pontoon*.—Patent dated October 27, 1863.—A sheet of water-proof fabric having been formed into the required shape for the body of the boat, a frame corresponding to the gunwale of the boat is inserted; from this depend swinging frames transversely of the boat, which extend to the bottom, and are sustained by longitudinal braces. The water-proof covering is attached by pins or cords which pass through the grummet-holes near its margin.

Claim.—First, the distending boat-frame and one or more swinging frames, the whole being constructed to operate together, as described.

Second, in combination with the main and swinging frames constituting a distending frame, operating substantially as set forth, the longitudinal braces, arranged as herein described, for stiffening the bottom, as specified.

No. 40,422.—OREN E. MILES, of Aurora, Kane county, Ill.—*Improvement in Wagon Standards*.—Patent dated October 27, 1863.—This is a cast metal standard having lips around its base which partly embrace the bolster and are partially let into the same, being further secured by bolts which pass through the bolster. The upper ends form sockets for wagon-bows.

Claim.—First, a cast metal upright for vehicles, adapted to be secured against lateral and end movements upon the bolster, substantially in the manner and for the purpose herein set forth.

Second, the specific arrangement of the several parts in the base of the said upright, the lip or flange being adapted to project down on both sides and at the end, and the part a' being let into the top of the bolster B at some distance from the end, all as herein set forth.

No. 40,423.—PARIS MILLS, of Ridge Farm, Vermillion county, Ill.—*Improvement in Corn Planters*.—Patent dated October 27, 1863.—The frame is supported upon a roller extending across the machine; the cutters preceding the share are runner-shaped and pass through deep grooves extending around the periphery of the roller; behind the share the seed is dropped from a box in which is a slide moved by a lever and accompanied by hooks which extend downwards nearly to the slide and prevent the seed from being drawn from the discharging holes; concave-faced covering rollers complete the operation.

Claim.—First, the combination of the grooved roller B, cutters C C, seed-boxes F F, provided with the slide G, and the covering rollers M, all arranged as and for the purpose set forth.

Second, the hooks I, secured to the inner side of the seed-boxes F, and arranged in relation with the seed-slide G, as and for the purpose herein set forth.

No. 40,424.—GEORGE C. NELSON, of Petersham, Worcester county, Mass.—*Improvement in Plating Machines*.—Patent dated October 27, 1863.—The crown-piece is introduced between the holding-bar, and the plate and the bar is brought down on to it. The series of jaws are manipulated consecutively to press the material into the succession of grooves into the plating former, so as to make the fold: when this is accomplished the jaws are retracted and the frame is raised, which admits of the withdrawal of the plated crown.

Claim.—The combination of the plating-former and its series of plating jaws, the whole being arranged in manner and so as to operate together, substantially as described.

Also, the combination of the elevating frame, or its equivalent, with the plating jaws and their former.

No. 40,425.—SOLOMON E. OVIATT, of Richfield, Summit county, Ohio.—*Improvement in Sleds*.—Patent dated October 27, 1863.—The sled knees are made of cast-iron and have sockets in which the ends of the benches are fitted, also a rebate for fitting the fenders, and a flange to set over the inner upper edge of the runner.

Claim.—The use of cast-iron sled knees, having pipe sockets in the upper parts thereof for the reception of the ends of the sled beams, when constructed and arranged substantially in the manner and for the purposes herein described.

No. 40,426.—JULIUS A. PEASE, of New York, N. Y.—*Improvement in Shirt Bosoms*.—Patent dated October 27, 1863.—Explained by the claim.

Claim.—A shirt bosom, water-proof enamelled, with springs to keep it in position, substantially as and for the purpose described.

No. 40,427.—WORDEN P. PENN, JACOB GEISS, and JACOB BROSIUS, of Belleville, St. Clair county, Ill.—*Improvement in Harcesters*.—Patent dated October 27, 1863.—The devices consist of a worm-wheel and segmental rack for raising and lowering the main frame of the machine, and a device for raising the platform or outer end of the finger bar, consisting of a screw rotating in bearings in a bracket, and screwing through a socket piece, wherein the arm of the caster wheel is made adjustable by being applied in either of different cavities provided therefor.

Claim.—First, in combination with the main frame, the segmental plate a and screw b, when arranged in respect to said frame, to each other and to the main shaft, as shown and described, for the purpose specified.

Second, the screw O, in combination with the bracket I, and division board or bar, and the socket N, for the purpose of raising and lowering the platform and out end of the finger bar, as shown and described.

Third, the socket N with a broad out end, and with cavities therein, for the purpose of shifting the position of the arms P of the caster wheel R, by which the out end of finger bar and platform can be raised or lowered, as shown and described.

No. 40,428.—WM. H. POLLEYS and DAVID D. POLLEYS, of La Crosse, Wis.—*Improvement in Plumb Levels*.—Patent dated October 27, 1863.—This consists of a weighted wheel rotating on steel pivots within the stock of a level. The perimeter of the wheel is graduated on each side of the point at which it stands at rest on a level, and which point is marked 90°, corresponding with the straight line P on the socket. When used as a plumb the figure 0° will correspond with the straight line.

Claim.—The wheel figure 3, with the socket, constructed, arranged, and operating in the manner set forth.

No. 40,429.—GEORGE W. POWELL, M. D., of Chinese Camp, Tuolumne county, Cal.—*Improved Fire-proof Paint*.—Patent dated October 27, 1863.—Dissolve borax and alum, of each one and a quarter pound, in boiling water, and agitate for four or five days to evaporate the acid; evaporate to dryness, pulverize, and add ten pounds of white lead; add turpentine and linseed-oil for the requisite consistency.

Claim.—The compound for making fire-proof paint in the manner herein described.

No. 40,430.—WILLIAM RAYNOR, of Brooklyn, N. Y.—*Cancelling Postage Stamps*.—Patent issued October 27, 1863; antedated October 14, 1863.—This consists of a lower die and a corresponding upper matrix, between which the stamp to be cancelled is inserted. The lower die has the name in relief, and the date in changeable types in the centre, also two holes in the face; the upper has sunken letters opposite the name on the lower, an elastic pad opposite over the changeable type, and two dowel pins to match the corresponding holes in the die. Two rings having the names of the months and numerals upon them, respectively, surround the plunger, and are rotated so as to expose the required name and figure prominently in front of the apparatus.

Claim.—A cancelling stamp, composed of a pair of outer rings, provided with male and female letters, within which rings are arranged a punch or punches, a series of changeable types, and an elastic pressure pad, all operating together as herein set forth, for the purpose specified.

No. 40,431.—JOHN H. REIMKASTEN, of Franklin Grove, Lee county, Ill.—*Improvement in Method of Attaching Carriage Wheels*.—Patent dated October 27, 1863.—The spindle is secured within the boxing by means of a divided nut which screws upon the base of the conical spindle within the opening at the inner end of the boxing; an inwardly projecting annular bead on the nut engages with a groove in the periphery of the collar on the spindle.

Claim.—A divided nut, constructed and applied substantially as described, to confine the arm C within the box A, when used in combination with screws or bolts d, to secure the divided nut upon the collar, and with a screw d', to prevent the turning of the nut within the box.

No. 40,432.—EDGAR D. SEELY, of Brookline, Norfolk county, Mass.—*Improvement in Percussion Cap Primer*.—Patent dated October 27, 1863.—This is a magazine for containing caps for priming fire-arms, and for presenting them successively to the nipple. It consists of an oblong box with a cover and with ribs, under which the flanges of the caps are slipped as they are impelled by the follower and spring cord.

Claim.—First, combining the cap chamber with a sliding cover or lid instead of the case heretofore used, whereby the instrument is improved and its cost diminished, as set forth.

Second, combining the follower and its spring cord with the cover, so that the cord will not interfere with putting the caps in broad end downward, as described.

Third, placing the ribs, against which the flanches of the caps rest, at the bottom instead of at the top or open side of the chamber, whereby flanchéd caps are prevented from flying or falling out when the magazine is open, as described.

Fourth, in combination therewith, cutting off the rear ends of the ribs for holding the flanchéd caps, to admit the introduction of the flanches under the ribs, as described.

Fifth, combining two magazines together by the use of a common cover, having a ring for suspending the instrument, as described.

No. 40,433.—JOHN R. LEES, of Philadelphia, Pa.—*Improved Lubricator*.—Patent issued October 27, 1863; antedated October 10, 1863.—The steam being admitted to the cup when it is shut off from the engine fills the cup, and condensing, the water displaces a certain amount of oil which is conveyed to the working surfaces. There are two valves at the upper and lower ends, respectively, of the adjustable rod which works in a tube, of which the ends are the seats; these valves admit the steam which closes the atmospheric valve, and oppose its return from the cup when it is condensed.

Claim.—First, the construction of a grease cup to effect the supply of grease in a measured quantity every time the steam is shut off from the engine, by displacing such quantity from the cup by a quantity of water resulting from the condensation of steam which is admitted to the cup by the act of letting on steam to the engine, substantially as herein described.

Second, the valves F and G and tube D, applied in combination with each other and with the cup, substantially as and for the purpose herein specified.

Third, the tube D and nut a, applied substantially as described, to serve as a means of connecting the different parts of which the cup is composed.

Fourth, the atmospheric valve H, applied in combination with the cup, substantially as and for the purpose herein specified.

Fifth, the independent screw socket E, applied in combination with the cup, substantially as and for the purpose herein set forth.

No. 40,434.—L. M. SEVERANCE, of Dixon, Lee county, Ill.—*Improvement in Platform Scales*.—Patent dated October 27, 1863.—This is an improvement on the inventor's former patent of November 11, 1862, and consists in the construction of the levers which connect the platform levers with the scale beam. The cross-levers are fitted between cross-bars, and suspended by links on pins, the inner ends of the levers being connected by a link, and the outer end of one having a bar attached, from the recurved end of which the inner ends of two platform levers are suspended; the outer end of the other lever is connected to the ends of the other two platform levers and with the scale beam.

Claim.—The two levers E E, in combination with the two pairs of levers B, all arranged and connected to each other and to the scale beam G, substantially as and for the purpose herein set forth.

No. 40,435.—B. F. SMITH, of Unity, Benton county, Iowa.—*Improvement in Grain Drills*.—Patent dated October 27, 1863.—A toothed frame is attached at the rear end of the tongue, and drags below the seed-box, which is attached by a draught-bar to the tongue, and is mounted on wheels. The seed-box is divided by partition plates with an opening between them provided with a slide, and the seed-wheel with cells in its periphery rotates in the chamber below the partitions, being driven by a cam on the shaft.

Claim.—First, the shaft B provided with seed sills b, in combination with the slide D, partition plates I I provided with holes g, and vibrating plate G provided with spurs e, and operated through the medium of the cam H, all arranged as and for the purpose set forth.

Second, the combination of the tooth frame J, with draught-bar M attached, and the draught-pole K, when arranged as shown, and applied to the machine to operate in the manner as and for the purpose herein specified.

No. 40,436.—OREN STODDARD, of Busti, Chautauqua county, N. Y.—*Improvement in Fruit Baskets*.—Patent dated October 27, 1863.—The basket is made of splints, which are secured at bottom between disks of wood, and at their upper end where the rim of the basket is formed are retained between hoops, of which one is higher than the other, so as to make a rabbet, in which the corresponding portion of the cover, which is similarly made, may fit within or upon.

Claim.—The herein described construction of basket and cover, wherein one end of the splints are secured between disks, and the other end between hoops, which form a rabbet in the top of the basket, and a corresponding rabbet in the cover, which fit together, as described, and as a whole, having the form and structure herein set forth, and operating as and for the purposes specified.

No. 40,437.—MELZER TUELL, of Penn Yan, Yates county, N. Y.—*Spokeshaves*.—Patent dated October 27, 1863.—The cutter is two-edged, and attached by its ends in the opening in the stock; it is surrounded by a gauge plate, which is pivoted at its ends in the stock, and adjusted relatively to the edge by means of set screws, so as to cut any required fineness on either edge, or with one more "rank" than the other.

Claim.—The stock A and cutter B, when constructed and arranged as and for the purpose set forth.

Second, the adjustable gauge C, when made and used as specified.

No. 40,438.—WILLIAM F. VEBER, of Perrysburg, Wood county, Ohio.—*Improved Wood-sawing Machine*.—Patent dated October 27, 1863.—This is a cross-cut sawing machine, and designed for being moved lengthwise of the log or tree to be cross-cut. The machine is operated by means of pawl levers which engage ratchet wheels on a shaft, which is geared to a pinion on a shaft carrying a four-armed crank wheel, which conveys a reciprocating movement to the saw sash, which runs on friction rollers. The weight of the saw is counterbalanced by means of a cord attached thereto, and carried over a pulley to a lever.

Claim.—First, the levers E, pawls F, and ratchet wheels D, in combination with the crank wheel J and saw sash P, the several parts being constructed and operating as and for the purpose specified.

Second, the rollers T T, in combination with the saw sash P, when arranged and operating as and for the purpose described.

Third, the break pulley V, and lever W, in combination with the cord Q and frame O, for the purpose herein set forth.

No. 40,439.—CHARLES C. WARWICK, of Philadelphia, Pa.—*Improvement in Lamp Burners*.—Patent dated October 27, 1863.—The perforated cylinder enclosing the space around the wick tube is capable of vertical movement, so as to be depressed and expose the wick-tube.

Claim.—Having the perforated ring D, which encloses the wick tube, made separate and independent of the burner, and arranged to operate as herein shown and described, so that said ring can be lowered at pleasure, and the wick tube thus exposed on all sides, all as set forth.

No. 40,440.—EDWARD WHITNEY, of Albany, N. Y.—*Improvement in Horse Collars*.—Patent dated October 27, 1863.—The collar is protected by the interposition of plates between the hames and the collar, so that the pressure of the draught is evenly distributed over the latter.

Claim.—The arrangement of a metallic plate placed on each side of the shoulder-piece and, connected either to the collar or hames, substantially as and for the purpose specified.

No. 40,441.—M. H. BARNES, of Peoria, Ill., assignor to Himself and A. S. NORTON, of same place.—*Improvement in Slide Valves for Steam Engines*.—Patent dated October 27, 1863.—This improvement is applicable to that class of slide valves in which there is a secondary plate or balancing valve, between which and the usual seat the main valve works, and consists in regulating the balancing pressure by changing the exposed area of the apertures in the seat of the balancing valve.

Claim.—Regulating the pressure and friction of a slide valve upon its seat, by changing the area of atmospheric exposure of the working surface of the balancing valve, substantially as herein described.

No. 40,442.—JESSE D. COTTRELL, of Milford, Worcester county, Mass., assignor to EBENEZER D. and GEORGE DRAPER, of same place.—*Improvement in Looms*.—Patent dated October 27, 1863.—This improvement consists in a delivery mechanism or let-off movement for delivering the yarn from the warp roller by connecting the latter, by means of the combination recited in the first claim, with the lay; it also consists in an arrangement for operating the warp guide so that its downward movement will decrease rather than extend its bearing surface on the warps. When the lay moves back the tension of the warp depresses the warp guide, causes the depressor rod O to trip the pawl I out of action with the pinion G, and the radial arm F will drop a tooth, more or less according to the strain upon the warp guide. When the lay moves forward the lever K elevates the pawl, and the arm which carries the pinion rotates the gear wheel C and delivers the warp or yarn.

Claim.—The combination for operating the train of gears of the warp beam, the same consisting of the radial arm F and its pinion G, the lever pawl I and its retainer N, the retaining pawl M, the depressor O, and the rocker lever K, the whole being applied to the lay and the warp guide, substantially as and so as to operate as described.

Also, the combination and arrangement of the two arms or levers u x and their pitman Z, with the spring s and the warp guide D. Also, the combination therewith of the toothed racks, or their equivalents, to receive and hold the pitman and admit of its adjustment, for the purpose set forth.

No. 40,443.—LUCIUS CRANDALL, of Plainfield, N. J., assignor to Himself and ELIPHALET LYON, of New York, N. Y.—*Improvement in Crutches*.—Patent dated October 27, 1863.—The improvements in this crutch are sufficiently described in the claim, and consist in hollowing the piece grasped in the arm-pit, so as to make it fit its location better than a piece of even thickness; in the method of clamping the covering of the upper piece between the upper and lower sections of the same; in the adjustable sleeves of the hand-hold, clamped by a segmental tapering bush; and in the socket, ferrule, and screw, of the foot or point of the crutch.

Claim.—First, an arm-piece A having its centre part f made narrower than the ends g, as and for the purpose shown and described.

Second, the combination of the two jaws *k i* of an arm-piece *A*, as described, so that when the jaws are drawn together, they take in and fasten the covering of the arm-piece.

Third, the hollow moulded or cast hand-piece *B*, with sleeves *b*, as shown and described.

Fourth, the employment or use of a segmental tapering bush *c*, in combination with the sleeve *b* of the hand-piece *B* and with the staff, all constructed and operating in the manner and for the purpose substantially as specified.

Fifth, the cast or moulded socket *D*, bottom-piece *E*, and screw *d*, in combination with the staff or staves of a crutch, constructed as and for the purpose set forth.

No. 40,444.—ISAAC GOODSPEED, of Norwich, Conn., assignor to Himself, A. A. GOOSPEED, E. S. STEBBINS, and A. NEWBURY, of same place.—*Improved Cork Cutting Machine*.—Patent dated October 27, 1863.—This is an improvement on the patent of Goodspeed, Stebbins & Goodspeed, dated June 4, 1861. The knives are confined to the pattern by clamps, and the latter pivoted to a lever which vibrates on studs attached to the disk, and adjusted by set screws. The knives are fed to the cork, and the latter held to the pattern by the motion of a lever connected to two rods which move up the knives and said holder, respectively, and which are limited in their longitudinal motion by stops.

Claim.—First, the clamps *L L* arranged on pivots *k k*, and applied to the rotating and sliding cutters directly opposite to the pattern, substantially as and for the purpose herein specified.

Second, combining the clamps with the disk *G*, or its equivalent, by means of levers *M*, studs *N*, and set screws *j j*, substantially as and for the purpose herein specified.

Third, combining the back spindle *E* with the disk or slide *H*, with which the cutters are connected, by means of a lever *P*, whose operation is so controlled by stops as to operate the said spindle and the said disk or slide, substantially in the manner herein specified.

No. 40,445.—JOSEPH W. HOPKINS, of Brooklyn, N. Y., assignor to Himself and JAMES CLAYTON, of same place.—*Improvement in Valves for Steam Engines*.—Patent dated October 27, 1863.—This consists of an independently oscillating hollow disk, the lower part of which is made in the form of a convex slide valve, and moves in a corresponding concave seat within the steam chest; axially with the said disk vibrates a winged valve which is attached to its spindle, and operated by cams from the machinery; the wing vibrates in a segmental cavity in the disk, and alternately opens and closes the exhaust channels. The alternate opening and closing of the supply ports is by means of the disk.

Claim.—The combination with the steam chest *B* and the valve *D* of the independent oscillating hollow disk and slide valve *B A*, all constructed and operating together in the manner herein shown and described.

No. 40,446.—LEBEUS W. LATHROP and WILLIAM P. DE SARMO, of Philadelphia, Pa., assignors to Themselves, WILLIAM H. MYERS, and JOHN McDOWELL, Jr., of same place.—*Improvement in Sewing Machines*.—Patent dated October 27, 1863.—This belongs to that class of machines which use two spools without rewinding in making the lock or shuttle stitch, in which the needle loop is caught by a hook and carried around the under spool; the loop is then liberated from the hook, and the hook takes the next loop round in the same way, drawing the first loop tight. The slotted and grooved cup contains the lower spool, and has a hook attached on its outer edge; to the back of the cup is attached the under take-up, the pin of which, at the appropriate time, is thrown out, and liberates the needle from the hook. The spool-case holder is a vibrating fork working in the slotted groove of the spool case, and is operated by a cam in the shaft.

Claim.—First, the slotted circular grooved cup *E*, with hook *F* permanently attached to the outside surface, constructed and operating substantially as described.

Second, the under take-up *J*, which revolves with the cup for extending the loop and liberating it from hook *F*, constructed and operating substantially as described.

Third, the reciprocating holder *O O' O''*, arranged and operating substantially as described.

Fourth, the combination of the slotted circular grooved cup *E* and its hook *F*, with the spool case and frame *L N*, the under take-up *J*, and the reciprocating spool-case holder *O O' O''*, the whole constructed and operating substantially as described.

No. 40,447.—JOSEPH W. HOPKINS, of Brooklyn, N. Y., assignor to Himself and JAMES CLAYTON, of same place.—*Improvement in Pump Valves*.—Patent dated October 27, 1863.—These oscillating winged valves are separated by a partition, and vibrate in a limited arc within the chamber, provided with segmental abutments which limit the motion of the valves in that direction. The box has three ports, one for supply and the other two communicating with the pump cylinder; the former has two branches to the two valves, respectively, which have orifices in them; the motion of the valves is effected by the motion of the piston.

Claim.—The arrangement of the independent oscillating valves *B B'*, constructed as set forth, with the partition *b*, case *A*, and the several water-ways, all in the manner herein shown and described.

No. 40,448.—JAMES PINE, of Troy, N. Y., assignor to Himself and WALTER A. WOOD.—*Improvement in Harvesters*.—Patent dated October 27, 1863.—A principal feature of this invention consists in dispensing with the use of shafts for the support of the driving gear by means of a vertical bar attached to the frame, and supporting the gear wheels upon pins or studs. A rigid and a hinged bar diverge from the vertical bar, the former passing to the finger bar, and having the drag hook attached, and the latter affording attachment for the tongue; the two bars carrying a lever and an arm, respectively, whereby the cutting apparatus is raised or lowered.

Claim.—First, a vertical frame *A* for carrying and supporting the gearing, substantially as described.

Also, hanging the gear wheels upon stationary pins or studs attached to the vertical frame *A*, so that I may dispense with all rotating shafts and journal boxes or bearings, substantially as described.

Also, in combination with the vertical frame *A*, the hinged bar *J* and the rigid bar *G*, both serving the purpose herein described and represented.

Also, in combination with the hinged and rigid bars connected therewith, the former carrying the tongue and the latter the drag hook *w*, a lever on one and an arm on the other, so that the cutting apparatus may be raised up, held up, and supported or let down at pleasure, substantially as described.

No. 40,449.—WILLIAM W. STEVENS, of Portland, Cumberland county, Me., assignor to NATHANIEL P. RICHARDSON & CO., of same place.—*Improvement in Coal Sifter*.—Patent dated October 27, 1863.—The sieve has two projecting handles, the shafts of which lie upon the projecting flange of the annular rim on the top of the barrel; the motions in a horizontal plane or by partial rotation by the handles give the required results.

Claim.—The combination of the two motions—reciprocating, rotary and rocking motion—as applied to a coal sifter, the first motion being obtained by moving the handles *A A* from left to right or right to left, the second motion by turning the handles *A A* up and down, giving the rocking motion.

No. 40,450.—GEORGE L. WITSILL, of Philadelphia, Pa., assignor to Himself and CLEMENT CRESSON, of same place.—*Improvement in Churns*.—Patent dated October 27, 1863.—The reservoir is a section of a cylinder or wedge-shaped, and is set point downwards on a supporting frame; it has a dasher with perforated sides of similar shape, but smaller, which vibrates back and forth inside of the reservoir; a perforated board extends from end to end of the churn between the sides of the dasher. The plug which holds the dasher to its point of vibration affords the means of removal of the buttermilk.

Claim.—First, the reservoir *A*, perforated dasher *D*, and detachable perforated board *F*, the whole being formed, arranged, and operated substantially as and for the purpose specified.

Second, the pin *E*, so fitted to the reservoir as to form a plug, and arranged in respect to the vibrating dasher as described, for the purpose set forth.

No. 40,451.—J. T. ALDEN, of Cincinnati, Ohio.—*Improvement in the Preparation of Yeast*.—Patent issued November 3, 1863; antedated October 20, 1863.—Crushed barley is steeped in water at a certain temperature. After drawing off the liquor, water of a higher temperature is added to the malt. These two liquors are then boiled with hops, to which is added red wheat flour. On being cooled to a certain temperature, bean or pea flour is added, and when still further cooled the mass is mixed with fresh yeast; the temperature is maintained the same for forty-eight hours, at the end of which corn meal or millers' shorts are added until the mass is of the consistency of soft dough, which is pressed through the meshes of a sieve in numerous threads, which are then exposed to a current of warm air and thoroughly dried.

Claim.—The process herein described of making or preparing granulated yeast, wherein the substance is reduced while in a plastic condition to a finely divided or granulated state, and in that form is dried and preserved for use, substantially as set forth.

No. 40,452.—T. F. ALLEN, of Canandaigua, N. Y.—*Improvement in Car Springs*.—Patent dated November 3, 1863.—Metallic conical springs are constructed with spiral coils, having bearing surfaces at given distances from each other, which admit of closing and opening, by which the coils are protected and the spring is graduated.

Claim.—The construction of a metallic conical car spring with spiral coils *B*, which have bearing surfaces and given spaces between them which close and open, and by means of closing and opening the spiral coils are protected and the spring is graduated, substantially as described in my specification, and for the purpose set forth.

No. 40,453.—PETER ANDREW, of Cincinnati, Ohio.—*Improvement in Shield for Ordnance*.—Patent dated November 3, 1863.—This invention is principally designed as a protection for field artillery and gunners. It consists of a portable shield enclosing the gun in front, and provided with ways on which the gun-carriage may recoil freely.

Claim.—The elliptic, funnel-shaped, protecting shield, substantially in the manner and for the purpose herein set forth.

No. 40,454.—THADDEUS BEACH, of New York, N. Y.—*Improvement in Sugar Mould Carriages*.—Patent dated November 3, 1863.—The object of the invention is to clasp or unclasp a double series of sugar moulds; and this is accomplished by attaching a double series of jaws to appropriate bars, whose simultaneous motion, through the intervention of a rack near the end of each bar and a pinion between, secures the result.

Claim.—The combination with jaws D D', set in the same horizontal plane of bars C C', for communicating simultaneous motion to the respective jaws, racks a a', attached to the said bars, and the pinion E, for imparting motion thereto, when all the said parts are constructed and arranged in the manner and for the purpose herein specified.

No. 40,455.—ALONZO T. BOON, of Galesburg, Knox county, Ill.—*Improved Paddle Wheel*.—Patent dated November 3, 1863.—The object of this invention is to cause the paddles to feather as they enter and leave the water, and to provide an improved method of securing the bucket to the arms of the wheels, so that they can be readily detached; this is accomplished by causing the buckets, of peculiar construction, to be retracted or otherwise from the centre of rotation of the wheel by a curved bar of a suitable shape.

Claim.—The combination of the double-sided buckets A A with the arms B B, of my improved paddle wheel, by means of the metallic side plate c c, embracing loops g g, and wedged elastic strips E E, or their equivalents, substantially in the manner and for the purpose herein set forth.

Also, in combination with the above feathering automatically, the pivoted sides b b of my improved paddle buckets A A, in the revolution of the wheel by means of projecting rods or pins m m upon said pivoted sides, and a suitable curved bearing surface G upon the side of the vessel, substantially in the manner and for the purpose herein set forth.

No. 40,456.—JOHN BRAISLIN, of Burlington, N. J.—*Improvement in Tile Machines*.—Patent dated November 3, 1863.—This machine consists of a pug mill with a vertical axis and spiral arms, working and driving down the clay through an opening into a recess or chamber beneath, where it is driven periodically, by a horizontally moving plunger, through dies in the end of the box, of such a shape as it is desired the tile should assume.

Claim.—First, the reciprocating plunger M, space N, and forming plate P, in combination with a mixing reservoir, and the opening m, at the bottom of the same, the whole being arranged and operating substantially as and for the purpose herein set forth.

Second, the mixing reservoir C, and vertical shaft F, with its plate k, in combination with the said opening m.

Third, the vertical cranked shaft F, rod H, lever I, rod K, and plunger M, the whole being arranged for joint action, substantially as set forth.

Fourth, the opening x, at the rear of the plate P, in combination with the bar Q, and block y, or other equivalent movable cover for the said opening.

No. 40,457.—ALEXANDER M. and JOHN J. D. BRISTOL, of Detroit, Mich.—*Improved Dish Washing Machine*.—Patent dated November 3, 1863.—This improvement consists in an arrangement for washing dishes which are exposed between two reciprocating frames armed with brushes, and with openings of such a shape as to drive the water against the plates; also of rotary brush disks, between which the dish is raised, and elevating plates by which the dish is raised to be grasped and removed.

Claim.—First, the reciprocating plates K K, arranged substantially as shown, within a suitable box or reservoir C, and provided with brushes L, substantially as and for the purposes herein set forth.

Second, providing the brush plates K K with openings d, having bevelled edges e, substantially as shown, for the purpose of throwing the water upon the dish by the action of the plates as specified, and freeing the hair of the brushes from grease.

Third, the rotary brush disks or wheels T T, arranged as shown within the box C', and provided with points or arms n, having bevelled edges, to operate as and for the purpose set forth.

Fourth, the plates M V, placed respectively between the brush plates K K and brush disks or wheels T T, and connected, substantially as shown, with the levers P P, for the purpose herein described.

No. 40,458.—JOHN CLARK, of Canandaigua, N. Y.—*Improvement in Cars for Carrying Petroleum*.—Patent dated November 3, 1863.—The claim is perfectly explicit.

Claim.—The application of a tank D, under the platform A of a railroad car, substantially as and for the purpose specified.

No. 40,459.—G. S. CORWIN, of Riverhead, Suffolk county, N. Y.—*Improved Boring Machine*.—Patent dated November 3, 1863.—The improvement consists in placing the crank shaft of the bevel wheel in a frame, which is adjustable vertically so as to admit of change of wheels to vary the speed of the drilling tool to suit varying requirements of work; also in the method of operating the drill frame, which is lowered to the work by depressing the treadle, and raised to its former position by elevation of the treadle thus freeing the spring.

Claim.—First, the vertically adjustable frame H, in combination with the bevel gear E F and bore spindle D, constructed and operating as and for the purpose specified.

Second, the combination of the treadle e, pawl p, bent lever click r s, ratchet wheel q, and vertically sliding rod L, with the bore spindle D, all constructed and operating in the manner and for the purpose substantially as shown and described.

No. 40,460.—C. B. DARROW, of Orland, Steuben county, Ill.—*Improvement in Pans for Evaporating Sugar, &c.*—Patent dated November 3, 1863.—The separate divisions of the pan are united by a cavity at alternating ends of the division plates, which cavity is made by a depression in the bottom of the pan.

Claim.—A sugar pan provided with cavities c at or under the alternating ends of the partitions a, substantially as shown and described.

No. 40,461.—W. C. DAVIS, of Cincinnati, Ohio.—*Improvement in Covers for Baking Pans*.—Patent dated November 3, 1863.—The cover is corrugated so as to diminish its liability to crack and to increase the efficiency of the embers.

Claim.—The corrugated Dutch oven cover A B b b', substantially as set forth.

No. 40,462.—JOHN B. EDMONDSON and JAMES CARSON, of Manchester, Lancashire, England.—*Apparatus for Dating Railroad and other Tickets*.—Patent dated November 3, 1863.—In this machine the inking tape is dispensed with, and an inking roller is combined with the press frame, the swing frame, and the striker, so that by the movements of the latter the roller will be brought in contact with the face of the type preparatory to the imprint. The India-rubber pad behind the type allows the latter to yield when the striking plate is pushed forward with undue violence. The roller is inked after every operation by contact with the flannel which receives its ink as it exudes from a slot in the ink receptacle.

Claim.—The improved dating or stamping press, as not only provided with a swing frame m and a striking plate or striker l, (to operate together and with the type as described,) but as having an inking roller e applied to the press frame and striking plate, substantially as and so as to be operated by the latter as specified.

Also, the combination and arrangement of the elastic cushion or pad d with the type or printing surface, and the striking plate l, applied to and so as to be operated by a swinging frame m, substantially as specified.

Also, the improved dating press as made, not only with the swing frame m, the striking plate or striker l, and an inking roller e, arranged and combined together and with type or its equivalent, as specified, but as provided with an inking apparatus or surface for inking the type, so arranged as to be passed over by or in contact with the roller during its movement away from the type.

Also, the inking apparatus, as made of the porous or absorbent bed or inker k, the ink receptacle A, and the screw i, constructed, arranged, and combined together, and so as to operate substantially as specified.

No. 40,463.—SIMON A. CUMMINS, of Vienna, Warren county, N. J.—*Improvement in Reaping Machines*.—Patent dated November 3, 1863.—This improvement is designed to deliver the grain falling upon the platform at the side of the machine by a number of reciprocating rakes whose teeth project through and work in slots in the table or platform; the rakes are operated by eccentrics on a common shaft geared to the reaper. The rakes in their back motion are dropped with their points only flush with the top of the platform and project to make their effective stroke.

Claim.—First, the vibrating toothed beams B B, operating as set forth, in combination with the slotted table A, constructed and arranged in the manner described.

Second, in combination with the slotted table A, constructed and arranged as described, the column C, with its eccentrics p p, for giving motion to the vibrating toothed beams B B, in the manner and for the purpose set forth.

Third, the curved end of the toothed beams B B, moving upon the pin n, in combination with spring r, ratchet q, and catch q', or the equivalent thereof, for giving the required motion to one end of the toothed beams B B, substantially as set forth.

No. 40,464.—WARREN L. FISH, of Newark, N. J.—*Improvement in Guides for Sewing Machines*.—Patent dated November 3, 1863.—An India-rubber roller is so arranged and applied to the guide as to press the whole width of a tuck or hem to keep it smooth and free from puckers.

Claim.—The arrangement of an India-rubber roller in combination with the gauge plate k, substantially as herein specified.

No. 40,465.—JOHN D. FLANSBURGH, of Philadelphia, Pa.—*Improvement in Cooking Stoves*.—Patent dated November 3, 1863.—The door, or side plate, of an oven has a transparent plate and a protecting shutter, so that, by opening the latter, the condition of the contents of the oven may be observed.

Claim.—The application to the oven of a cooking stove of a transparent plate *a'*, in combination with a protecting outside shutter *a*, the same being arranged to operate in the manner described, for the purposes specified.

No. 40,466.—ANDREW C. FLINT, of Boston, Mass.—*Improved Curtain Fixture*.—Patent dated November 3, 1863.—This is a spring wire attached to the bracket and coiled around the roller so as to partially support it and have a frictional bearing upon it while rotating in one direction, while it has a tendency to uncloze when the roller is rotating in the other direction.

Claim.—The combination of the spring with the roller and its bracket, substantially in manner and so as to operate therewith as specified.

No. 40,467.—JOSEPH A. FORSMAN, of Jamestown, Greene county, Ohio.—*Improvement in Grinding Mills*.—Patent dated November 3, 1863.—The burrs are set in a vertical plane, and the casing is so hinged as to be laid back to expose the stones for dressing. Each stone is trammed by means of set screws, and the grain from the hopper conveyed by a spiral flange through the eye of the nether stone.

Claim.—So hinging the curbs or cases B C which contain the burrs as that, by the removal of the fastenings and the conveyor case and spindle, they may be opened outwardly in opposite directions, thereby bringing the faces of the burrs into a convenient position for dressing, substantially as described.

Second, the combination of the hollow cylindrical box *m*, set screws and thrust bolt *r*, constructed and arranged substantially as and for the purpose described.

Third, the combination of the adjustable or pivoted driver *d* with the tram screws *s'*, by which the runner or revolving burr is easily trammed or set at right angles to its axis of motion, substantially as specified.

Fourth, the combination and arrangement of the conveyor *z*, curb or case B, tram screws *s*, and the stationary burr B', when constructed and arranged substantially as described, and for the purposes set forth.

No. 40,468.—SAMUEL GARDINER, Jr., of New York, N. Y.—*Improvement in Constructing Hollow Projectiles*.—Patent dated November 3, 1863.—The shell, to form the central chamber, is attached to a mandrel, and the metal forced into the mould around it.

Claim.—Constructing shells for fire-arms by forcing the metal into the mould around an internal shell B supported on a mandrel F, all as hereinbefore described.

No. 40,469.—MELVIN A. GEMUNG, of Granville, Licking county, Ohio.—*Improved Burglars' Alarm*.—Patent issued November 3, 1863; antedated October 25, 1863.—This is a spring and clock-work alarm connected by a spring cord to the window sash or door, so that, on the opening of either, the cord is released by the slipping of the detaining hook from its catch and the alarm started.

Claim.—First, the combination of the bridge, with the alarm and bell, and hole W in bell for the purpose of winding up the alarm, substantially as and for the purpose specified.

Second, the combination of the attachment F G and H, in combination with pin K and plates I and J, and hooks D, substantially as and for the purpose specified.

No. 40,470.—WILLIAM GERHARDT, of New York, N. Y.—*Improvement in the Manufacture of Steel*.—Patent dated November 3, 1863.—The wrought-iron is brought to a welding heat in a crucible, the oxide of iron or of manganese is added, and the molten cast-iron poured over all into the crucible or melting reservoir; the partial carbonization of the wrought-iron and the partial decarbonization of the cast-iron take place at once—the proportions determining the quality of the result.

Claim.—The method of converting wrought and cast iron into steel in the manner and for the purposes above specified.

No. 40,471.—ENOS TURNER, of Chicago, Ill., assignor to WILLIAM S. JOHNSTON, Jr. of same place.—*Improvement in Anti-friction Roller Journal Bearings*.—Patent dated November 3, 1863.—This is a circular system of rollers to surround the journal bearing; each roller rotates loosely on a shaft which has its bearings in an annular plate; the friction rollers rotate against the inner surface of the casing, whose flanges provide an annular groove for them to revolve in.

Claim.—The combination and arrangement of the metallic frictional casing B, the rollers *a*, the supporting shafts *c* and circular frames C, when said shafts are provided with shoulders to prevent the frames C from pressing against the ends of the rollers, and are provided at each end with heads countersunk in said frames C, and when the perforations through said rollers are made larger than the shafts *c*, so that the friction may be thrown off from the said shafts *c* and come upon the casing B and the journal, substantially as herein specified and shown.

No. 40,472.—WILLIAM GERHARDT, of New York, N. Y.—*Improvement in Purifying Iron and Steel*.—Patent dated November 3, 1863.—A case or tube containing oxide of iron, or other

decarbonizing material, is introduced into the mass of molten metal and the contents expelled into it by a plunger in the tube; sulphur in the metal may be removed by adding ingredients to the oxides, which will make a gaseous combination with sulphur, or cause it to enter into a combination with the covering flux. Modifications of construction are mentioned in the specification.

Claim.—The method herein fully described and for the purposes specified.

No. 40,473.—THOMAS H. GIRARD, of Batavia, Genesee county, N. Y.—*Harness Pad-Former or Mould*.—Patent dated November 3, 1863.—This is a hinged mould and pressure block, between which the cushion of the pad is pressed into the required shape.

Claim.—The harness pad-former or mould, substantially as and for the purpose described.

No. 40,474.—VICTOR GIROUD, of New York, N. Y.—*Improvement in Marine Clocks*.—Patent dated November 3, 1863.—This has reference to the means for winding the clock and setting the hands without the use of a detached key or manipulation between the dial and glass. It consists of a lever, pawl and ratchet, by which the clock is wound, and a spindle and gear wheels by which the hands are set, the movement being attached to the dial, the latter as well as the glass frame being hinged to the case.

Claim.—First, the pawl lever I, pawl *c*, and ratchet wheel H, applied to the winding shaft *c*, and in combination with a hinged dial to which the works are attached, substantially as herein described.

Second, the spindle *m*, pinion *l*, and knob *m'*, applied in combination with the gearing of the hands and with the hinged dial, substantially as and for the purpose herein specified.

No. 40,475.—THOMAS W. GODWIN, of Portsmouth, Norfolk county, Va.—*Improvement in Lubricators*.—Patent dated November 3, 1863.—This consists of two chambers and two screw valves with threads running in opposite directions, so that as the upper valve is opened to let the oil flow from the basin to the lower chamber, the valve closing the orifice leading from said chamber is closed; and, as the orifice is opened to admit steam to the machinery, the valve above is closed to prevent the escape of steam.

Claim.—The arrangement and operation of a screw-plug valve F, having threads *a a'* running in one direction, and a combined feeding cup and grinding valve A A', having threads *c c'* running in the opposite direction, in connexion with an oil-cup, substantially as shown and described.

No. 40,476.—LOUIS GOLDSMITH and NOAH GREGORY, Jr., of Goshen, Orange county, N. Y.—*Implement for Catching Swine*.—Patent dated November 3, 1863.—This consists of a pair of tongs or jaws, one at the end of a pole and the other pivoted to it and closed by pulling on a cord. A ratchet on the former and a pawl on the latter hold them in their closed position.

Claim.—The two jaws A A', formed of the hooks *a a'* and shanks *c c'*, connected by the pivot *b*, in connexion with the rack B, pawl C and rope G, and with or without the pole F and gauge or set screw D, all arranged substantially as and for the purpose herein set forth.

No. 40,477.—JAMES GREENE, of Providence, R. I.—*Improvement in Box for Case-hardening*.—Patent dated November 3, 1863.—This box has an opening in the centre exposed to the fire, so that the contents may be more equally heated; and it is further provided with a hinged bottom, so that, after the contents have been sufficiently heated in contact with the bone dust or other matter, they may be suddenly precipitated into the water or other liquid.

Claim.—A box for case-hardening, constructed with a central opening or flue and a movable discharging bottom, all as herein shown and described, for the purpose set forth.

No. 40,478.—ISAAC HICKS, of Hartford, Washington county, Wis.—*Improved Stump Extractor*.—Patent dated November 3, 1863.—This consists of a bridge frame provided with pulleys, &c., and mounted on wheels, of which those under the hinder part of the frame are fixed, and those under the forward end are so connected by a lever to the frame that the latter can be made to rest upon them or upon the ground. The chain which is wrapped around the stump or stone is made of plates connected by joints.

Claim.—The frames J, provided with wheels *o*, and attached as shown to one end of the bed-pieces *d* of the framing A, in combination with the fixed wheels *n* at the opposite ends of the bed-pieces, and with the hook I, composed of a series of plates *h* connected by joints, as and for the purpose specified.

No. 40,479.—E. S. HIDDEN, of New York, N. Y.—*Improved Deck Light*.—Patent dated November 3, 1863.—This consists of a faucet so applied as to draw the water from the chamber above the glass when the latter is not flush with the upper surface of the deck.

Claim.—A deck light for iron-clad vessels, provided with a faucet C applied to it in the manner substantially as shown, to admit of the water being withdrawn from the chamber above the light at the under side or below the deck, and without opening the glass or light, substantially as herein set forth.

No. 40,480.—S. L. HILL, of Williamsburg, Kings county, N. Y.—*Improved Machine for making Boxes*.—Patent dated November 3, 1863.—This consists of a former, corresponding in shape and size to the interior of the boxes and with a surrounding casing in which set screws are placed to hold the sides of the boxes against the former while being fastened.

Claim.—The employment or use, in the manufacture of wooden boxes, of a form *a*, provided with thumb-screws *d*, or their equivalents, and operating in the manner and for the purpose substantially as shown and described.

Also, the combination of the form *a* with the support *b* and the thumb-screws *d*, or their equivalents, substantially as and for the purpose set forth.

No. 40,481.—REUBEN HOFFMEIER, of Dover, York county, Pa.—*Improvement in Harvesters*.—Patent dated November 3, 1863.—The improvements are in the frame, which is made open behind and before, and partially encloses one driving wheel, while the other is journaled outside; the tongue is capable of being placed on either side of the first mentioned wheel, according to whether it is to be used as a reaper or a mower; the crank shaft lies in a strengthening flange cast on the gear frame, and the finger beam is enabled to turn on its own axis to fold it away for transportation, or to adjust the vertical presentation of the fingers.

Claim.—First, the main frame and gear frame *A A*, constructed as described, open at each end, when used in combination with shafts, gearing and double driving wheels, arranged and operating substantially as and for the purposes specified.

Second, the flange *a*, cast or formed upon the gear frame for the combined purposes of strengthening the latter and protecting the crank shaft *E*, as hereinbefore explained.

Third, the movable tongue *K*, adapted to be attached to the frame on either side of the wheel *B*, and employed to support or raise the inner end of the beam.

Fourth, attaching the shoe to the drag bar by a transverse swivel joint to permit the finger beam to turn on its axis to elevate or depress the points of the fingers, or to fold the beam against the frame for transportation, when combined with bracing guides *h*, substantially as herein described.

No. 40,482.—BENNET HOTCHKISS, of New Haven, Conn.—*Improvement in Blowers*.—Patent dated November 3, 1863.—The blades in the blower are held between two rims, are slightly recurved backwards, and taking the wind from the inside of the wheel, drive it into an annular air chamber to the outlet.

Claim.—The blades *a a*, when the same are of the form and set relatively to each other in the manner described, and combined with an air chamber *H*, inlets *F*, and outlet *I*, substantially as and for the purpose specified.

No. 40,483.—SETH C. HOWES, of South Chatham, Barnstable county, Mass.—*Improvement in Planes for Beading, Moulding, &c.*—Patent issued November 3; antedated October 24, 1863.—The degree of projection of the plane bit is regulated by a screw and nut, a point on the latter engaging in a notch in the under side of the bit; the latter is firmly held by a screw clamp in the throat, which is curved so as to increase in size and favor the discharge of the shaving.

Claim.—As an improved article of manufacture a moulding plane, provided with the adjusting nut *C*, screw *D*, the holding clamp *H*, screw *J*, and curved throat *a*, all constructed and operating together, as herein shown and described.

No. 40,484.—O. R. HYDE, of East Cleveland, Cuyahoga county, Ohio.—*Improvement in Device for Oiling Thread in Sewing Machines*.—Patent dated November 3, 1863.—To the needle arm a box is attached, in which latter is an oiled sponge; the thread traverses through slots in the sides of the box in contact with the sponge.

Claim.—As an improved article of manufacture a sewing machine oil sponge box, made as herein shown and described, with an opening *a* to receive the sponge, and clamps *d d* to bind the box against the needle arm and close the said openings, all as set forth.

No. 40,485.—FRANK G. JOHNSON, of Brooklyn, N. Y.—*Improvement in Water Meters*.—Patent dated November 3, 1863.—The invention consists in measuring the water passing through a large pipe by passing a relatively proportionate amount through a small tube, the water in the latter passing through, and that in the former around the meter.

Claim.—The peculiar arrangement and combination of the crooked pipe *F* with the meter *C I*, substantially in the manner and for the purposes set forth.

No. 40,486.—RICHARD W. JONES, of Syracuse, N. Y.—*Harness Snap*.—Patent dated November 3, 1863.—A spring is laid in a recess in the hook, which operates a pivoted dog to close its nose against the point of the hook.

Claim.—The arrangement and combination of parts specifically as described, and substantially as and for the purposes set forth—that is to say, the spring *B* laid into a recess *E* in the hook, without being applied thereto, and held in place by the pivot of the lip *A*, all as herein described.

No. 40,487.—THOMAS B. LAMB, of Hamilton, Gratiot county, Mich.—*Improvement in Percussion Cap-Holder*.—Patent dated November 3, 1863.—The cap-holder consists of two notched revolving plates united at their centres, the portions of plate between the notches being flexible and forming studs, on which the caps are placed. The cap plate rotates in a casing which completely encloses it, except at a notch where the caps are placed in and removed. A box and lid for holding an extra supply of caps occupies a portion of the interior of the holder.

Claim.—First, the combination of the revolving circular plate *C C'* with studs *c c c c*, the case *A A A' A'*, and opening *d*, the wheel operating substantially as and for the purpose herein set forth.

Second, in combination with such revolving circular plates with their studs and the said case, the box *B* with its cover *B'*, substantially as herein described.

Third, the peculiar manner of forming the studs by means of two circular plates fastened together in the centre, having notches cut out around their circumference so that one-half of each stud is formed from one plate, and the other half from the other plate, and they are capable of adjusting themselves to the size of the percussion cap that may be placed upon them, substantially as and for the purpose herein described.

No. 40,488.—SAMUEL K. LIGHTER, of Hamilton, Butler county, Ohio.—*Improvement in Harvesters*.—Patent dated November 3, 1863.—The improvements have reference to the lateral and vertical adjustments of the tongue, which is socketed to a wedge-shaped piece with a locking and a trigger-detaching arrangement for the lateral, and a semicircular bracket with slots and set screws under the wedge-shaped socket for the vertical adjustment.

Claim.—First, in the described combination the pivot *G*, dog *I*, spring *K*, and trigger *L*, or devices substantially equivalent, whereby the tongue of a harvesting machine is rendered laterally limber at the option of the operator, and restored automatically to the rigid condition, substantially as set forth.

Second, the provision between a laterally limber tongue *F* and the main frame of a harvester, of the wedge-formed socket block *H* and inclined or adjustable bracket *B*, or devices substantially equivalent.

No. 40,489.—HENRY LOEWENBERG, of New York, N. Y.—*Process for Transferring Prints, &c.*—Patent dated November 3, 1863.—A spirituous solution of resins is applied to the paper to render it transparent; the device printed on it is caused to adhere to a second surface, which is made adhesive, and the paper may be removed or not, as preferred.

Claim.—Printing or drawing designs or characters on paper or cloth rendered transparent in the manner described, and afterwards covering the printed surface with an adhesive substance to adapt the design to be transferred to another surface by moistening the adhesive substance, as hereinbefore explained.

No. 40,490.—WILLIAM W. MARSTON, of New York, N. Y.—*Improvement in Primed Metallic Cartridges*.—Patent dated November 3, 1863.—The percussion nipple is projected through an orifice in the rear of the cartridge case, the flange of the former lying against the rear of the case.

Claim.—The flanged nipple *b*, containing the detonating material, in combination with the cartridge case, having a perforated base for the passage of said nipple, as specified.

No. 40,491.—THOMAS J. MAYALL, of Roxbury, Mass.—*Improvement in Restoring Waste Rubber*.—Patent issued November 3, 1863; antedated October 29, 1863.—The waste rubber, combined, as it is, with fibrous matter, sulphur, &c., is reduced to a fine condition by chopping or otherwise, and then exposed to the direct action of the flames of gas or inflammable liquids, by which the foreign matters are consumed and the rubber rendered plastic and cohesive.

Claim.—The process or means, as herein described, by which sulphur or fibrous materials, or either, which have been combined with India-rubber or gutta-percha, separately or combined, before being subjected to the process of vulcanization, and whether vulcanized rubber articles or not, by subjecting the same to the flame of inflammable liquids or gases, such as spirits of turpentine, camphene, petroleum or carbon oil, alcohol, benzine, benzole, naphtha, or any other inflammable liquids or gases producing the same result, substantially as set forth.

No. 40,492.—ASHER MERWIN and C. H. HOBART, of Padua, McLean county, Ill.—*Improvement in Corn Planters*.—Patent dated November 3, 1863.—The improvement is in the method of suspending the runner frame from the front part of the machine; under the vibration of the lever the rod is caused to bend the toggle joint supporting rod and raise the frame.

Claim.—The frame *D*, pivoted to vertical bars *d* attached to the front part of the frame *A* of the machine, when said frame is arranged with or raised and lowered by means of the toggle *J*, rod *L*, and lever *M*, substantially as herein set forth.

No. 40,493.—CHARLES G. MILLER, of Brattleboro', Windham county, Vt.—*Improved Clothes Dryer*.—Patent dated November 3, 1863.—This consists of a bracket to be fastened to a wall, having lips or lugs through which a vertical bolt is passed, which serves as a pivot for clothes bars which are movable laterally within a range of about 180°.

Claim.—The arrangement of the plate C and adjusting nut c with the screw bolt b, bars D, and lips a', all in the manner and for the purpose herein shown and described.

No. 40,494.—GEORGE MULLIKIN, of Littleton, Grafton county, N. H.—*Improvement in Water Wheels*.—Patent dated November 3, 1863.—At the back of each bucket is a horizontal plate attached to the hub and intended to deflect the sheet of water downwards and prevent its reacting against the back of the bucket; the water is admitted by a pivoted gate whose rear end moves in connexion with a segmental plate.

Claim.—The combination of the horizontal plates c with the backs of the buckets B, substantially in the manner herein shown and described, whereby the water is made to act with its full force upon the faces of the buckets, and is prevented from reacting against the backs of the buckets, all as set forth.

Also, the arrangement of the segment plate J with the pivoted gate H, and shaft I, in the manner herein shown and described.

No. 40,495.—H. B. and G. A. MYERS, of Schoolcraft, Kalamazoo county, Mich.—*Improvement in Grain Drills*.—Patent dated November 3, 1863.—The seed box and slide box are attached to the bar by means of the dovetailed upper ends of the drill teeth, and the whole described arrangement is lifted out of its place in the frame by means of the semicircular pivoted lever.

Claim.—First, the semicircular lever O applied to the seed box E, as shown, when said seed box is arranged or fitted in the frame C, as and for the purpose specified.

Second, the drill teeth I, provided with dovetails J on their upper ends, to fit in corresponding recesses in the back of the bar D, to secure the box J to the seed box E, as set forth.

No. 40,496.—THEOPHILUS OGDEN and JOS. HINDERMYER, of Philadelphia, Pa.—*Improved Soda Water Fountain*.—Patent dated November 3, 1863.—The bottom of the soda fountain has a hollow arched chamber which forms a receptacle for ice, the floor of said chamber being an elastic water-proof diaphragm which clings to the lower flange of the fountain.

Claim.—First, providing a soda-water fountain of any form equivalent to the one herein described with an inwardly arched bottom B, forming a receptacle for ice beneath the soda-water chamber.

Second, the use of an elastic, self-tightening bottom H, in connexion with the described receptacle for ice, substantially as and for the purpose herein set forth.

No. 40,497.—ISAAC H. PALMER, of Lodi, Columbia county, Wisconsin.—*Improvement in Grain Drill Teeth*.—Patent dated November 3, 1863.—Explained by the claim.

Claim.—A drill or cultivator tooth, jointed at or about its mid length, to permit it to yield backward in the event of striking an immovable obstacle, and provided with a spring attached directly to the tooth, independently of the frame, for the purpose of throwing the tooth forward to its operating position when released, substantially as herein described.

No. 40,498.—NEWTON A. PATTERSON, of Kingston, Roane county, Tenn.—*Improvement in the Construction of Cannon and Fire-arms*.—Patent dated November 3, 1863.—Sheets of metal, fusible at different temperatures, are alternately wrapped around a mandrel or a barrel, and are united by the melting of the more fusible metal.

Claim.—The process of constructing or strengthening ordnance or other fire-arms by coiling sheets of different metals, adapted to fuse at different temperatures, upon or around a mandrel or cylinder, or the barrel or breech of the gun, and uniting the coils of harder metal by the fusing of the softer metal, substantially as hereinbefore explained.

No. 40,499.—JAMES N. PEASE, of Panama, Chautauqua county, N. Y.—*Improvement in Horse Powers*.—Patent dated November 3, 1863.—The periphery of the master wheel has V-shaped teeth, which engage with a pallet attached to a lever which has rods connected to its ends; they again are connected to other levers and rods passing to the mechanism to be operated.

Claim.—The wheel B, provided with V-shaped teeth b, in combination with the pallet C, lever D, and the rods E G and levers F, or their equivalents, all arranged to operate substantially as and for the purpose herein set forth.

No. 40,500.—WILLIAM G. PHILIPS, of Newport, Newcastle county, Del.—*Improvement in Ladders*.—Patent dated November 3, 1863.—This ladder is jointed in the middle, and has a locking latch when used as a step ladder. It is also capable of use when folded or at its full extension, and the splay of its feet at the bottom increases its base of support.

Claim.—Curving or bending out the sides b of a ladder, substantially as and for the purpose shown and described.

No. 40,501.—JOHN G. RANDALL, of Cañon City, Fremont county, Colorado Territory.—*Improved Machine for Grinding Ores and Amalgamating Precious Metals*.—Patent dated November 3, 1863.—This consists of a stationary pan with a high rim or edge, and a central stationary die; above this is a revolving furrowed die set in a runner with downwardly projecting rim, the material being fed in at a central tube.

Claim.—The stationary die D secured within a stationary pan B, in combination with the revolving die E, provided with furrows e and secured within the pan F, having the tube H attached to it, the pan B being arranged as shown to admit of a quicksilver receptacle b, into which the rim a' of the pan F projects, substantially as and for the purpose herein set forth.

No. 40,502.—E. B. REQUA, of Jersey City, N. J.—*Improved Head Block for Saw Mill*.—Patent dated November 3, 1863.—The two dogs are worked by right and left screws, so as to be operated simultaneously, or one is adjustable separately by the traversing of its clamping screw in a slot in the dog. The side bars act as guides, traversing in grooves in the sides of the nuts to which the dogs are attached.

Claim.—First, the employment or use of two screws J J' connected by a clutch K, arranged as shown, or in any equivalent way, in combination with dogs N N' connected with the screws, through the medium of nuts M M', and arranged substantially as shown to admit of the simultaneous adjustment of both dogs N N', and the separate adjustment of one dog N when required, for the purpose herein set forth.

Second, the two bars H H attached to the bar G, and fitted in grooves a' in the sides of the nuts M M', as and for the purpose specified.

Third, the attaching of the upper dog N to its nut M by means of a screw g passing through a vertical slot h in the dog, for the purpose of admitting of a vertical adjustment of said dog, as described.

No. 40,503.—JOSEPH SCHMEDINGHOFF, of Cincinnati, Ohio.—*Improvement in Fireplace Stoves*.—Patent dated November 3, 1863.—The stove is placed in the fireplace, in connexion with a basket grate, so as to admit of air passing around in chambers in connexion with the heated back and flue, and passing the air from the room into the back of the fire, and air from the outside, after being heated, into the room.

Claim.—The arrangement of the fireplace C, draught passages E, ventilating chamber F, chest I, pipes K, chimney J, and dampers H L, the whole being combined and operating as described.

No. 40,504.—JOHN SHEFFIELD, of Williamson, Wayne county, N. Y.—*Improvement in Fluid Meters*.—Patent dated November 3, 1863.—This consists of a movable weight, guided by an oscillating slide, which connects with one of two valves that are balanced on a working beam, and change the current of the fluid as they are acted on by the force of the fluid on the diaphragm. The motion of the working beam from which the valves are suspended is communicated to a registering apparatus.

Claim.—First, the weight K and tilting guide L, in combination with the diaphragm F, valves H H', rock shaft I, and registering apparatus M, constructed and operating in the manner and for the purpose substantially as shown and described.

Second, the tappet p, hinged to the side of the tilting guide L, and operating in combination with the weight K, double-hooked catch p', and dogs p" p*, substantially as and for the purpose set forth.

No. 40,505.—NORMAN A. SHERBURNE, of Elgin, Kane county, Ill.—*Improvement in Grain Separators*.—Patent issued November 3, 1863; antedated October 24, 1863.—The shaking shoe is supported by springs which are attached to it, and pass through slots to be fastened outside the casing of the machine. The riddles are supported by lugs on a bridge-shaped bar, whose ratchet teeth, engaged by pawls, maintain it at a suitable elevation. The cheat riddle below has a shaking motion derived from a rock shaft, and has several points of discharge for offal and grain.

Claim.—First, suspending the shoe or riddle frame on bent springs, for the purpose and substantially in the manner set forth.

Second, in combination with a shoe vibrated within the sides of the frame, the connecting of the upper ends of the springs to the outside of the frame, and uniting their lower ends to the shoe through slots in the sides of the main frame, substantially as described.

Third, the bar o, with its supports and holding mechanism, for the purpose of raising the nest or series of riddles, or lowering them in a body for the purpose and in the manner substantially as set forth.

Fourth, the long riddle G, arranged and operating with regard to the delivery points r s t, and having a shake motion communicated to it, substantially in the manner and for the purpose described.

No. 40,506.—WILLIAM SMITH, of Pittsburg, Pa.—*Apparatus for Making Plumbago Crucibles*.—Patent dated November 3, 1863.—The crucible is shaped between a former and

a revolving divisible mould. The composition of graphite and clay is placed in the mould, which is secured on the wheel; the former is then lowered into the wheel, pressing the crucible material up in the mould, and by a lateral motion shaping its interior surface.

Claim.—Making plumbago crucibles in the manner substantially as hereinbefore described, by means of a mould attached to a revolving wheel or disk, and a former revolving freely on a non-revolving spindle attached to a slide rest, susceptible of two motions, one parallel to the axis of the mould, and the other at right angles thereto.

No. 40,507.—JOHN SPERRY, of New York, N. Y.—*Improvement in Manufacturing Boxes.*—Patent dated November 3, 1863.—The box is so constructed of thin layers of wood as that the grain of one layer shall run in a different direction from that of the adjacent layer to brace the box and prevent splitting. The bottom may be made of a series of gores attached to the sides and bent over so as, by the meeting of their edges, to form a bottom.

Claim.—First, a grain-bound box made of bottom pieces *a a'* and bands *c*, which are so arranged in relation to each other that the grain of one layer crosses the grain of the adjacent layer, substantially as specified.

Second, making the bottom and the sides of a wooden box either partially or wholly out of one and the same piece of material by turning the edges up or in, as set forth.

No. 40,508.—JAMES STEPHENSON, of Canandaigua, Ontario county, N. Y.—*Improvement in Time Keepers.*—Patent dated November 3, 1863.—A laterally yielding or elastic detent lever is attached to the shaft of the pallet and extends across the face of the escapement wheel in such a position that a pin projecting from the hub of a balance wheel will impart the necessary motion to the detent lever in the forward motion of the balance wheel, but slip past the pin in the backward motion.

Claim.—First, operating the pallet or escapement by an elastic or yielding lever, so constructed and applied that it will be actuated by the forward motion of the balance wheel and permit its free return, substantially as explained.

Second, the employment or use of a bevelled pin *b'*, in combination with the yielding lever *H A*, for the purpose specified.

No. 40,509.—FRANCIS B. STEVENS, of New York, N. Y.—*Improvement in Valves for Steam Engines.*—Patent dated November 3, 1863.—This is a slide valve with two seats working in a chamber and alternately closing and opening a passage-way leading from the mid-length of the cylinder of a double eduction steam engine, so that when a plenum is in the cylinder the valve shall work against one seat, and when there is a vacuum it shall work against the other seat. By the division or branching of its passage-way in the opening through the valve the throw of the valve may be reduced.

Claim.—A side valve connected with a passage made midway in the length of a cylinder, and made to bear alternately with its opposite faces against two seats, as herein set forth and described.

Also, in connexion with the first claim, placing a greater number of openings in one seat than in the other as a means of diminishing the throw of the valve without decreasing the size of the passage-way, as herein set forth and described.

No. 40,510.—FRANCIS B. STEVENS, of New York, N. Y.—*Improved Condenser for Steam Engines.*—Patent dated November 3, 1863.—The hot well is closed against the atmosphere and the steam of the first eduction is discharged into it, so that it is condensed by the water delivered by the air pump into the hot well, so that the latter acts as an additional condenser, or the apparatus can be used in connexion with a cooler.

Claim.—First, condensing the steam discharged from the cylinder of a steam engine by the first eduction by delivering this steam into the hot well of the engine, in the manner herein described.

Second, the application and use to, and in the supplying of, a cooler with water heated in the hot well by the steam discharged from the cylinder by the first eduction, in the manner herein described.

Third, in connexion with delivering the steam discharged by the first eduction into the hot well, the arrangement of the pipe for drawing off the water from the hot well into a cooler, and also the arrangement of the pipe for drawing off the water from the hot well into the atmosphere, and also the arrangement of the shifting valve, or its equivalent, in the manner herein described.

No. 40,511.—JOHN STOCK, of New York, N. Y.—*Improvement in Wood Moulding Machines.*—Patent dated November 3, 1863.—The bed on which the material is placed rests upon a pattern which rises and falls according to its own contour as it passes over projections attached to the moving bed-plate below. The up and down motion of the pattern is permitted by the elastic bar upon which the supporting arms of the pattern are inposed.

Claim.—The arrangement of attaching the pattern or template *H* to elastic bars or their equivalent, in such a manner that the same will allow the required motion to the pattern plate, for the purpose substantially as described and set forth.

No. 40,512.—JOSEPH SUTTER, of New York, N. Y.—*Improved Folding Chair or Lounger.*—Patent dated November 3, 1863.—Two sections of the bed bottom are folded against each other, and then by another fold are laid away under the seat of the couch; the back and the ends are supported by arc-rods and set-screws and are capable of being placed in a reclined position.

Claim.—The folding bottom *e d e*, formed as specified, in combination with the swinging back *f* and braces *g*, as and for the purposes specified.

Also, the swinging arms *A*, in combination with the brace *k*, fitted as and for the purposes specified.

No. 40,513.—JOSEPH SUTTER, of New York, N. Y.—*Improved Folding Table.*—Patent dated November 3, 1863.—The table is supported upon hinged legs; one pair have feet to them; one pair of legs folds underneath the table top, which latter is then folded down until it comes in contact with the feet upon which the table is then supported. When the table is expanded the legs are locked in position by spring latches.

Claim.—The folding pairs of legs *b b* and *c c*, hinged to the table and folding as specified, in combination with the feet pieces *A A*, for the purposes specified.

Also, retaining the legs, fitted to fold as specified, when the table is open, by means of spring latches applied and acting as set forth.

No. 40,514.—WILLIAM A. SWEET, of Syracuse, Onondaga county, N. Y.—*Improvement in Machines for Cutting Nails.*—Patent dated November 3, 1863.—The descending punch removes a nail from the plate, leaving a portion outside of the shape of that removed, so that by working against two cutting edges two nails are made at a stroke.

Claim.—The formation of two nail blanks, brads, or spikes, substantially identical in form and dimensions by one operation of a punch working in combination with a corresponding double-cutting die, whereby also the turning of the nail plate or bar is completely avoided.

No. 40,515.—JAMES G. TARR and A. H. WILSON, of Gloucester, Essex county, Mass.—*Improved Paint for Ships' Bottoms.*—Patent dated November 3, 1863.—To forty gallons Stockholm tar add gradually, stirring constantly, thirty gallons naphtha; close the vessel tightly and allow it to stand twenty-four hours. Decant the supernatant liquid and add to it thirty gallons pulverized oxide of copper; when mixed it is ready for use, and is not subject to become coated with sea-weed and barnacles.

Claim.—The composition prepared substantially as herein set forth and for the purpose specified.

No. 40,516.—WILLIAM M. TATE, of Zanesville, Muskingum county, Ohio.—*Improved Machine for Filling Bottles.*—Patent dated November 3, 1863.—The cylinder is nearly filled with oil, (the tube at the bottom being first closed by a cork;) the plunger, with its small hole open, is placed on the surface of the oil and pressure applied till oil exudes above; the hole in the plunger is then stopped, the plunger is lifted by the spring, the cork removed, the bottle placed underneath and filled by pressure on the lever; this done, the plunger rises on the removal of the pressure, the bottle is removed and another substituted until the contents of the cylinder are exhausted.

Claim.—The arrangement and combination of the spring, lever, plunger, and cylinder described, and the other parts of the machine by which the effect is produced, substantially as set forth.

No. 40,517.—JESSE G. THOMPSON, of Carbondale, Luzerne county, Pa.—*Inkstand.*—Patent dated November 3, 1863.—A dipping cup occupies one side of the interior space, and it is filled or emptied by tipping the inkstand so as to make the ink flow towards or away from that side.

Claim.—The placing the ink-chamber *B* and the ink-cup *D* in opposite sides of the inkstand and connecting them with the passage-ways *C* and *E*, as herein described, for the purpose set forth.

No. 40,518.—SAMUEL THOMPSON, of San Pedro, Los Angeles county, Cal.—*Improvement in Paper Files.*—Patent dated November 3, 1863.—The papers are placed between the two rollers, where they are retained by springs. One of the rollers is removable by being slipped longitudinally, when its sliding spring gudgeon allows its lower end to be withdrawn from the socket.

Claim.—First, the arrangement of the rod *A* with arms *B*, sockets *a*, and springs, in combination with the adjustable rod *A'*, constructed and operating as and for the purpose shown and described.

Second, the longitudinally sliding spring gudgeon *b*, in the end of the adjustable rod *A'*, to operate in combination with the arms *B*, projecting from the ends of the rod *A*, substantially as and for the purpose specified.

No. 40,519.—THEODORE R. TIMBY, of Saratoga Springs, N. Y.—*Improvement in Solar Time Pieces*.—Patent dated November 3, 1863.—The revolving dial graduated for the twenty-four hours and subdivisions has a central map representing a polar projection of one of the hemispheres so that the culminating time of the sun or any part of that hemisphere and the difference in time between two places can be observed.

Claim.—First, a revolving hemispherical map A, in combination with a stationary index F, substantially as and for the purpose specified.

Second, a revolving clock-face or dial E, in combination with the map A and stationary index F, constructed and operating in the manner and for the purpose substantially as set forth.

No. 40,520.—JAMES P. TRAVERS, of New York, N. Y.—*Improvement in Preparing Jute Twine*.—Patent dated November 3, 1863.—The invention consists of a sizing for jute twine, and is compounded of glue, ten pounds; water, two gallons; starch, one pound; tallow, four ounces; China clay, ten pounds; boiled and applied warm. The twine is finished by passing over heated pipes, friction brushes, &c.

Claim.—The application of the above sizing and finishing to jute twines for the purpose of a substitute for cotton wrapping twine.

No. 40,521.—P. S. WARD, of Millville, Clayton county, Iowa.—*Improved Washing Machine*.—Patent dated November 3, 1863.—This consists of a semi-cylindrical tub with a slat bottom, and a vibrating dasher formed of slats, and acting in conjunction with two stationary racks attached to the sides of the tub; the slats present their edges to each other and to the clothes which are pressed between them.

Claim.—The combination of the semi-cylindrical tub A, strips E, swinging frame G, and stationary and vibrating racks F and I, when the said racks are formed of angular bars f and i, presented edgewise with the bars i, opposite the spaces between the bars f, and all the parts are constructed and arranged to operate in the manner and for the purposes specified.

No. 40,522.—E. WARREN, of Marshall, Calhoun county, Mich.—*Improved Clinching and Nipping Tool*.—Patent dated November 3, 1863.—In addition to the nipper jaws a projection is made on each jaw, one of which is to be placed under the head of the nail, while the other is brought down upon the end which has just been nipped, so as to draw it down and clinch it against the hoof.

Claim.—The combination of the nippers c c and projections d f on the short arms b b' of the pivoted crossed levers A A, substantially as shown and described, to form a combined clinching tool and nippers, for the purpose herein set forth.

No. 40,523.—WILLIAM WEBSTER, of Morrisania, Westchester county, N. Y.—*Improved Boiler-feed Regulator*.—Patent issued November 3, 1863; antedated October 25, 1863.—This device is so arranged that the expansion of a tube (about on the water line in the steam boiler when the water is at the required height) will open a valve and supply water to the boiler. As the water sinks below the tube, the latter is surrounded by steam and rises in temperature, which, if prolonged to an unusual extent, has the further effect of sounding an alarm whistle by the opening of a valve.

Claim.—First, the combination of the traversing bar, pawl, and expansive tube, as arranged, constructed, and operated, substantially as described and for the purpose set forth.

Second, in combination with the water regulator, an alarm, when arranged, connected, and operated as described and for the purpose set forth.

No. 40,524.—CHARLES WELLMAN, of New York, N. Y.—*Improvement in Side-saddle Trees*.—Patent dated November 3, 1863.—The flexible tree is made of sole leather, stiffened with metallic straps around the pommel, cantle, &c., to sustain the more salient parts.

Claim.—The saddle-tree or body for side-saddle, formed of sole leather, with the metallic straps applied thereto, as specified.

No. 40,525.—H. J. WENTWORTH, of Norvell, Jackson county, Michigan.—*Improvement in Wind Wheels*.—Patent dated November 3, 1863.—The wind wheel and vane are attached to a frame placed on a circular way so as to rotate under the action of the wind and keep the wheel to the wind. The radial arms of the wheel support an inner and outer wheel, to the former of which the inner ends of the segment sails are pivoted, the outer ring passing through them; supplementary sails are attached by rods to a sliding wheel operated by the governor, and are used for stopping and starting the wheel.

Claim.—First, the frame C, with wind-wheel and vane attached and applied to the platform A, to rotate thereon and keep the wheel properly presented to the wind, substantially as herein set forth.

Second, the manner of constructing the wind-wheel, as herein set forth, to wit: by means of the radial arms H, braced by the segment bars I I, with the latter passing through the sails J, substantially as and for the purpose herein set forth.

Third, the supplemental sails R, applied to the wind-wheel and connected with the sliding head G', as shown, in combination with the sails J, also connected to the head G, and all arranged to operate as and for the purpose specified.

Fourth, the sliding head G' placed on the shaft F, and connected with the sails J and R and the lever frame O for the purpose of stopping and starting the wind-wheel, as set forth.

No. 40,526.—A. D. WHITMORE, of Housatonic, Berkshire county, Mass.—*Improved Folding Chair*.—Patent dated November 3, 1863.—The seat is pivoted to the legs and back, and there is a similar frame below formed by the four rounds; the seat being raised in front and laid flat against the back brings the legs into a collapsed position against the back also. When the parts are in their normal condition they are retained by a brace extending from the hind legs up to a guide on the side of the seat, where it is retained by a latch.

Claim.—The combination of the frame b b with the legs and rounds and the frame a a, the braces c c, the guide d, and latch e, substantially as and for the purpose specified.

No. 40,527.—CHARLES D. WHORF, of St. Louis, Mo.—*Improvement in Cooking Stoves*.—Patent dated November 3, 1863.—The lower part of the apparatus consists of the central fire-box and the ovens; over these are a coil of pipe communicating with a water chamber around it, and over this coil is an elevated oven surrounded by flues.

Claim.—The combination of the ovens c c and I, water tank E, with the furnace B, when constructed substantially as described, and forming the substantial parts of a cooking apparatus, as set forth.

No. 40,528.—ASA WILMOT, of New Haven, Conn.—*Improvement in Safety Pocket*.—Patent dated November 3, 1863.—One side of the mouth of the pocket is made of a metallic strip, and the other of an elastic band combined in the shape of a bow and string.

Claim.—A pocket protected at its mouth in the manner described of an elastic cord or band combined with a metallic stay, substantially as specified.

No. 40,529.—BURTON WILSON, of Morristown, Morris county, N. J.—*Improvement in Corpse Preservers*.—Patent dated November 3, 1863.—The device is fully explained in the claim; the object is to effect a circulation of cold air around the body-chamber.

Claim.—The arrangement of a double air channel B B', the channel B' surrounding the channel B and communicating with it through a series of holes a, and both channels surrounding the body-chamber in combination with an air passage f leading to the ice-box D, and through holes in the sides of the ice-box and channel C to the air channels B B', all as and for the purpose herein shown and described.

No. 40,530.—HENRY WILSON, of Binghamton, Broome county, N. Y.—*Skeleton Skates*.—Patent dated November 3, 1863.—The boot of the skater is confined between the heel-post, which is armed with a point to penetrate the back of the boot heel, and a clamp which is slipped forward to embrace the sides of the boot, and then retracted by the springs to pull the boot back against the heel post; the hook which catches against the front of the heel is tightened by the thumb-screw behind.

Claim.—First, the cramp D, combined with springs and points as described above, and for the purposes set forth herein.

Second, the hook with the screw and thumb nut, or their equivalent, for assisting the springs in securing the whole to the foot, as above described.

No. 40,531.—H. R. WINCHELL, of Plainville, Adams county, Wis.—*Improved Washing Machine*.—Patent dated November 3, 1863.—The clothes are pressed between a rack attached to a rocking bar and operated by a lever and an inclined stationary rack.

Claim.—The arrangement of the rock shaft C, arms d, bars f, inclined bars j, and rubber bars g i, with the box A and inclined rack B, in the manner herein shown and described.

No. 40,532.—ANDREW WINTERBURN, of Albany, N. Y.—*Improvement in Grates for Furnaces*.—Patent dated November 3, 1863.—This consists of a rotary shaft with a series of heads so arranged in the bottom of the grate as to sift out the ashes; this headed shaft is combined with a dumping grate for the general discharge of the contents, and both are journaled upon the end of the frame and operated by a handle.

Claim.—First, the manner of fitting the shaft E in the frame B, as shown and described, to wit, by means of the tubular projections C D, the latter, D, being formed of two parts, a e', connected by the screw j, all so arranged that the bearings of the shaft E are made to serve as journals for the dumping frame B.

Second, the combination of the shaft E, and heads H, with the revolving frame B and teeth or projections a a, constructed and operating substantially as and for the purposes described.

No. 40,533.—FRANK P. WOODCOCK, of New York, N. Y.—*Improved Pack-Saddle*.—Patent dated November 3, 1863.—The load is suspended in cribs by straps from posts, which pro-

ject from the pommel and cantle, respectively, from the tops of which the posts are bound by straps; the cribs are stayed at their ends by straps which pass to the tops of the posts, and they rest against pads attached to the flaps of the saddle.

Claim.—First, the herein described manner of suspending burdens from a pack-saddle, substantially as set forth.

Second, the arrangement of posts F, attached to the pommel and cantle of a pack-saddle, in combination with the straps a, to support the load or burden, and the manner of bracing said posts, so as to bring the strain of the weight near the centre of the saddle-tree, as described.

Third, the forward and after guide-straps H, for the purpose specified.

Fourth, in combination with the above arrangement the pads M, for the purpose described and set forth.

No. 40,534.—THEODORE BURR, of Battle Creek, Calhoun county, Mich., assignor to Himself and ISAAC C. MOSS, of same place.—*Improvement in Machines for Cutting Files*.—Patent dated November 3, 1863.—In this machine the file blank is fed in between three rollers, the large one forming the bed or anvil, and the others the feed and the pressure rollers, respectively; above this bed, in an inclined position, but radial with the roller upon which it impinges, is a chisel stock, moving in ways attached to the frame of the machine; the stock is lifted by a cross-head or double cam which enters a slot in its upper point, raises and then frees it to the impulse of the spring, which brings it down with the cutter upon the blank with a force proportioned to its weight and the tension of the spring.

Claim.—First, a file-cutting machine constructed with inclined ways a' a' inclined chisel stock b, adjustable power spring f, and a rotating bed B, all arranged substantially as described.

Second, in a file-cutting machine, the combination of a rotary bed B, feed roller m, and spring pressure roller m', and inclined cutter stock b, substantially as described.

Third, arranging the spring pressure roller m at an intermediate point between the rolling bed B and the feed roller m, substantially as described.

Fourth, cutting or producing the abraded surface upon the broad sides of files upon a cylindrical rotating bed, substantially as described.

Fifth, the combination and arrangement (with the system of mechanism which actuates the chisel and the roller bed) of the roller bed, the inclined chisel and the spring-regulating device, all constructed and operating substantially as described.

No. 40,535.—MICHAEL A. COLLINS, of Chelsea, Suffolk county, Mass., assignor to Himself, GEORGE W. BUTTERFIELD, and WILLIAM A. RICHARDSON.—*Improved Monitor Turret*.—Patent dated November 3, 1863.—This turret is composed of annular segments whose upper and lower sides are respectively grooved and tongued, so that they shall fit upon one another to secure the requisite height and relative position, the latter being further secured by vertical bolts which descend through holes in the whole series and lock them together, the segments having any required material interposed between the layers.

Claim.—The improved battery, fort, or monitor turret, as constructed of a series of annular segments, made, arranged, and confined together substantially in manner as represented in the accompanying drawings, and as hereinbefore specified.

Also, a turret as so made, and having felt or other suitable non-vibratory or non-resonant material interposed between the layers of annular segments, substantially as and for the purpose specified.

No. 40,536.—FREDERICK FICKEY, Jr., of Baltimore, Md., assignor to WILLIAM H. FICKEY, of same place.—*Improvement in Tobacco Pipes*.—Patent dated November 3, 1863.—The volatile results pass from the tobacco chamber into a vertical passage whose lower end forms a nicotine chamber; the smoke (except what condenses on the sides of this chamber) passes upwards and then down to the saliva chamber, and thence to the exit.

Claim.—So arranging the smoke passages of a tobacco pipe, in combination with distinct receptacles for nicotine and saliva, that these fluids respectively will be received and retained in separate vessels and be prevented from mingling together or being drawn into and through the pipe stem, the arrangement and construction being substantially as described and represented.

No. 40,537.—EDWIN J. FRAZER, of Chicago, Ill., assignor to Himself and E. W. HAZARD, of Galesburg, Ill.—*Improvement in Galvanic Batteries*.—Patent dated November 3, 1863.—The cap is annular and lies between the zinc and outer jar, and partially upon the latter; it is composed of three thicknesses, the lower of wood and the upper of metal, with an interposed ring of rubber; the centre of the jar is occupied by a cylinder of zinc attached to the cover; this admits of sealing the contents of the jar. The insulated screw cap has attached to it a metallic spring which presses against a sheath of insulating material on a stud, or against the stud as may be desired, the latter being the course adopted when it is required to remove the zinc from the jar without disturbing other jars in the same battery.

Claim.—First, the cap a b c and cover C, in combination with each other and with the zinc B and jar A, substantially as and for the purpose herein set forth.

Second, the stud t, insulating sheath j, and spring k, applied in combination with each other and with the metal ring s of the cap a b c, or its equivalent, substantially as and for the purpose herein specified.

No. 40,538.—HALVOR HALVORSON, of Cambridge, Middlesex county, Mass., assignor to CHARLES SPEAR, of Boston, Mass.—*Improvement in Explosive Shells*.—Patent dated November 3, 1863.—This shell has an open mouth and central opening terminating in spiral passages, by the passage of the air through which latter, rotation is produced. Around the central cavity is a chamber for explosive material, which is closed in front by a cap, under which is the fulminate. The base is recessed.

Claim.—First, the exterior explosive chamber lying exterior and around the central passage, and in combination therewith and with the mouth and air openings and passages for producing rotation of the shell, as herein set forth.

Second, the cap h, in combination with the explosive chamber g, as and for the purposes herein described.

No. 40,539.—ENOCH HARRISON, of New York, N. Y., assignor to Himself and EDWARD W. BERRELL, of same place.—*Improved Pontoon Boat*.—Patent issued November 3, 1863; ante-dated October 29, 1863.—The parts of the boat are made detachable for convenience in transportation. The sides and ends are locked together by angle pieces and bolts, and the bottom secured by metallic straps and draw bolts to the sides.

Claim.—The mode of retaining the floor planks beneath the thwarts g g, by the metallic straps h h and bolts 2 2, in combination with the removable side and end pieces of the boat as set forth.

No. 40,540.—EBENEZER C. C. KELLOGG, of Hartford, Conn., assignor to Himself and JAMES C. CAMPBELL, of New York, N. Y.—*Improvement in Repeating Ordnance*.—Patent dated November 3, 1863.—This consists of a carriage on wheels with a series of slides containing chambers for cartridges, which slides are operated by means of a lever and rack so as to bring the chambers consecutively to the rear of the barrel in position, the movement also operating the cocking and firing device in proper order of time. Either of the barrels may be brought into the position for firing while the other may be cooling. The carriage is rocked on its axle so as to elevate or depress the gun by means of its jointed bars and sector rack which is engaged by a worm screw rotated by hand.

Claim.—First, the combination with a series or system of many-chambered slides G G of two connected barrels adjustable upon the carriage in such manner that either may be brought to the operative position and used while the other is cooling, substantially as herein specified.

Second, combining the barrels with the carriage by means of a sliding plate C, constructed with rings D D, to embrace the two barrels in such manner as not to interfere with their longitudinal expansion.

Third, the pawl carrier H, furnished with two pawls k l, and applied in combination with the ratchets on the many-chambered slides G G and with the hand lever I, substantially as and for the purpose herein specified.

Fourth, the cocking lever N' and its dog N, applied and arranged in combination with the hammer J and hand lever I, substantially as and for the purpose herein specified.

Fifth, the letting-off lever P, furnished with a tongue P2 and spring P3, applied in combination with the trigger p and the hand lever I, substantially as and for the purpose herein specified.

Sixth, the stop lever R and stop pin e, applied in combination with the many-chambered slides G G, and with the hand lever I, pawl carrier H, and pawls K L, substantially as and for the purpose herein specified.

Seventh, the combination of the jointed bars S and T, the toothed sector T', and endless screw V, substantially as and for the purpose herein specified.

No. 40,541.—LOOMIS G. MARSHALL, of Philadelphia, Pa., assignor to Himself and ANDREW COCHRAN, of same place.—*Improvement in Iron Railway Chairs and Cross-ties*.—Patent dated November 3, 1863.—The chair has two grooves, one on top fitting the flanges on the base of the rail, and the other, a similar groove, at right angles to the former, fitting on the flanges of the cross-tie; on the outside of the rail and on one side of the tie, between the rail and chair and the tie and chair, are driven wedge-shaped keys; an elastic pad of rubber is interposed on both sides of the chair between it and the rail and tie respectively.

Claim.—First, the square-shaped double-grooved chair with its elastic rubbers, as herein described.

Second, the arrangement and combination of the rail chair and tie, arranged, constructed and keyed together as herein described, and for the purposes set forth.

No. 40,542.—LUKE B. MULLS, of New York, N. Y., and CHARLES HART SMITH, of Baltimore, Md.—*Improved Roofing for Buildings*.—Patent dated November 3, 1863.—Explained by the claim.

Claim.—A roofing composed of a lower layer of felt or sheathing paper and a top layer of some rigid substance, the two being firmly connected by an intermediate layer of cement.

No. 40,543.—S. H. NOBLE, of Prairie du Chien, Crawford county, Wis., assignor to Himself, JOSEPH GOODRICH, CHARLES GOODRICH, and WILLIAM M. WOOLEY.—*Improvement in Directing Projectiles*.—Patent issued November 3, 1863; antedated October 1, 1863.—The projectile is attached to a wire, and when fired vertically describes a course which is an arc of the circle of which the cord is the radius. The wire is anchored to a point half-way between the gun and the object aimed at.

Claim.—First, causing a projectile, after leaving the gun, to describe the arc of a circle in its flight, substantially as herein delineated and set forth.

Second, causing the projectile to describe the arc of a circle after leaving the gun, until it reaches any required point in said arc, and then to move on in a tangent line to said arc, substantially as herein specified and described.

No. 40,544.—J. F. SHELDEN, of Pope Creek, Mercer county, Ill.—*Improvement in Refining Sorghum Juice and Sirup*.—Patent issued November 3, 1863; antedated September 23, 1863. Soda and cream of tartar, or their equivalents, are added to the sirup or sorghum molasses, which removes the green acrid taste and purifies it.

Claim.—Treating sorghum or cane sirups successively with soda, cream of tartar, and milk, by the process herein described and for the purposes specified.

No. 40,545.—JOSEPH H. ATWATER, of Providence, Providence county, R. I.—*Newspaper File*.—Issued November 10, 1863; antedated October 29, 1863.—This invention consists in making the rods taper towards one or both of their ends so as to embrace more firmly the papers, also to unite the ends of the rods with an elastic band to accommodate the file to the increase of the papers.

Claim.—First, making one or both of the rods largest in the middle and tapering gradually toward one or both ends, so that when they are clasped together at the ends they act as springs on the paper between them.

Second, encircling the rods toward each end beyond the paper clamped between them with elastic bands or straps, substantially as described.

No. 40,546.—ALBERT BALL, of Worcester, Mass.—*Improvement in Polishing Machine*.—Patent dated November 10, 1863.—This invention consists in a table adjustable vertically, so that the object to be polished may be guided by its surface, and, by the lowering or detaching of parts of the table, the work may be brought conveniently to the polishing wheel notwithstanding some projections.

Claim.—First, the adjustable table forming a guide for the surface to be polished.

Second, making the table in parts to allow projections to pass close up to the side of the wheel, substantially as set forth and described.

No. 40,547.—CHARLES L. BANDER, of Cleveland, Ohio.—*Improvement in Travelling Invalid Chairs*.—Patent dated November 10, 1863.—This improvement consists in arrangements for extending, propelling, and guiding an invalid chair—the former being accomplished by a locking lever, with notches and spring, the propelling by a lever, pitman, and crank under the control of the sitter, and the steering by guide-wheels and jointed rods.

Claim.—First, the locking lever E for holding the chair at any inclination or extension required.

Second, the mode of propelling the chair by the arrangement of the driving-wheels K and their cog-gearing, as herein described.

Third, the manner of guiding the movements of the chair in any direction by the guide-wheels and their jointed rods, as herein described.

No. 40,548.—J. S. BODGE, of Bath, N. Y.—*Improved Grain Separator*.—Patent dated November 10, 1863.—The brackets on the sides are for the purpose of sustaining the imperforate plates which are located above the riddles to prevent the grain from rising and passing endwise through the meshes. The ridges on the lower riddle are intended to catch the grain and turn the oats into a favorable position for passing the meshes of that riddle; the sinks around the perforations in the upper riddles are intended to favor the passage of wheat, as the diameter of the sink is too small for the length of the oat. The devices are mainly for the separation of wheat and oats.

Claim.—First, the slides I, having inwardly projecting arms or brackets b, in combination with the tapering keys j, as and for the purpose specified.

Second, the adjustable imperforate plates H H', in combination with the riddles F and F', as and for the purpose specified.

Third, the inclined screen K having one or more ridges P across it, as and for the purpose specified.

Fourth, the shoe L adapted to have longitudinal movement in the frame E, in combination with the riddles F and F', and imperforate plates H and H', as described.

Fifth, surrounding a portion of each of the perforations in the riddle F and F', at bottom, with a sloping flanch e, as and for the purpose specified.

No. 40,549.—ALONZO T. BOON, of Galesburg, Knox county, Ill.—*Improved Metallic Burrs*.—Patent dated November 10, 1863.—The invention has relation to making a thin circular disk of cast-steel and attaching it to an iron disk.

Claim.—Making the grinding surface of mill burrs of cast-steel in the form of a thin circular disk, and attaching the same to the face of the iron disk, or its equivalent, substantially as described.

No. 40,550.—ALONZO T. BOON, of Galesburg, Knox county, Ill.—*Improvement in Gear Cutting*.—Patent dated November 10, 1863.—The invention consists of an arrangement for regulating the height and angle of the machine, and one to regulate the depth of the cut—the former by a slotted standard and set screw; the latter by a bar elongated beyond the periphery of the disk.

Claim.—First, the combination of the slotted standards B B', screws C C', and nuts K K', K K', or their equivalents, when attached to the index G, for the purpose of adjusting the wheel to be cut, at the proper height in relation to the cutter, and the arrangement of the elongated bar D, set handle screw E, for the purpose of regulating the depth of the cut, substantially in the manner and for the purpose herein set forth.

Second, in combination with the above the attachment of my gear-cutting apparatus to a common or engine lathe, substantially in the manner and for the purpose herein set forth.

No. 40,551.—JESSE H. BUNNELL, of Massillon, Stark county, Ohio.—*Improvement in Apparatus for Making Ice*.—Patent dated November 10, 1863.—The object is to fill the box with ice without its adhering to the bottom. This is secured by first allowing a proper thickness to freeze on top, then withdrawing the water beneath it to let that sheet of ice down on to the blocks or studs, then fill up to ascertain height, and so on till the box is filled, when the movable sides are withdrawn and the block removed.

Claim.—First, in combination with a box or vessel constructed substantially as herein described, the floor A, provided with the blocks or studs E and cocks or vents F F', for the purpose of preventing contact and adhesion between the ice and the floor, as explained.

Second, the movable sides C, constructed and secured substantially as herein described, for rendering the ice accessible to the dividing or sawing apparatus.

Third, in combination with the studded floor A E a series of cocks or vents F F' G G', arranged as and for the purposes specified.

No. 40,552.—JOEL BRYANT, of Brooklyn, N. Y.—*Improvement in Lids or Covers for Cans, &c.*—Patent dated November 10, 1863.—The invention consists in providing the lid or cover with a central opening and a plug or screw to close it in the final stopping of the air-tight cover.

Claim.—The exclusive use of lids or covers L for jars or cans, when provided with an opening V, and plug or screw S, or their equivalent, when constructed and operating substantially as herein described and for the purposes set forth.

No. 40,553.—JOHN WEBSTER COCHRANE, of New York, N. Y.—*Improvement in Revolving Fire-arms*.—Patent dated November 10, 1863.—This invention consists of two rammers connected by a yoke and operated by a lever segment-toothed wheel and rack; one of which will enter at the rear of the chamber to remove the cartridge case, and the other at the forward part of the chamber to ram home the cartridge. The cylinder revolving in connexion with a single barrel, and the chamber being filled as described at the side of the piece.

Claim.—The loading and unloading rammers or pistons d and d' connecting bar or yoke with the gear lever h for revolving fire-arms.

No. 40,554.—PHILIP H. CORBETT, of West Manchester, Alleghany county, Pa.—*Improvement in Locomotives*.—Patent dated November 10, 1863.—The improvement consists in an extra inner plate for the smoke-box and cinder chamber of locomotives, whereby the outer and main plate is protected from the immediate action of the fire.

Claim.—Making the body of the smoke-box of locomotives with double plates A B B', with an air space between them, with perforations C C', for the purpose of protecting the outer plate from the destructive action of the heat, substantially as specified.

No. 40,555.—PHILIP H. CORBETT, of West Manchester, Alleghany county, Pa.—*Improved Draught Regulator for Locomotives*.—Patent dated November 10, 1863.—This improvement consists in providing the escape pipe with a number of holes which are opened or closed by means of a circular thimble or sleeve which embraces that part of the escape pipe occupied by the holes, so that by the opening or closing the draught is increased or diminished.

Claim.—Providing the escape pipe C with openings or holes E and valves F operating substantially as and for the purpose specified.

No. 40,556.—TIMOTHY EARLE, of Smithfield, Providence county, R. I.—*Improvement in Preserves Cans, Jars, &c.*—Patent dated November 10, 1863.—The cap is placed so as to fit over the rim around the mouth of the jar, a plug is placed over the orifice in the lid, and a

hook cramping bar which catches under the flange of the neck on being rotated presses upon the cam-shaped rim of the plug and closes both it and the lid.

Claim.—The method, substantially as described, of controlling the air vent to a preserve can or jar by causing the same pressure which holds the cover upon the jar to secure the vent and the same motion which unfastens the cover to relieve the vent, as herein set forth.

No. 40,557.—SYLVESTER G. FARNHAM, of East Hartford, Conn.—*Improvement in Gates.*—Patent dated November 10, 1863.—The upper rail of the gate is very much extended, and the gate is slipped longitudinally from across the track; it is supported by a T-rail whose flanges are embraced by the upper and lower rollers as the gate traverses.

Claim.—Making the upper rail of a gate longer than the gate itself, in combination with a double-track rail plate *i* and rolls *d*, arranged and operating substantially in the manner as described.

No. 40,558.—DERRICK P. FELTS, of New York, N. Y.—*Improvement in Umbrellas.*—Patent dated November 10, 1863.—The ends of the ribs are hooked into holes in the crown piece and a disk screwed down on to them to prevent their disengagement.

Claim.—The hook-shaped ends of the umbrella ribs or braces, formed by bending the wire composing such rib or brace, in combination with the perforated crown piece or runner receiving such hooks, and with the disk at the back of such hooks for retaining them in place, as and for the purposes specified.

No. 40,559.—F. H. FURNESS and JACOB HOVEY, of Cleveland, Ohio.—*Improvement in Pistons for Steam Engines.*—Patent dated November 10, 1865.—By the openings the steam is admitted into the piston so as to expand the rings against the inside of the cylinder to keep it steam-tight. There are two sets of valves, communicating by orifices with the respective sides of the piston, so as to be operated by the steam from either side alternately.

Claim.—First, the openings *E* and *F*, valves *L*, in combination with the piston, as and for the purpose set forth.

Second, the hollow screw *K*, forming an adjustable valve seat, in combination with the valve *I* and piston, for purposes described.

Third, the grooves *M*, in combination with the openings and piston, as and for the purpose specified.

No. 40,560.—THOMAS W. GODWIN, of Portsmouth, Norfolk county, Va.—*Improvement in Lubricators.*—Patent dated November 10, 1863.—By the rotation in one direction the lower orifice is closed and the upper opened, and vice versa; the object is by one motion to admit oil from the upper cup to the reservoir while the steam is withdrawn, and by the other motion to close the upper passage and allow the lubricant to flow to the machinery. A central tube in the reservoir allows the condensed water to collect in the reservoir, the oil floating on the top and running over.

Claim.—First, the vertical shaft *C C'*, substantially as described.

Second, the tube *E*, in combination with the vertical shaft *C C'*, substantially as shown and described.

No. 40,561.—CHARLES W. GUEST, of Dexter, Washtenaw county, Mich.—*Improved Machine for Raising, Creasing, and Sticking Leather.*—Patent dated November 10, 1863.—The upper roller has a series of forms to be impressed on leather, and each is bounded by a thin deep flange for confining the strap laterally, while the flanges of the lower roller approach the forms between the flanges in the upper, and keep the leather pressed against said forms.

Claim.—The employment of the rollers *R'* and *R''*, in combination with the unequal-sized spur gear wheels *o'* and *o''* and the forked and weighted lever *D*, constructed, arranged and operated substantially as and for the purposes specified.

No. 40,562.—SAMUEL HOYT, of New York, N. Y.—*Improved Sugar Evaporator.*—Patent dated November 10, 1863.—This consists of a series of pans arranged in vertical series, the fire being applied under the upper one, and thence conducted in a diving flue to the second, thence to the third, under and through which it passes to the chimney; the bottoms of the pans are corrugated and inclined, and they discharge to the ones below by pipes. Other points of detail are explained in the claim.

Claim.—First, forming a flue communication between two or more evaporating pans arranged one above another, constructed with gradually diminished flues in their bottoms, substantially as herein described.

Second, increasing the amount of heating surfaces of the flues, in the several succeeding pans, according to the different conditions of the sirup subjected to these pans, substantially as described.

Third, the combination of the inclined longitudinally corrugated evaporating surfaces, with the transverse receiving troughs and discharge pipes, substantially as described.

Fourth, constructing the pan *A2* with a central corrugated flue *B4* passing through it and communicating with the common flue of the series of pans, substantially as described.

Fifth, constructing the pan *A'* with a corrugated evaporating plate *b'* and a corrugated bottom plate *a'*, both plates forming a flue of increased capacity, and constituting the bottom of said pan, substantially as described.

Sixth, a series of evaporating pans, arranged in or nearly in horizontal planes, one above another, and furnished with inclined evaporating surfaces and a common flue running through the whole, substantially as set forth.

Seventh, in combination with the system of evaporating pans, arranged substantially as described, the system of pipes for changing the sirup from one pan to another, substantially as set forth.

No. 40,563.—SAMUEL HOYT, of New York, N. Y.—*Improvement in Steam Boilers.*—Patent dated November 10, 1863.—The boiler is of a cylindrical form, with longitudinal corrugations; the flues are also corrugated, and consist of a central and two curved flues; the jacket or case enclosing the furnace is made flaring towards the front, and affords space for an auxiliary grate on each side of the main furnace.

Claim.—First, constructing the shell of a steam boiler with that portion of its surface which is exposed to the fire and heat corrugated, and that portion which is not thus exposed plain or uncorrugated, substantially as described.

Second, combining with a partially corrugated boiler shell the corrugated jacket *B*, so applied thereto that it forms a flue space, encloses that portion of the boiler shell which is corrugated, and communicates with the internal flues *B C C*, substantially as described.

Third, the auxiliary fire chambers *J J*, in combination with the main fire chamber *G* and flaring jacket *E*, substantially as and for the purposes described.

Fourth, the combination of the internal curved flues *C C* with the central circular flue *B*, substantially as described.

No. 40,564.—ANTONI ISKE, of Lancaster, Pa.—*Improved Extension Bedstead.*—Patent dated November 10, 1863.—The head and foot boards, when closed and a loose board put on, resemble a cabinet; on being extended, their pivoted truss connexion forms the side, and the cross-bars of the same support the transverse slats for the mattress. The foot board being dispensed with, and the back inclined and supported by the ratchet bar makes a settee.

Claim.—The employment of pivoted cross-slats *L*, in combination with the head and foot boards of a bedstead *A* and *F b*, or their equivalent, the front and rear portions of a side board *B* and *F*, with their sides *S1* and *S2* and loose top *T*, made and arranged substantially as shown, with the slotted plates *K*.

Also, the ratchet *O*, in combination with the affixed or hinged head-board *A*, cross-slats *L*, and rails *R*, when arranged substantially in the manner shown, for the purpose specified.

No. 40,565.—SAMUEL JOLLY, of Ripley, Brown county, Ohio.—*Improvement in Grain Drills.*—Patent dated November 10, 1863.—The seed slides are operated from a cross-bar attached by pitmen to the cranks on the driving wheel. The pitmen are detached from the cross-bar, and the seed dropping stopped by means of a hand rod and a rocking frame which lifts the pitmen.

Claim.—The combination and arrangement of the slides *k*, cross-bar *j*, pitmen *i i*, and cranks *A A*, as and for the purpose specified.

In combination with the pitmen *i i* the arrangement of the U-shaped piece *s* and hand rod *t*, for disengaging the pitmen from the cross-bar *j*, and temporarily suspending the delivery of seed, as herein described.

No. 40,566.—GEORGE A. JONES, of New York, N. Y.—*Improvement in Lamps.*—Patent dated November 10, 1863.—Explained by the claim.

Claim.—Constructing lamps, which use an impelled current of air to promote combustion, with an outer or enclosing case or shell surrounding the oil chamber, but at a little distance from it, so that the impelled current of air may pass up around the oil chamber, and in the space between it and the enclosing shell, to the wick, for the purposes set forth.

No. 40,567.—MELVIN W. KNOX, of Sheridan, Chautauqua county, N. Y.—*Improvement in Securing Combined Railroad Chair and Splice-piece.*—Patent dated November 10, 1863.—The splice-piece and chair extends under the rails on each side of the joint, and also acts as a side brace; it is fastened to the rail by key bolts, and the latter being entered from opposite directions, are retained in their mortices by a spring.

Claim.—A railroad chair and coupling combined, together with the bolts and keys secured by a spring, substantially as described and for the purposes set forth.

No. 40,568.—CHARLES EUGENE, of Laederich, St. Amier, Canton of Berne, Republic of Switzerland.—*Improvement in Winding and Setting Watches.*—Patent dated November 10, 1863.—Patented in France May 19, 1863.—The winding up and the setting of the hands of

the watch take place by the knob of the pendant, through the intervention of a sliding stem and pinion. The pin is locked in the winding position by a stop, and is unlocked and pushed further in to engage the hand-setting mechanism.

Claim.—The sliding stem *d*, carrying a pinion *f* that will alternately by moving it rotate the wheel *h*, or the wheel *p*, and thus wind up the watch or set the hands, substantially as herein described.

Also, in combination with the sliding stem *d*, the neck *o* and sliding stop *n*, for the purpose of holding said stem and its pinion in proper position for winding the watch, its other position for moving the hands being regulated by the end of its movement, thus enabling the user to operate the parts by one hand only, substantially as described and illustrated by the annexed drawings.

No. 40,569.—JONATHAN LILLY, of Castle Creek, Broome county, N. Y.—*Improvement in Water Elevators.*—Patent dated November 10, 1863.—This lever, whose upper end is shod with a pawl, engages, under the influence of the spring, with the ratchet teeth, but when thrown out by the lateral pressure of the foot it disengages the pawl, and by still more forcible pressure in the same direction rubs against the inside of the ratchet wheel and acts as a brake.

Claim.—The combination and arrangement of the lever *L*, spring *S*, brace *b*, pawl *P*, ratchet wheel *R*, and windlass *W*, as and for the purposes set forth.

No. 40,570.—ALBERT MAGEE, of Lawrence, Essex county, Mass.—*Improvement in Portable Furnaces.*—Patent dated November 10, 1863.—This consists of an upper cylindrical portion with a smaller cylinder below, the latter setting down into the pot hole on a cooking stove; the air is admitted at an opening immediately above the stove plate, and is conducted downward under the grating, and escapes by a flue under the said plate.

Claim.—The combination, in a portable furnace, of the induction cold air flue *F*, smoke exit flue *G*, and grate *C*, when constructed to be used as a utensil upon a cooking stove or range, substantially as described.

No. 40,571.—ADOLPH MILLOCHAN, of New York, N. Y.—*Improvement in Rotary Steam Engines.*—Patent dated November 10, 1863.—This consists of induction and eduction pipes and cocks applied to a wheel which is attached to a shaft, having notches in its periphery receiving pistons that remain in contact at their outer edges with the interior of a circular case eccentric to the shaft, and at their inner edges with rings eccentric to the shaft, but concentric with the case, whereby an outer and inner crescent-shaped space are produced, in which the steam is admitted to act upon the inner and outer portions of the pistons, and produce rotation by the direct action in either direction, according to the position of the said valves or cocks, in the said eduction and induction pipes.

Claim.—The pipes *i l n* and *o*, and valves or cocks *k k' m* and *m'*, in combination with the ring *c* and pistons acting in the steam spaces *y* and *z*, substantially as specified.

No. 40,572.—WILLIAM MORGENSTERN and EDWARD MORWITZ, of Philadelphia, Penn.—*Improvement in Breech-loading Fire-arms.*—Patent dated November 10, 1863.—The breech-block is slipped longitudinally into and out of position and has a projection on its forward end that slips into the end of the bore; this projection has an orifice in front for the priming cap and one below through which the exploding needle works. The guard lever is pivoted on a hanger and at its forward end engages a vertical bolt which locks the breech-block in position; to this bolt is attached the hammer, and on pressing up the rear end of the lever the breech-locking bolt and the hammer are withdrawn, a dog catching in notches 1 and 2 in the bolt; the motion of the trigger releases the dog, the bolt flies up and locks the breech, and the needle attached to the hammer explodes the cartridge.

Claim.—First, the breech-block *C*, constructed, arranged, and operating substantially as herein described and represented.

Second, the combination of the bolt, and needle or hammer, with the mainspring, lever, dog, and trigger, for the purpose of cocking and letting go said bolt and needle or hammer, substantially as described.

No. 40,573.—FRANCIS PEABODY, of Salem, Mass.—*Keyed Instrument of Music.*—Patent dated November 10, 1863.—A circular plate on a vertical axis carries a plate which has dents or pins in concentric circles which operate levers communicating with the key-board of a musical instrument. The levers are arranged in two sets diverging to the right and left, respectively; the motion is communicated by suitable gearing to the shaft of a fan regulator.

Claim.—First, in keyed instruments the use of concentric series of dents *I J*, or their equivalents, mounted on removable plates *G*, and arranged relatively to a removable series of levers *C*, so as to operate therewith, in the manner substantially as herein set forth.

Second, the division of the levers into two independent sets *C C'*, operated on opposite or nearly opposite parts of the plate *G*, substantially as and for the purpose herein set forth.

Third, the speed regulator composed of the hollow shaft *L*, changeable rings *N N'*, and adjusting rod *P*, arranged to operate in connexion with each other and with the automatic works of a keyed instrument, substantially as and for the purpose herein set forth.

No. 40,574.—H. PARKER ROSS, of Hastings, Oswego county, N. Y.—*Improvement in Portable Fences.*—Patent issued November 10, 1863; antedated October 24, 1863.—A dowel pin enters the slots between the upper and second boards of the respective panels; the fence is supported by stakes attached to the panels by staples.

Claim.—Providing the panels with the staples *B*, and movable post *C*, in combination with the dowel *A*, the whole constructed and arranged in the manner and for the purpose herein set forth.

No. 40,575.—VOLNEY E. RUSCO, of Chicago, Ill.—*Improved Machine for Tanning.*—Patent dated November 10, 1863.—This is a cylindrical reservoir revolving by means of its gear wheel and a worm wheel rotated by hand. The cylinder is journaled in a vat and communicates with the same by holes in its periphery. The hides are prevented from rolling into a heap by means of radial pins projecting from the inside of the cylinder and set spirally around it.

Claim.—The machine for tanning hides, constructed and operated in the manner set forth.

No. 40,576.—GEORGE ESCOL SELLERS, of Hardin county, Ill.—*Disintegration of Vegetable Substances for the Separation of Fibre, &c.*—Patent dated November 10, 1863.—The invention consists in removing the non-fibrous matter from the stalks, leaves, &c., under treatment, some by a current of steam and some by coagulation, crushing, and washing, leaving the fibre comparatively free.

Claim.—First, the disintegration of vegetable substances, in the manner substantially as described and for the purposes specified.

Second, the utilizing of the non-fibrous portions of vegetable substances when separated from the fibrous portions, for the purposes specified.

No. 40,577.—REBECCA SHERWOOD, of Fort Edward, Washington county, N. Y.—*Improvement in Reducing Hemp, Flax, &c., to a Fibrous Condition.*—Patent dated November 10, 1863.—A solution is made as follows: water, 1,500 gallons; soda ash, 575 pounds; borax, 20 pounds; rosin, 8 pounds; and soda ash, 10 pounds; dissolved in a pail of water; this amount for a ton of the substance, which is to be reduced to a textile fibre, which is boiled in it. Other formulæ are given, including saponaceous compounds, and those in which coal oil is combined.

Claim.—First, the use of the solutions combined as described, for the purpose of reducing hemp, flax, grass, straw, and other fibrous substances to a textile fibre for the manufacture of textile fabrics and pulp for paper, substantially as described.

Second, the use of coal oil, naphtha, benzine, or other liquid hydro-carbon, either alone or combined with alkaline or soapy solutions, for the purpose of reducing hemp, flax, grass, straw, and other fibrous substances to a textile fibre for the manufacture of textile fabrics, or for pulp for all kinds of paper, substantially as described.

No. 40,578.—DANIEL C. SMITH, of Adrian, Lenawee county, Michigan.—*Improvement in Trusses for Hernia.*—Patent dated November 10, 1863.—The two parts of the spring are attached by a hinge, and the pressure of the spring is adjusted by means of the set-screw and nut and the projections on the respective portions of the spring.

Claim.—First, the screw *F* and nut *G*, operating in connexion with the projections *D* and *E*.

Second, the joint *B B*, as above described, for the purposes set forth and described.

No. 40,579.—GEORGE STEVENSON, of Zionsville, Boon county, Ind.—*Improved Sugar-Evaporator with Automatic Feeder.*—Patent dated November 10, 1863.—A float in a chamber connected with the pan admits the juice to the evaporator. The last or "sugaring off" pan is disconnected at will from the direct action of the fire by means of the plate, damper, and an interposed corner chamber and a side opening which cools that part; a low place in the side of the last pan receives the overflow of foam into a side chamber and conducts it back to the pan.

Claim.—First, regulating the flow of the juice to the evaporating pan *B* by means of the float *i*, when so arranged as to rise and fall by the action of the juice in the pan and by its operation control the admission of juice thereto, substantially in the manner and for the purpose herein described.

Second, in combination with the division *c* of the evaporator *B*, set below the level of the other part or parts as herein described, the combination and arrangement of the damper *m*, plate *k*, flues *l l'*, air chamber *o*, and side doors *n*, substantially as herein shown and described.

Third, in combination with the pan *B*, or division thereof *c*, the thin metal side chamber *p*, constructed and arranged in connexion therewith, substantially in the manner and for the purpose described.

No. 40,580.—JOHN SYRCHER, of Buffalo, N. Y.—*Billiard Cushion.*—Patent dated November 10, 1863.—This consists of a strip cut spirally and continuously from horn, and after suitable treatment, inserted as a facing for, or in a slit in the cushion to give an elastic spring to the latter.

Claim.—The application and use of a strip of horn, in connexion with an India-rubber pad, for the purpose of making an improved billiard cushion, substantially as herein described.

No. 40,581.—J. TERRELL, of Philadelphia, Pa.—*Improvement in Moulds for Forming Artificial Teeth.*—Patent dated November 10, 1863.—The devices recited in the claim are designed to make depressions in the bases of the teeth; to facilitate their withdrawal from the moulds after the depressions are made, and to make longitudinal openings in the teeth communicating with said depressions. These salient points and communicating slots render them peculiarly fit for setting in vulcanite gum plates.

Claim.—First, the stationary projections *a*, for forming recesses in the teeth, in combination with the key *E* and movable strips *D*, for permitting the teeth to be withdrawn from the said projections, in the manner described.

Second, the employment of the movable pins *G* in the manner and for the purpose described.

No. 40,582.—JAMES H. VAN SICE, of Buffalo, Erie county, N. Y.—*Improved Horse Collar.*—Patent dated November 10, 1863.—This collar consists of a rigid stuffed rim, which gives shape and firmness to the collar, a roll behind the rim which receives the draught of the hame, and an elastic pad of leather between the roll and the horse's shoulder.

Claim.—A horse collar having an elastic and flexible pad *B*, stuffed rim *A*, and roll *C*, constructed substantially as described.

No. 40,583.—WILLIAM F. VERNIER, of Philadelphia, Pa.—*Improvement in Device for Locking Screw-nuts.*—Patent dated November 10, 1863.—This consists of a plate which is set down between the nuts with its edges in contact with the sides so as to prevent their rotation. The plate is fastened by its two depending lugs which are engaged by a stationary and a removable bolt.

Claim.—The plate *L L*, with the lugs *N N*, and the rods *G* and *M*, constructed and applied substantially as above described and for the purposes set forth.

No. 40,584.—GEORGE J. WARDWELL, of Coaticook, Stanstead county, province of Canada.—*Improvement in Stone-cutting Machine.*—Patent dated November 10, 1863.—This machine is intended for cutting trenches in stone quarries. The special object attained consists in being able to cut the wall trenches by operating the cutters or drills on the outside of the frame of the machine and the track on which it moves; also, the convenience of changing the cutters or drills, by allowing the outside standard to swing from its position, and being so arranged as to allow the machine to cut both ways and keep the machine more diligently at work.

Claim.—The guide blocks *T* and *U*, packing blocks *C'*, bolts *a'*, clamp rods or bolts *b'*, arranged and combined as herein specified.

Also, the corrugations on the side of the cutters or drills *S*, and corresponding corrugations on the inner surfaces of head guide blocks *T*, packing block *c'*, bolts *a'*, clamp rods or bolts *b'*, as arranged and combined for effecting the objects specified.

Also, the double-acting feed arm or plate *q'*, connecting rod *U*, vibrating lever *r'*, combined and arranged in the manner and for the purpose herein described.

Also, the standards *R*, arranged on the outside of frame *A* in the manner and for the objects specified.

No. 40,585.—STEPHEN S. BARTLETT, of Providence, R. I., assignor to Himself and THOMAS H. DODGE.—*Improvement in Harvesters.*—Patent dated November 10, 1863.—The object of this invention is to avoid friction in draught. This is accomplished by throwing the direct strain upon the tongue socket pieces, giving the tilting frame and tongue a common axis of motion.

Claim.—The combination in a mowing machine of a tilting frame, to which the finger beam is attached, and a hinged tongue in such a manner as that the frame and tongue shall both have a common axis of motion, while, in drawing the frame and cutting apparatus forward, the draught thereof shall come directly upon the metal tongue socket pieces, or their equivalent, and not upon the main axle, whereby much friction is avoided and the machine rendered of more easy draught, substantially as described.

No. 40,586.—MARTIAL DIMOCK, of Newark, N. J., assignor to PORTER FITCH, of Brooklyn, N. Y.—*Improved Machine for Twisting Wires for Marking Tags.*—Patent dated November 10, 1863.—The tag and the barb are placed on the loops of the wire, while the two ends are fastened in a central rest. The two loops are then attached to the stationary and revolving centres, and the latter rotated, which twists the wire and secures the tag and barb at their respective ends.

Claim.—First, the construction and use of the shaft *a*, having the aperture *i* and the double tenon *k*, substantially as shown and described.

Second, the construction and use of the sliding shaft *l*, having the double tenon *A* and the notches in the shoulder *o*, substantially as shown and described.

Third, the arrangement and use of the shaft *a*, having aperture *i* and double tenon *K*, the sliding shaft *l*, with its double tenon *A*, and notches in the shoulder *o*, in connexion and cooperation with each other and with the shaft *o*, when used for twisting wires, substantially as shown and described.

No. 40,587.—HORACE FISHER, of Waterford, Saratoga county, N. Y., assignor to Himself and FULLER & SAFELY, of Cohoes, N. Y.—*Improvement in Tool for Manufacturing Knitting Burs.*—Patent dated November 10, 1863.—The object is to hold the cylinder fast while the wings are placed in their proper position; the cylinder and its neck being embraced between the collar and cup and the button, the wings are slipped into their slots upon the cylinder, and the nut being tightened, brings each to its true position without separate adjustment, and the solder is applied to complete the operation.

Claim.—The combination of a spindle *E* and its button *G*, screw and nut *N*, with a follower *K*, and collar *H'*, substantially as described and for the purpose set forth.

No. 40,588.—JOHN C. RHODES, of East Bridgewater, Mass., assignor to B. HOBART & SON, of same place.—*Improvement in Machines for Nicking Screw Blanks.*—Patent dated November 10, 1863.—The screw blanks are brought to the feeder by hand or otherwise, and, passing down its inclined surface, are received in a recess and transferred by the carriage to and under the saw, which cuts a nick across the head of each blank. During this movement and operation the shank is held by a spring, which, in the retractive movement, ceases to act. The cam discharger removes the blank from the niche in the carriage, and the latter starts for another blank.

Claim.—The improved machine or combination, constructed in manner and so as to operate substantially as above described, such machine not only having an inclined feeding trough *M*, a blank receiver or carriage *F*, a presser *N*, a rotary saw or cutter *E*, a discharger *O* and saw adjustments, substantially as hereinbefore described, but being provided with a spring *K*, applied to the blank receiver or carriage so as not only to retract the latter, but to enable it to move in an opposite direction, under derangement of a screw blank, as set forth.

No. 40,589.—JEROME B. SECOR, of Chicago, Ill., assignor to Himself and W. H. BUTLER, of same place.—*Improvement in the Loop-Check of Sewing Machines.*—Patent dated November 10, 1863.—This is intended as a substitute for the pad or brush used to temporarily detain the loop, as in the Wheeler & Wilson machine; it consists of a hook attached to the bobbin ring, with its point almost directly in line with the needle's motion, and discharging the loop backwards at the proper point for disengagement.

Claim.—Having the lower face of the bobbin ring *A*, provided with a recess *a* and a loop-check *b*, projecting over a portion of such recess, the whole constructed, arranged, and operating together substantially in the manner herein shown and described.

No. 40,590.—GEORGE C. TAFT, of Worcester, Mass., assignor to THOMAS H. DODGE, of Nashua, N. H.—*Improvement in Wrenches.*—Patent dated November 10, 1863.—On the end of the screw shank are several annular projections which traverse corresponding channels in the main shank, and relieve the ferrule from strain.

Claim.—The combination of the parallel grooves *d d d*, in the shank *A*, in the corresponding projections *e e e*, on the rosette *D*, the same not being spiral, but running at right-angles to the line of motion of the jaw, thus relieving the ferrule from all strain while retaining the rosette in the same relative position as respects the handle of the wrench, substantially as and for the purposes set forth.

No. 40,591.—S. LLOYD WIEGAND, of Philadelphia, Pa., assignor to ABRAHAM HART, of same place.—*Improvement in Gas-heating Apparatus.*—Patent issued November 10, 1863; antedated November 2, 1863.—The improvement consists in the arrangement of the burner in its inverted funnel-shaped cap, and the passage under the convex end of the cylindrical boiler, which latter is supported upon the base by lugs on the annular plate which rests on rods rising from the base, and by projections on the lower end of the boiler which rest on a flanged rim which rises from the base. The lower half of the boiler is surrounded by a casing forming a chimney.

Claim.—First, the combination of the burner *H* and adjustable cap *J*, with the funnel *X*, when used in the manner and for the purpose set forth.

Second, combining the external fender or chimney *C* with the burner *H*, adjustable cap *J*, and a funnel *X*, for the uses hereinbefore specified.

Third, the manner of attaching the boiler and fender to the base ring *E*, by means of the lugs *T T T*, and projections *Z Z*, ring *G*, and bolts *D D D*, when in combination with the adjustable screw funnel, constructed and used in the manner set forth.

No. 40,592.—STEPHEN M. ALLEN, of Woburn, Mass.—*Improved Floor Cloth.*—Patent dated November 17, 1863.—Scraps of leather are steeped and washed in warm water with or without alkalis, thereby removing a portion of the tannin in the leather. They are then ground and mixed proportionately with vegetable or animal matter, from which the gummy matter has not been extracted. Scraps are added to reduce it to the proper consistency. The mass is then pressed between rollers and converted into sheets, ready for painting or printing.

Claim.—First, as a substitute for canvas and cloth used in the manufacture of painted carpets or floor coverings, sheets made by combining scrap leather with fibrous substances, in the condition and manner hereinbefore set forth.

Second, the stuffing, painting, printing, or staining, in the manner and for the purpose specified, of sheets made by combining scrap leather with fibrous substances, in the condition set forth.

Third, as a new article of manufacture, floor covering, made substantially as herein described, by first forming a sheet of leather scraps and vegetable or animal fibre as described, and by then coating the same with paint, or its equivalent, for ornamenting the same, as set forth.

No. 40,593.—STEPHEN M. ALLEN, of Woburn, Middlesex county, Mass.—*Improved Fabric for Insoles.*—Patent dated November 17, 1863.—The inventor soaks leather scraps in water or any suitable solution to wash out a portion of the tannin, and adds a proper amount of fibrous materials in their unrotted state, grinding the whole in a pulp mill. After well mixing the materials he adds a proportionate quantity of raw untanned scrap hides, making a pulp of the whole, which, after being run off upon an apron attached to a board or paper machine, is formed into a sort of leather paper, suitable for the production of insoles.

Claim.—As a new article of manufacture and substitute for leather used in the manufacture of insoles, the herein described composition, the same consisting in combining untanned leather scraps with tanned leather scraps, when the latter is prepared and mixed with vegetable fibrous matter, substantially in the manner herein set forth.

Also, as a new article of manufacture, an inner sole for boots and shoes, formed of the within described composition, substantially in the manner herein set forth.

No. 40,594.—JAMES S. and T. B. ATTERBURG, of Pittsburg, Alleghany county, Pa.—*Improvement in Lanterns.*—Patent dated November 17, 1863.—The invention consists in placing a disk of polished metal permanently within a circular depression on the side of the "globe," so that on one hand its surface is not exposed to the air to tarnish, and on the other hand the glass of the globe protects it from the smoke of the burner.

Claim.—A metal plate reflector, in combination with a lantern globe, substantially in the manner and for the purpose set forth.

No. 40,595.—H. F. and T. R. BARGAR, of Border Plains, Webster county, Iowa.—*Improvement in Corn Planters.*—Patent dated November 17, 1863.—This invention consists in a seed-dropping device, operated by the hand of the driver, and calculated to insure certainty and evenness in the execution of the work.

Claim.—The arrangement and combination of the cylinder H, pawl J, lever M, provided with the two valves *p s*, rock-shaft *l*, and lever K, as and for the purpose herein set forth.

No. 40,596.—ALVY T., JOHN B., and SOLOMON BARNS, of Grosbeck, Hamilton county, Ohio.—*Improved Stave-making Machine.*—Patent issued November 17, 1863; antedated November 11, 1863.—The invention consists in the convenient arrangement and combination of the different appliances for making staves. The circular saw, in connexion with a sliding frame for cross-cutting the ends of the stave timber; the knife and rest for shaving the sides, and the jointer and rest for preparing the edge of the stave.

Claim.—A stave-making machine, having three different parts or devices—one for cutting the stave to the proper length; the other for dressing the sides of staves in proper shape; and the third for dressing the edges of the same, all combined and arranged together on one bench, and each part consisting substantially of the devices and parts set forth in this specification.

No. 40,597.—PHILO D. BECKWITH, of Dowagiac, Cass county, Mich.—*Improvement in Grain Drills.*—Patent dated November 17, 1863.—This invention consists in an arrangement for securing an even discharge of grain by preserving the uniformity of the aperture; and, secondly, in the construction of the rollers or wheels with tubular guards and extension hubs, which indent the ground for the reception of the seed.

Claim.—First, the arrangement of the fixed projections *g g* on the stationary plate or jaw F, in combination with the screw bolts *m*, angular slots *h h*, and the movable plate or jaw G, substantially as herein described and represented in the drawing, for the purpose set forth.

Second, the combination of the tubular guards, rollers, or wheels with extension hubs and the axle, substantially as and for the purposes set forth.

No. 40,598.—WILLIAM H. BENTLEY, of Westford, Otsego county, N. Y.—*Improvement in Hay-loading Machines.*—Patent dated November 17, 1863.—The object of the machine is to take up, elevate, and discharge hay from the windrow into a wagon, and the invention consists in certain details of arrangement in the belt, rake-heads, and discharging board, and rear support.

Claim.—The arrangement of the rake-heads G, grooved board *h*, and grooved roller D, with the apron C, rake B, and discharging board H, all in the manner herein shown and described.

Also, the arrangement of the caster wheel J, spring K, and brace handle I, with the frame A, all in the manner herein shown and described.

No. 40,599.—SIDNEY BERRY, of Grand Rapids, Michigan.—*Improvement in Fire-arches, or Furnaces of Evaporating Apparatus.*—Patent dated November 17, 1863.—The object of this invention is to economize heat by preventing the radiation from the sides, ends, or bottom of the furnace. This is accomplished by lining the fire-walls with stucco, and making an air-chamber around the sides and back.

Claim.—The walls D and C, with the air-chamber between them, the stucco layer or filling G, and the inverted brick arch F, terminating in walls B, the whole constructed and arranged substantially as set forth.

No. 40,600.—T. F. BINGHAM, of Gowanda, Cattaraugus county, N. Y.—*Improvement in Beehives.*—Patent dated November 17, 1863.—This invention consists in an arrangement for regulating the hive by means of a passage, covered by wire cloth extending from the main chamber through the middle floor, and between and around the honey boxes.

Claim.—The partition plate D, provided with holes *h*, as shown, and an oblong opening *i*, covered with wire cloth *j*, in connexion with the slot O in the box F, and the arrangement of the two spare honey boxes E E, for the purpose of controlling the ventilation of the hive, as set forth.

No. 40,601.—JOHN BRETT, of Geneva, Ashtabula county, Ohio.—*Improvement in Harvesters.*—Patent dated November 17, 1863.—This improvement consists of a seat, sliding laterally upon a shaft with springs on each side to break the jar of the lateral concussion, securing the ease of the driver, and obviating much of the danger of being thrown off.

Claim.—The frame A attached to the harvester, in combination with the plate B and springs D D, all arranged to operate in the manner substantially as and for the purpose herein set forth.

No. 40,602.—FREDERICK W. BROCKSIEPER, of Bridgeport, Conn.—*Improvement in Gas Regulators.*—Patent dated November 17, 1863.—This device is intended to regulate the issue of gas, and consists of a regulating screw, which protrudes through the under side of the valve chamber into an orifice in the inner chamber, which is suspended upon an elastic diaphragm; the said chamber connecting, by a valve opening below, with the pipe from the meter; the turning of the screw forward or backward by decreasing or increasing the size of the orifice, regulates the light.

Claim.—The arrangement and application of the regulating screw A, or its equivalent, in combination with the elastic diaphragm C and valve D, in the manner and for the purpose substantially as herein set forth and described.

No. 40,603.—ELIPHALET C. BROOKS, of San Francisco, Cal.—*Improvement in Vehicle Springs.*—Patent dated November 17, 1863.—The improvement consists in mounting the body upon springs resting upon a curved bar, which, in turn, impinges upon shackles on bars ironed together in the centre and spanning the distance from axle to axle; a spring K fastened centrally to a curved bar which spans the width of the carriage is pivoted at its ends on the springs I, and prevents the rolling motion.

Claim.—The shackles or bars B, connected together and applied to the axles A A, as shown, in combination with the curved bars E E L and the springs I I and K, with or without the rubber *c g c'*, all arranged substantially as and for the purpose herein set forth.

No. 40,604.—H. BUCKWALTER, of Kimberton, Chester county, Pa.—*Improved Cherry-Stoner.*—Patent dated November 17, 1863.—This invention consists in the arrangement of a rotary disk with curved ribs, in combination with an adjustable hopper and a grooved channel, in such a manner that, by the action of the curved ribs on the edges of the hopper and channel, the stones are squeezed out and caused to escape sideways through said channel, and the pulp is deposited in a suitable vessel or reservoir below.

Claim.—First, the rotary disk E, with curved ribs *a*, in combination with an adjustable hopper E, and side channel G, constructed and operating as and for the purpose shown and described.

Second, the arrangement of the shoulder or offset *d*, groove *e*, and shoulder *f* in the channel G, to operate in combination with the rotary ribbed disk E, substantially as and for the purpose specified.

No. 40,605.—JASON CADWELL, of Dexter, Washtenaw county, Mich.—*Improved Manure Distributor.*—Patent dated November 17, 1863.—It consists of a vessel with a perforated bottom, a register to close the openings, and a handle to convey it by, and is intended to sow plaster and other pulverulent manures.

Claim.—The vessel A, provided with a handle B and a perforated bottom *a*, and with or without the register D, substantially as and for the purpose herein set forth.

No. 40,606.—WILLIAM CHISHOLM, of Cleveland, Ohio.—*Improvement in Machines for Making Nuts.*—Patent dated November 17, 1863.—The mandrel C, working between suitable guides on the bed plate, is actuated by a cam working in a slot; as the cam rotates it strikes the friction plate D, and, carrying it down, reduces the friction of the surfaces. The

mandrel is propelled by this motion, and nipping the bar between the two dies cuts off the piece, and, the punch advancing makes the hole and drives the disk into the hollow of the mandrel, from whence it is discharged at R'. The retreating mandrel, operated by cams B, draws the female die with it a short distance, and the impact of the short cam releases the nut, which is discharged at R.

Claim.—First, the cams A and A' B and B, in combination with the mandrel C, arranged and operating as specified.

Second, the friction plate D, when arranged and used substantially as set forth.

Third, the male die E and plate G, in combination with the sides F F' and plate f of the matrix, when arranged as and for the purpose specified.

Fourth, the recess F'' in the side F, and the corresponding projection G' in the head-plate G, for the purpose described.

Fifth, securing the male die in place by means of the jam block o and set screw d, constructed and arranged as described.

Sixth, the herein-described device for steadying and adjusting the punch.

Seventh, the mandrel H, bar g', and rod H' for removing the formed nut from the punch in the manner specified, by the retreating action of the mandrel C.

No. 40,607.—THOMAS L. CHURCH, of Syracuse, N. Y.—*Improvement in Tobacco-Cutters.*—Patent dated November 17, 1863.—The improvement consists in the method of attaching the knife to the stock, which is accomplished by means of a clamp with stops, which, being fastened by temper screws to the stock, is caused by a cam under its rear edge to press the clamp firmly upon the blade.

Claim.—First, the employment or use of the clamp C, substantially such as herein specified, for the purpose of securing the knife blade B to the stock A.

Second, the cam c, in combination with the clamp C, knife blade B, and stock A, all constructed and operating in the manner and for the purpose substantially as herein specified.

Third, the stops g, in combination with the clamp C, knife B, and stock A, all arranged and operating as and for the purposes set forth.

No. 40,608.—J. H. CONNELL, of Lexington, Fayette county, Ky.—*Improvement in Balloons.*—Patent dated November 17, 1863.—This balloon is constructed of a boat shape; has a car of a similar form, and the two are connected by posts, so as to enable them to move on one body.

Claim.—The posts D D', in combination with the balloon A, and car E, constructed and applied in the manner and for the purpose substantially as herein shown and described.

No. 40,609.—J. S. CORBIN, of Ann Arbor, Mich.—*Improvement in Gates.*—Patent dated November 17, 1863.—This gate is made of a truss construction, or, as it is sometimes called, the lazy tongs principle, and is collapsed up against the post when open, and expanded when shut. The operation being performed by ropes which run upon rollers or pulleys, and lift the upper edge of the truss so as to collapse it, the lower edge being bolted fast to the post; another rope, passing down under a roller and returning back over the rollers, affords the means of closing the gate again.

Claim.—The arrangement of the fixed pulleys g h i and cord f, with the post B, slotted as shown, gate A, and bolt d, all constructed and operating as herein shown and described.

No. 40,610.—JOHN R. DAVIS, of Bloomfield, Davis county, Iowa.—*Improvement in Cone Planters.*—Patent dated November 17, 1863.—The cone pulleys are driven by one of the wheels of the machine, and work in combination with the other devices recited in the claim for the purpose described.

Claim.—The employment or use of the cone pulleys C C' and elastic band C2, in combination with the crank D', pitman G, post H, and bar K, with their accessories for imparting a variable reciprocating motion to the slide M, arranged and operating substantially as set forth.

No. 40,611.—S. W. DAVIS, of Wilmington, Del.—*Improvement in Horseshoe Machines.*—Patent dated November 17, 1863.—This is an improvement on the machine of Thomas R. Taylor, patented April 3, 1860. The pivoted jaws carry the forming dies, of which the rounded rib has an additional bead on its edge; these jaws are suspended from blocks, which are relatively adjustable and are attached to a reciprocating cross-head, which as it descends pushes the points of the jaws into the throat formed in the bed of the machine and bends the heel ends of the shoe towards each other.

Claim.—First, in combination with the two arms K K' of the jaws, and the reciprocating cross-head I, the two blocks J and J', when the same are rendered adjustable either together or independently of each other, substantially as and for the purpose described.

Second, a supplementary rib q formed on the edge of the rounded rib q of the forming dies Q, as set forth for the purpose specified.

No. 40,612.—M. DECAMP, of South Bend, St. Joseph county, Ind.—*Improvement in Water Wheels.*—Patent dated November 17, 1863.—The bed-piece has a ring which projects upwards

into the lower rim of the wheel, and a funnel-shaped ring projects downwardly from the decking into the upper rim of the wheel.

Claim.—First, the ring E placed on the bed piece d, in which the shaft D is stepped and fitted in the lower rim a of the wheel C, substantially as and for the purpose specified.

Second, the conical or funnel shaped ring F, fitted in the circular opening h, in the decking or planking B, and within the upper rim a of the wheel, substantially as and for the purpose set forth.

No. 40,613.—JOHN B. DOUGHERTY, of Rochester, Monroe county, N. Y.—*Improved Hoop Machine.*—Patent dated November 17, 1863.—The splint is passed between the surfaces of a grooved central roller and a semicircular system of rollers around the central, where it is pressed and caused to assume a correct shape to fit the barrel.

Claim.—The method herein described of forming splints into hoops by passing them between a series of rollers arranged and operating in the manner and for the purpose substantially as described.

No. 40,614.—JOHN H. ELWARD, of Ottawa, La Salle county, Ill.—*Improvement in Harrows.*—Patent dated November 17, 1863.—This consists of elliptical bars secured to links which form the frame of the harrow; the harrow teeth pass through the elliptical bars, projecting considerably on one side and but a short distance on the other; either side of the harrow is to be used as the nature of the work requires.

Claim.—In combination with the convex or elliptical bars A the short inclined teeth c, when constructed and operated substantially in the manner and for the purposes herein described.

Also, in combination with the convex or elliptical bars A and short inclined teeth c, the links B, substantially in the manner and for the purposes described.

Also, in combination with the elliptical hinged bars A, the harrow teeth C and the short elod-breaking teeth c, when the latter are the prolongation of the former, substantially in the manner and for the purpose described.

No. 40,615.—JOHN FISH, of New York, N. Y.—*Improvement in Steam Engines.*—Patent dated November 17, 1863.—The cylinder has two pistons with rods working through its respective ends; the back one is connected by side rods to a cross-head and pitman to one crank, and the other one is connected through an interval in said cross-head with another crank on the same shaft.

Claim.—In a single cylinder engine having two pistons with their piston rods, each working through the opposite cylinder heads, the arrangement of the cross-head E, in connexion with the piston rod of piston B, whereby the piston rod, cross-head, and connecting rod of piston b can work through the space or aperture of cross-head E upon their own crank, by which means two connecting rods of equal length can be obtained, each working upon an opposite crank upon the same shaft, substantially as specified and in the manner herein set forth.

No. 40,616.—LANCELOT HOPE EVERITT, of New Orleans, La.—*Improvement in Acoustic Telegraphs.*—Patent dated November 17, 1863.—This machine operates to convey and communicate intelligence by the generation and transmission of sounds of similar and dissimilar intensities, which, separately and combined, are made to represent the different letters of the alphabet, the Arabic notation, and other valuations according to certain phonic formulæ, each one of which is expressed by one or more symbols engraved on marble for the use of the deaf, dumb, and blind, and tinted of various colors for those who can see. The sensation is imparted to a distance or to an audience beyond the visual range by means of wires, one to each person, the ends of which are held between the finger and thumb, or terminating in a nipple are inserted into the acoustic trumpet of the external ear.

Claim.—Two phonographic locomanauuds mounted by acouglottic batteries—names implying machines which generate intelligent sounds—which they communicate to the spiritual sense of hearing through the nervous papillæ of the index finger and thumb tips, and through the acoustic trumpet of the external ear, being the natural parts of the body which have direct relationship therewith, so that persons who are deaf and dumb and blind, arising either from physical defects or from length of distances, may hear and hold converse together by means of these locomanauuds and copper wires attached thereto.

Also, the method of evoking these intelligent sounds, as herein described, using for that purpose the inci, the mallet, the phonic fossæ, the tympani, and keys.

Also, the mode of intensifying and modifying sounds and chimes systematically by means of a right diatonic staff and a left diatonic staff, or one single diatonic staff as herein described; using for that purpose bars of wire projecting from the staff, and placed at different distances from one another and from the facial incus, and striking the facial malleus upon the facial incus from the projecting points of these bars, and in this way evoking similar and dissimilar sounds.

Also, the method of assorting similar and dissimilar intensities of sounds under symbolic formulæ, representing the various letters of the alphabet, Arabic notations, &c., and dividing

them into certain divisions, each division of which represents a separate and distinct order of sound as herein described; using for that purpose geometric, arabic, and arithmetical figures; and also the mode of separating sounds by silent diatessaron, giving force and decided character to a phonic letter or notation, or valuation.

Also, the method of communicating sermons to a deaf and dumb audience by means of a radiating locomaud as herein described; using for that purpose one cylindrical incus, supported by its pedestal, its anterior face pressed by the facial malleus, which is attached to the tympanum and key, and all supported by the stapes, its posterior face capped by the instrument of radiating wires, and in this way evoking sounds upon the facial incus, which directs them simultaneously into all the radiating wires, centred in the copper cap, which covers the posterior face of the incus.

No. 40,617.—WARREN L. FISH, of Newark, N. J.—*Improved Attachment to Lamps and Gas-burners for Holding Vessels or Shades over the Flame*.—Patent dated November 17, 1863.—Explained by the claim.

Claim.—First, the combination of a support for sustaining vessels to be heated or other articles with a standard rod and adjustable clamp in such a manner that it may be attached to any convenient part of a lamp or burner, and when so attached shall hold the said vessel or article in a position immediately over the flame, substantially as herein described.

Second, the combination with the support and suitable clamping device of an extensible standard rod, adjustable substantially as herein described.

No. 40,618.—HENRY GERNER, of New York, N. Y.—*Improvement in Furnaces for Steam Boilers*.—Patent dated November 17, 1863.—The object of the improvement is to graduate the supply of air to the furnace, and to secure more perfect consumption of the fuel. The door is hollow and forms a chamber with partitions, around which the air is passed, and eventually through slits into the fire. The shutters above the door are automatically opened and closed by a regulator operated by means of chambers containing mercury. On each side of the furnace are openings in the intervals of the fire-brick wall. The perforated brick partition under the boiler is heated by the passage of the flame, and serves to heat the gases sufficiently for them to ignite on contact with oxygen.

Claim.—First, the fire door D, arranged with abutments *d* in the case *a*, and with slots in its rear side and an adjustable opening *c* in its face, in the manner and for the purposes shown and described.

Second, the shutters E, in combination with the regulator G and fire bricks H, with slots *r*, constructed and operating in the manner and for the purpose substantially as specified.

Third, the regulator G, arranged with chambers *m n*, channels *o p*, and valve *q*, and operating by the action of mercury or other suitable liquid, substantially in the manner and for the purposes set forth.

Fourth, the perforated partitions I, made of fire-proof material and arranged under the boiler A, in the manner and for the purpose herein shown and described.

No. 40,619.—THOMAS GOULSTON GHISLIN, of London, England.—*Improvement in treating Marine Algae to obtain a material for Veneering, Inlaying, &c.*—Patent dated November 17, 1863.—The cleansed algae are immersed in a hot lye of caustic lime for three hours, then removed and steeped in a bath of dilute sulphuric acid and then in a bath of common soda, then washed and dried. The prepared material may be softened and rendered plastic so as to be moulded. A number of formulæ are given for its preparation and for bleaching it, having the same general object, to gelatinize it and render it plastic, it becoming rigid on cooling.

Claim.—The preparation of marine plants above referred to and of other analogous vegetable productions, and also the applications of the products thereby obtained by the methods herein above described and to the purposes herein above named or by any similar methods for any analogous purposes.

No. 40,620.—CHARLES M. HALSTEAD, of Troy, N. Y.—*Improvement in Filters*.—Patent dated November 17, 1863.—The chambers are separated from each other by two partitions, consisting of wire-cloth and filtering material, supported by cross-bars; the upper partition supports a cup which is intended to break the force of the current of water.

Claim.—A water filter having an upper chamber D, intermediate chamber H, lower chamber I, wire sieve or strainer C, cup F, supports *b b*, cloth sieve or strainer *e*, supports *a a*, the whole being arranged and combined, substantially as and for the purposes herein described and set forth.

No. 40,621.—JACOB HANES and LUKAS KOHLER, of Millersburg, Elkhart county, Ind.—*Improvement in Flax-breaking Machines*.—Patent dated November 17, 1863.—The improvement consists of a central revolving corrugated roller with a feed and discharge on the respective sides; into this roller mesh two other rollers whose pressure upon the material between themselves and the former roller is adjusted by spring bars and set screws which act upon slides on the upper roller journals.

Claim.—The combination of the fluted rollers B C C', elastic bars E F, slides D, set screws *e e*, and feed boards H H, all arranged to operate as and for the purpose herein set forth.

No. 40,622.—W. D. HEYER, of New Orleans, La.—*Improvement in Sewing Machine*.—Patent dated November 17, 1863.—This is designed to make a chain-stitch with a single thread, and the device is made of a single piece of spring sheet metal, suitably fashioned and bent; the thread is rove through the holes of the needle-holder and the eye of the needle, and on being pressed through the cloth pushes back the feeder; on rising it leaves a loop at the under side, and, the feeder advancing, pushes the cloth along and the loop under it; the next time the needle comes down it passes through the loop, and so on.

Claim.—First, the arrangement of the clamping device *h g* and feeding device *b* relatively to the needle-operating device, substantially as and for the purpose herein specified.

Second, making the cloth-holding device, the feeding device, and the needle bar, and the needle also, if desired, of one piece of metal, or of two or more pieces united in such manner as to be equivalent to one piece, substantially as herein specified.

No. 40,623.—JOHN HOUSTON, of Lake Village, Belknap county, N. H.—*Improvement in Churns*.—Patent dated November 17, 1863.—The churn has vertical cleats on its inner surface, and the vertical revolving shaft has a dasher composed of a cross-bar below and an annular disk and vertical projections above it in the order named.

Claim.—The improved churn as constructed, not only with the series of cleats or current breakers *b b b*, arranged within its tub as specified, but with the dasher composed of the flat annulus or perforated disk *c*, the horizontal arms *f f*, and the vertical arms D D, made and arranged together in manner and so as to operate substantially as described.

No. 40,624.—JOHN H. IRWIN, of Chicago, Ill.—*Improvement in Lanterns*.—Patent dated November 17, 1863.—The wick-raising ratchet wheel is attached to one end of a rod, and a button on the other end projects through the casing so as to adjust the wick without exposing the flame to the exterior air; a circular flange fits against the inner side of the orifice in the casing and more effectually closes the hole.

Claim.—First, the combination and arrangement of the button C and rod *d* with the circular aperture D, operating in the manner substantially as described.

Second, providing the rod *d* with the flange *c*, when arranged with respect to the casing B and aperture D, in the manner herein shown and described.

No. 40,625.—GEORGE F. JEROME, of North Hempstead, Queen's county, N. Y.—*Improvement in Tedders for Animals*.—Patent dated November 17, 1863.—Tethering cords for hitching animals are supported upon posts; the cords run upon rollers and have weights attached, and stops to limit their motion; the animals are fastened to traversing rings which run on the cord.

Claim.—First, an elevated tedder sustained by posts, so that animals may feed under the same in combination with a spring or weight, by means of which the said tedder is allowed to yield to the movement of the animal or the slack of the rope taken up, as specified.

Second, in combination with the said yielding tedder the stop bars *g*, for the purposes specified.

Third, in combination with the said yielding tedder the swivel-sliding ring *i*, to receive the leading rope or halter, as specified.

Fourth, a series of posts arranged in rows, as specified, to receive and sustain the yielding tedder above the animals grazing, for the purposes and as set forth.

No. 40,626.—WILLIAM H. JOHNSON, of Springfield, Mass.—*Improvement in Machines for Cutting Objects from Leather, Cloth, &c.*—Patent dated November 17, 1863.—The leather, or other material, is placed in a continuous sheet upon a table, which rises after the operation is performed, thereby disengaging the leather from the knife or die and presenting it for a pair of nippers to take hold of it, for the purpose of drawing it forward and presenting a new portion to the action of the knife or die which is stationary, the leather being forced down upon it by pressure from above. The nippers have a reciprocating sliding motion over the knife, operating as they approach it, when they seize it and draw it over the knife, and then open and retire out of the way. The presser then descends and cuts the leather, the piece cut out drops down through the knife, and the nippers advance again to renew the operation, the sheet of leather passing between their lips and through a transverse slot in the lower one.

Claim.—First, combining in one machine the three following elementary parts of mechanism, namely, a cutting or embossing apparatus, consisting of one or more cutting or embossing dies and a device for forcing the material on to them, a table and presser for holding and guiding the material properly to the cutting or embossing apparatus, and a reciprocating nipper or clamp for drawing the material forward from the table over the dies to the proper position to be operated upon by them, and then releasing it, and retiring to permit the dies to operate, the whole being made to operate automatically, substantially as described.

Second, the employment in combination with the cutting or embossing apparatus of a rising and falling table and presser plate, operating substantially as described.

Third, the employment, in combination with the cutting or embossing apparatus, of the feeding nippers or clamp, which seize and convey the material to the proper position over the dies and then release it and retire to permit the dies to operate, substantially as described.

Fourth, the combination of the feeding nippers or clamps operating as described, with a rising and falling table, and rising and falling with it, substantially as described.

Fifth, opening and closing the jaws of the nipper or clamp by means of the lever M, rod N, and adjustable stops Q and R, or their equivalents, and the spring O, co-operating with the longitudinal movement of the nippers, substantially as described.

Sixth, inclining the axis of the cutting dies toward each other, so as to bring their contiguous edges close together when more than one is used, substantially as described.

No. 40,627.—J. H. KELLER, of New Orleans, La.—*Improved Machine for Pressing Soap*.—Patent dated November 17, 1863.—The soap is placed within a mould with hinged sides and a die cover; a drop weight elevated by a rack and segment pinion, and dropping when it reaches the blank space on the pinion, is the means of pressure on the cake of soap.

Claim.—The drop B, in connexion with the expanding mould G, slide I, and cap dice M, all combined and arranged to operate as and for the purpose herein set forth.

No. 40,628.—AARON KRATZ, of Plumsteadville, Bucks county, Pa.—*Improvement in Horse Hay Hooks*.—Patent dated November 17, 1863.—The two prongs are pivoted to a bar, and are also suspended by chains attached to their midlength. To discharge the load, the latch connexion of the middle bar is severed, and the weight being thrown upon the chains, the prongs spread and release the load.

Claim.—The hooks A A pivoted to the rod or bar B, as shown, in combination with the bar D, provided with the hook E and the catch or fastening F, and connected to the hoops A A by the chains I I, all arranged to operate substantially as and for the purpose specified.

No. 40,629.—WILLIAM KUEHN, of Lively, St. Clair county, Ill.—*Improvement in Gang Ploughs*.—Patent dated November 17, 1863.—The front end of the hounds is depressed, which, by elevating the slider bar, raises the plough beams, and adjusts the depth of the ploughs or removes them from the ground. The weight of the driver's seat is upon the hounds.

Claim.—First, pivoting or hinging the front ends of the beams E E' to the top of the axle tree A of two carriage wheels in such manner that a lifting bar c, or its equivalent, may be applied beneath them to allow the beams to have an unrestrained swinging movement vertically, and to enable them to be operated by said bar, substantially as described.

Second, a driver's seat arranged over the axle A, and attached to the hounds C C, which are secured rigidly to said axle, in combination with swinging plough beams E E', substantially as described.

Third, the arrangement and combination of the pivoted plough beams E E', pivoted draught pole D, and extended hounds C C, with the supporting bar c, whereby the driver is enabled to raise the rear ends of the plough beams, by pressing upon the rear end of the draught pole, the driver's seat being supported by and upon the hounds, substantially as described.

Fourth, applying the leverage power to the hinged beams E E' in rear of the axle A, beneath said beams, by means substantially as described.

Fifth, the combination of swinging plough beams E E', hinged to the axle A, extended hounds C C, lifting bar c, pivoted draught pole D, transverse stop plate b, and treadle l k, all arranged and operating substantially as described.

No. 40,630.—JOHN P. LAIRD, of Altoona, Blair county, Pa.—*Improvement in Fire-boxes of Locomotives*.—Patent dated November 17, 1863.—The L-shaped tube passes from the crown to the tube sheet to support the fire clay partition, which acts as a deflector within the fire-box.

Claim.—The within-described arrangement of tubes H, passing from the rear plate or tube sheet to the crown for the purpose of sustaining the partition I of fire clay or other refractory material within the fire-box of a locomotive boiler, in the manner herein set forth.

No. 40,631.—J. LAWTON, S. HIBBERT, and J. RHODES, of Manchester, Lancashire, Kingdom of Great Britain.—*Improved Potato Washer*.—Patent dated November 17, 1863.—This consists of a central rotating shaft armed with radial brushes, and a surrounding cylinder with inwardly projecting brushes, and the two revolving in opposite directions, so as to expose the potatoes to friction between them.

Claim.—The employment and use of a double arrangement of rotating brushes revolving in opposite directions and acting upon potatoes and other esculent roots for the purpose of decorticating or cleaning them, as hereinbefore described, set forth and fully illustrated in the drawings attached.

No. 40,632.—CHARLES LOCKHART and JOHN GRACE, of Pittsburg, Pa.—*Improvement in Stills for Petroleum, &c.*—Patent dated November 17, 1863.—The first device mentioned in the claim is for the purpose of taking off vapor from the still at the same height from the surface of the oil and at different heights during the process of distillation. The second consists of a revolving scraper composed of hinged plates with flanges fitting the bottom of the pan and intended to prevent the accumulation of incrustation.

Claim.—The combination with the goose neck C of the horizontal or lower pipe D and valves E E, in the manner herein shown and described.

Second, the combination of the curved hinged plates I and attached scrapers d with the shaft F and bottom a, in the manner herein shown and described.

No. 40,633.—HENRY LOEWENBERG, of New York, N. Y.—*Improved Fabric for making Imitation Lace, &c.*—Patent dated November 17, 1863.—The muslin or other fabric is steeped in a solution of silicate of potash; a sheet of paper similarly steeped is laid on either side of the muslin, before it is dry it is pressed by dies in imitation of lace if required.

Claim.—A fabric obtained by treating muslin and paper with soluble glass, in the manner and for the purpose substantially as specified.

No. 40,634.—THOMAS MADGETT, of Buffalo, N. Y.—*Improved Boot Crimping Device*.—Patent dated November 17, 1863.—The crimping plate and the pressure plates are both hinged to a standard on the table, and operated so as to approach each other, by one lever, which is connected to the upper one by a rod and elevates the lower one by a toe extension piece beneath it.

Claim.—The crimping plate E, in combination with the pressure plates C C', attached to the hinged bar B, the above parts being arranged with the lever G, and link g, or their equivalents, to operate as and for the purpose herein set forth.

No. 40,635.—SAMUEL PIERCE, of Troy, N. Y.—*Improvement in Cooking Stoves*.—Patent issued November 17, 1863; antedated April 29, 1863.—This consists of a bridge or deflector back of the front of the boiler holes, and hanging down from the long centre. A vertical fire grate serves as the front part of the fire chamber, and by its openings directs the air into the body of the fire.

Claim.—The downward projecting bridge or deflector p, constructed and combined with the long centre, and with the fire-box chamber of a cooking stove, substantially as and for the purposes herein described and set forth.

Also, the vertical fire grate g, constructed and combined with the fire-box or chamber, and with the hot-air chamber z, substantially as and for the purposes herein described and set forth.

No. 40,636.—JOHN McMARTIN, of Janesville, Rock county, Wis.—*Buckle Gag-Runner*.—Patent dated November 17, 1863.—The buckle frame forms the shank of the gag-runner, or the latter may be said to depend from the buckle.

Claim.—The combination of the gag-runner and buckle as arranged and described.

No. 40,637.—HIRAM NASH, of Pittsfield, Berkshire county, Mass.—*Improvement in Water Elevators*.—Patent dated November 17, 1863.—This bucket has valves in its bottom and a discharging spout beneath each valve; as it reaches the proper elevation it is shoved over on one side so that the valve next to the curb spout is raised, and the bucket spout discharges into the curb spout. The details are sufficiently described in the claim.

Claim.—First, the cross-bar G, provided with blocks e e, or their equivalent, having double bearings f f, when said cross-bar is used in combination with the heads a a of the windlass, for throwing the bucket outward, in either position it may come up, substantially as herein set forth.

Second, in combination with the cross-bar thus arranged and provided with the arm i, and cross-head K, the double rods d d', and valves H H', for adapting the discharge to either side of the bucket that may come outward, substantially as herein set forth.

Third, the double spout I I', in combination with the valves H H', situated respectively over each spout, and operated automatically, in such a manner that while one allows the discharge of water at the proper position, the other shuts it off, substantially as herein described.

Fourth, the arrangement and combination of the cross-bar G, double rods d d', valves H H', and double spout I I', substantially as specified.

Fifth, in combination with a bucket provided with the double spout I I', and valves H H', the two branch cords or chains b b, connected with the single cord or chain F, in such a manner that, when the bucket is fully raised, one end or the other of the said spout will come in coincidence with the curb spout, substantially as herein set forth.

Sixth, in combination with the bucket thus connected with the windlass the guides K K, for centring the bucket, substantially as described.

Seventh, the combination of the brake M, lever L, pawl D, ratchet wheel C, and head a', or equivalent, of the windlass, whereby, when the brake is applied, the pawl is disengaged automatically and vice versa, substantially as described.

Eighth, the loose winch E, ratchet disk Q, and pivoted latch p, when used in combination with the windlass B, and a bucket provided with the double spout I I' and valves H H', substantially as specified.

Ninth, the arrangement of the brake M, lever L, pawl D, ratchet wheel C, winch E, ratchet disk Q, and pivoted latch P, substantially as herein described.

No. 40,638.—OWEN B. PARKER, of Hopkinton, Middlesex county, Mass.—*Improvement in Fruit Gatherers*.—Patent dated November 17, 1863.—This consists of a basket to be suspended in a tree to be filled with fruit, and on being lowered a trigger coming in contact with the ground opens the door and the fruit is discharged when the basket may be again raised.

Claim.—The said fruit basket or gatherer, as constructed, not only with the opening in its side, or with a flat or door thereto, but with a trigger or lever catch applied to the bottom, the whole being as and to operate substantially as described.

No. 40,639.—ISAAC PHILLIPS, of Burlington, Des Moines county, Iowa.—*Improvement in Smut Machines.*—Patent dated November 17, 1863.—The cylinder has annular ledges, over which revolves an arm attached to the revolving shaft. The beaters are made with angular facets.

Claim.—First, providing the cylinder C with one or more ledges c, in combination with the beaters E and F, and the arm a, arranged and operating substantially as herein set forth and described.

Second, providing the beaters E and F with the re-entrant faces m n, when used in combination with the ledges c and the pronged arm a, as and for the purposes herein specified and shown.

No. 40,640.—EMMONS MANLEY, of Marion, Wayne county, N. Y.—*Improved Apple Parer.*—Patent dated November 17, 1863.—On this machine are two forks turned by one spur wheel which communicates its motion through pinions to the fork shafts. The forks are alternately operated through a mechanism too complicated to be here minutely detailed, so that the motion of the master wheel may be continuous, and an apple placed on the stationary fork, while the apple on the other fork is under treatment.

Claim.—First, the sliding plate O placed on the tilting or rock shaft I, the racks Q Q on bar P, the segment racks R on the plates S, which have the knife bars T attached to them, in combination with the two rotating forks C C, all arranged substantially as and for the purpose herein set forth.

Second, giving the reciprocating motion to the plate O, by means of the bevel wheel H, rotated from the shaft F, through the medium of the bevel pinion E', the friction roller K on the wheel H, and the pendants q' q'' q''' of plate O, arranged substantially as described.

Third, tilting the plate O and shaft I through the medium of the lug l on the wheel H, the long pendants q' q'' on plate O, and the spring M on the rod L, the latter being connected to shaft I by rod K and pendant J, as set forth.

Fourth, The shifting bar d' with the forked shafts B B, attached and operated from the tilting or rock shaft, through the medium of the bar N fitted in the notch n in the projection O of the bar d', as set forth.

No. 40,641.—T. A. RISHER, of Oskaloosa, Mahaska county, Iowa.—*Improvement in Corn Harvesters.*—Patent dated November 17, 1863.—The concave is hinged at its outer side and at each end to the shocker frame, so that it can be raised by turning the crank from right to left and thrown outside of the frame to discharge its load. The motion of the hand crank is communicated by the worm to the segment wheel on the shaft.

Claim.—First, the arrangement of shaft K with the worm wheel n, when used in connexion with the shaft l, to which the segment m is attached, substantially as and for the purpose specified.

Second, hanging the concave T, which receives the corn, at two points to the outer side of the shocker frame, substantially as and for the purpose set forth.

No. 40,642.—MARY C. ROSS, of New York, N. Y.—*Improved Composition for Liniment.*—Patent dated November 17, 1863.—Composed as follows: alcohol, half a pint; camphor, three ounces; spirits of hartshorn, two ounces; spirits of turpentine, half a pint; oil of tar, four ounces; cayenne pepper, (ground,) two ounces.

Claim.—The liniment composed of the ingredients and compounded as specified, for the purposes set forth, the same being a new article of manufacture.

No. 40,643.—MARY C. ROSS, of New York, N. Y.—*Improved Compound for Salve.*—Patent dated November 17, 1863.—Composed as follows: Pitch, a pound and a half; beeswax, one pound; hogs' lard, one pound; mutton tallow, one pound; mixed with one pound of dogs' fat and four ounces of white lead add to the virtues of the composition.

Claim.—The salve composed of the ingredients and in the proportions specified, the same being a new article of manufacture.

No. 40,644.—VOLNEY E. RUSCO, of Chicago, Ill.—*Improved Apparatus for Cooling Lard.*—Patent dated November 17, 1863.—The hot lard runs in comminuted streams from a sieve and passes through a chamber in which it is subjected to jets of cold air from perforated tubes which surround said chamber, and from whence it falls into a collecting pan or reservoir.

Claim.—First, a machine or apparatus for cooling lard, constructed substantially as herein set forth.

Second, subjecting fluid hot lard which is finely divided to the action of finely divided streams or currents of cold air under pressure, as it flows from the rendering tank or apparatus, substantially as and for the purposes set forth.

No. 40,645.—GEORGE SCHOTT, of New York, N. Y.—*Improved Spring Bed Bottom.*—Patent dated November 17, 1863.—Hooked studs rise from the cross-bars and pendant hooks are attached to the slats, and these are connected by an elastic band which "gives" to the weight of the body upon the mattress.

Claim.—The cross-bars c c and hooked studs e e in combination with the pending hooks g g on the slats f f and the elastic cord or strap h, for the purpose and substantially as specified.

No. 40,646.—HENRY SPEER and JOHN L. HARLOW, of Chelsea, Washtenaw county, Mich.—*Improvement in Fruit Dryers.*—Patent dated November 17, 1863.—This house has a roof and the lower part is boarded up; the upper part is occupied by trays, which can be slipped out so as to dry the fruit by exposure to the sun and air, their outer ends being supported by legs, but in unfavorable weather the shelves are pushed in and the pipe inserted through the roof and series of trays to the stove in the lower part of the house.

Claim.—First, the trays or racks B when the same are provided with perforated bottoms and with blinds d and legs c, and arranged in relation to each other and to the house A, as shown and described.

Second, the recesses e in the house A in combination with the perforated bottoms of the trays and with the blinds d, as and for the purpose specified.

Third, the pipe E, arranged in combination with the trays B and stove D, substantially in the manner and for the purpose set forth.

No. 40,647.—J. B. STACKPOLE, of Boston, Mass.—*Drawing and Camera Table.*—Patent dated November 17, 1863.—This arrangement is designed to make the top of the table adjustable as to height and inclination. The adjustable table top is hinged to a folding board, which again is hinged to the stationary table top. A standard, which is raised by a crank, barrel, and cord, impinges upon the under side of the folding board, and a similar lifting arrangement raises other standards under the adjustable table top; by moving either, or both, the required adjustment is attained.

Claim.—The combination of the adjusting standards J I L, operated either by means of the barrel and cord, or by ratchet and pinion, with the double folding boards D and C, substantially as described and for the purpose herein set forth.

No. 40,648.—B. F. STILWELL, of San Francisco, Cal.—*Advertising Directory.*—Patent dated November 17, 1863.—Attached to each of the subdivisions of the show frame or business directory is a case containing small cards appertaining to the business of the individual occupying that section, so that a party interested may withdraw a card and not be under the necessity of making a memorandum.

Claim.—As an improvement to Advertising or Business Directories. Attaching thereto or connecting therewith the box for cards, bill heads, &c., substantially as herein set forth.

No. 40,649.—ABRAHAM STRAUB, of Milton, Northumberland county, Pa.—*Improved Asphaltum Cement.*—Patent dated November 17, 1863.—This is a cement for roofing or paving, and consists of a mixture of asphaltum (coal tar) and shale, the latter pulverized and added to the former while boiling.

Claim.—The within described cement when composed of the ingredients united substantially in the proportions herein specified, for the purpose set forth.

No. 40,650.—A. STRAUB, of Milton, Pa., and ISAAC STRAUB, of Cincinnati, Ohio.—*Improved Artificial Variegated Marble.*—Patent dated November 17, 1863.—This artificial marble is intended to have a dark ground interspersed with light-colored substances. It consists of sand, shale rock, mother-of-pearl, bones, &c., imbedded in a cement of asphaltum, making a fanciful conglomerate. The sand and cement may be in equal proportions, the nodules, &c., as judgment or taste dictates.

Claim.—As a new article of manufacture the sea-shell or ornamental marble, composed of the ingredients united substantially in the proportions herein set forth.

No. 40,651.—A. STRAUB, of Milton, Pa., and ISAAC STRAUB, of Cincinnati, Ohio.—*Improved Asphaltic Paving or Flag Stone.*—Patent dated November 17, 1863.—This is a conglomerate formed of shale rock, sand, pebbles, and boulders in a cement of asphaltum or coal tar; the sand and cement in equivalent proportions, and the other matters in quantity as required.

Claim.—The within-described ingredients when combined together substantially in the proportions described, for the purpose set forth.

No. 40,652.—A. W. STREETER, of Shelburne Falls, Franklin county, Mass.—*Improved Brace.*—Patent dated November 17, 1863.—The shank of the bit stock is inserted into the counter bore of the socket and maintained in it by a headed screw from the upper end of the socket piece; a knob is screwed on to the socket and the bit stock revolves in the latter.

Claim.—The combination of the knob C and socket D, with their screws a a, for the purpose of uniting said knob and socket to each other, and to the bit stock A, in the manner and for the purpose herein set forth.

No. 40,653.—SAMUEL E. TOMPKINS, of Newark, N. J.—*Improvement in Harness Saddles*.—Patent dated November 17, 1863.—The shank of the rein hook is prolonged and fastened by screws underneath the tree.

Claim.—A harness saddle having its check-rein hook C secured to it by having its shank a prolonged and extending down around the front end of the saddle and backward underneath the tree A, with two screws E passing upward from underneath the shank a, and through countersunk holes therein into the tree, and either with or without the nut F, substantially as described.

No. 40,654.—J. Q. A. TRESIZE, of Zanesville, Muskingum county, Ohio.—*Stereoscope and Photographic Album*.—Patent dated November 17, 1863.—The stereoscope is laid in a recess in a thick leaf or in the cover; the lenses are secured in the top piece which hinges and folds upon the back; a partition is also hinged to the back and folds upon it, being held to the top piece when in an erect position by an elastic cord. The pictures occupy places in the book and the stereoscope is conveniently enclosed within the same cover.

Claim.—First, the particular form of a folding stereoscope, as herein described.

Second, the opening or recess for the reception of the stereoscope, attached to the album, or enclosed within it, as herein described, or in any manner substantially the same, and for the use herein set forth.

No. 40,655.—J. M. TROWBRIDGE, of United States army.—*Improved Canteen*.—Patent dated November 17, 1863.—A bottle enclosed in a cup which answers as a boiler.

Claim.—The cooking canteen, composed of a bottle A, and the enclosing boiler B C C' D E E', or their equivalents; the whole being so adapted and arranged as to combine the functions of a canteen with those of a cup and boiler, within convenient and portable limits, substantially as set forth.

No. 40,656.—HENRY WATERMAN, of New York, N. Y.—*Improvement in Steam Engines*.—Patent dated November 17, 1863.—The invention consists in combining with the engine internal heaters within the cylinder, at each end and around the sides when it is double-acting, and at one end when it is single-acting; the said heaters consist of thin metallic steam-tight vessels of sufficient strength to contain steam of greater temperature than the steam used in the engine. The object of this is to prevent the condensation of the steam admitted to the cylinder by the comparative coolness of the cylinder itself, owing to its loss of heat by radiation.

Claim.—The method, substantially as herein described, of constructing the interior surfaces of the cylinders of steam engines, in whole or in part, of as thin metal as will retain the pressure of the steam used, as set forth and for the purposes specified.

No. 40,657.—LOUIS BOLLMAN, of Vienna, Austria.—*Improvement in Sewing Machines*.—Patent dated November 17, 1863.—In connexion with the sewing mechanism are two adjustable plates and a gauge block so arranged that the material may be folded over the edge of one of the plates and between it and the block and so that the other plate will come against the previously sewn seam to regulate the distance between the plaits. In connexion with the holder are a detachable plaiting straight-edge and a corder, so arranged as that either of the latter can be used in connexion with the former. In connexion with the presser-foot are removable shoes which clasp the foot and are changed as required for the varying character of the material operated upon.

Claim.—First, the employment, in connexion with a mechanism for sewing seams, of two adjustable plates or straight-edges B and D and an adjustable block or stop F, when the said plates or straight-edges B and D are so made and arranged as that while one serves to have the plait formed over it and regulates the width of the plait, the other acts, in conjunction with the previously sewn seam, as a gauge to regulate the distance between the plaits, substantially as herein before set forth.

Second, the employment, in connexion with a single supporting arm or holder A, of a plaiting plate B, and a corder G, when these several parts are so constructed as that either of the last-named two may be used in combination with the first-named, substantially as and for the purposes hereinbefore described.

Third, the employment, for the purpose hereinbefore explained, of removable or changeable presser-foot shoes or bottom pieces H, which are so constructed and combined with the presser-foot as that they may be clasped or sprung on to the latter, in the manner substantially as hereinbefore described.

No. 40,658.—ALZIRUS BROWN and L. G. KNIFFEN, of Worcester, Mass., and THOMAS H. DODGE, of Nashua, N. H.—*Improvement in Harvesters*.—Patent dated November 17, 1863.—The improvement consists in devices for raising the finger bar by means of the lifting apparatus in connexion with a cramping bar and link, which connect the shoe with the pole iron attached to the shaft; the finger bar is attached to a shoe, which is suspended at two points by a hanger iron from the main frame. Jointed at the rear hinge of the shoe is a bar which connects by means of a link with the pole iron; fastened to the edge of the main

frame is a notched bar, which as the lifting lever is depressed, traverses in a staple on its side, and by being hooked into one of the notches, retains the main frame at an elevation desired, being there retained by a spring and staple. Underneath the tongue is a draught iron, which is chained to the main frame which carries the cutter bar, and in driving tends somewhat to raise it and diminish the friction of the bar upon the ground.

Claim.—First, the combination with the pole iron, shoe K, and main frame, of the cramping bar Q and link R, substantially as and for the purposes set forth.

Second, the combination of shoe K and hanger iron J, with the lower end of the cramping bar Q, substantially as and for the purposes set forth.

Third, the combination of bar P, having a series of catches b on one edge or face, and a retaining hook or catch m on the other, with spring j and loop k, when said parts are constructed and arranged to operate in relation to each other substantially as and for the purposes set forth.

Fourth, the combination with the main frame A, and tongue O, of the draught iron T, and chain S, constructed and arranged in relation to each other substantially as shown and described.

No. 40,659.—JIM B. FULLER, of Claremont, Sullivan county, N. H., assignor to Himself and JAMES P. UPHAM, of same place.—*Improvement in Preparing Vegetable Fibre for Paper, &c.*—Patent dated November 17, 1863.—This invention consists in curing the vegetable material in a vessel by means of steam admitted in jets around said vessel, so as to heat the mass thoroughly and produce an agitation to mix the material. This operation is performed under heat and pressure, and the uncured vegetable material is supplied near the top of the vessel, from which the cured material passes away to the grinder. The pressure is now relieved, but the heat of the fibre is maintained, and the gummy and silicious matters removed. The material is then carried away through a spiral channel, and cooled by the passage of the uncured material, which traverses other spiral channels on both sides of the heated material and in an opposite direction.

Claim.—First, curing vegetable fibre in a vessel by means of jets of steam introduced into such vessel, substantially as and for the purposes specified.

Second, an open grinder, receiving the fibrous material directly from the curing vessel, as specified, so that the grinding operation is independent of the curing operation; but the vegetable fibre is ground while hot, as set forth.

Third, separating the fibre from the overflow water by means of the sieve o and brush p, as set forth.

Fourth, heating the interior of the grinder n by the introduction of steam, for the purposes specified.

Fifth, a column of water rising sufficiently above the grinder to produce the hydrostatic pressure necessary for causing the fibrous materials to pass through the grinder, as specified.

Sixth, the double volute or spiral channels for cooling the cured vegetable fibre and imparting the heat thereof to the uncured vegetable material travelling in the intervening volute channels in the opposite direction, as specified.

No. 40,660.—A. H. KNAPP, of Newton Centre, Middlesex county, Mass., assignor to JESSE A. LOCK, S. G. COOMBS, and DAVID G. PRIEST.—*Improvement in Rotary Pumps*.—Patent dated November 17, 1863.—The piston wheel rotates inside of a cylindrical case, and drives the abutment, which rotates in a recess in an enlargement of the case, by means of the pistons, which mesh into the concavities of the abutment. The intervening spaces on the peripheries of the piston wheel and the abutment, between their pistons and the concavity, respectively, are occupied by gearing, by which their respective revolutions are made uniform. The water is received from and ejected into side cases through openings of even height at the commencement and termination of the race traversed by the piston, and a drip opening and cock is provided at the lower part of the case.

Claim.—The piston and revolving butment rotary pump; the employment of gearing cogs m m' and n n', respectively, upon the intermediate portion of the peripheries of the piston wheel and butment, alternating in action, and in combination with the pistons and their concavities, substantially as and for the purpose herein specified.

Also, the water-chambers G T in the end of the pump case, separate from and opposite to the piston-chamber and butment recess, substantially as and for the purpose herein set forth.

Also, the arrangement of the inlet and outlet apertures P Q, at nearly equal height and near each other, in combination with the pistons and abutment, substantially as and for the purposes herein specified.

Also, in combination with the piston and revolving butment rotary pump herein described, the drain aperture j, passage k, and cock K, substantially as and for the purpose set forth.

No. 40,661.—HERMAN MILLER, of New York, N. Y., assignor to CHARLES T. RAY, FRED. W. DEVOR, and CHARLES PRATT, of same place.—*Improvement in Sheet-Metal Cans*.—Patent dated November 17, 1864.—Explained by the claim.

Claim.—Making the seams or joints of sheet-metal vessels by turning in the marginal portions singly, at proper angles, and soldering the faces of the said portions together, to form a double inwardly projecting rib, substantially as herein described.

No. 40,653.—SAMUEL E. TOMPKINS, of Newark, N. J.—*Improvement in Harness Saddles*.—Patent dated November 17, 1863.—The shank of the rein hook is prolonged and fastened by screws underneath the tree.

Claim.—A harness saddle having its check-rein hook C secured to it by having its shank a prolonged and extending down around the front end of the saddle and backward underneath the tree A, with two screws E passing upward from underneath the shank a, and through countersunk holes therein into the tree, and either with or without the nut F, substantially as described.

No. 40,654.—J. Q. A. TRESIZE, of Zanesville, Maskingum county, Ohio.—*Stereoscope and Photographic Album*.—Patent dated November 17, 1863.—The stereoscope is laid in a recess in a thick leaf or in the cover; the lenses are secured in the top piece which hinges and folds upon the back; a partition is also hinged to the back and folds upon it, being held to the top piece when in an erect position by an elastic cord. The pictures occupy places in the book and the stereoscope is conveniently enclosed within the same cover.

Claim.—First, the particular form of a folding stereoscope, as herein described.

Second, the opening or recess for the reception of the stereoscope, attached to the album, or enclosed within it, as herein described, or in any manner substantially the same, and for the use herein set forth.

No. 40,655.—J. M. TROWBRIDGE, of United States army.—*Improved Canteen*.—Patent dated November 17, 1863.—A bottle enclosed in a cup which answers as a boiler.

Claim.—The cooking canteen, composed of a bottle A, and the enclosing boiler B C C' D E E', or their equivalents; the whole being so adapted and arranged as to combine the functions of a canteen with those of a cup and boiler, within convenient and portable limits, substantially as set forth.

No. 40,656.—HENRY WATERMAN, of New York, N. Y.—*Improvement in Steam Engines*.—Patent dated November 17, 1863.—The invention consists in combining with the engine internal heaters within the cylinder, at each end and around the sides when it is double-acting, and at one end when it is single-acting; the said heaters consist of thin metallic steam-tight vessels of sufficient strength to contain steam of greater temperature than the steam used in the engine. The object of this is to prevent the condensation of the steam admitted to the cylinder by the comparative coolness of the cylinder itself, owing to its loss of heat by radiation.

Claim.—The method, substantially as herein described, of constructing the interior surfaces of the cylinders of steam engines, in whole or in part, of as thin metal as will retain the pressure of the steam used, as set forth and for the purposes specified.

No. 40,657.—LOUIS BOLLMAN, of Vienna, Austria.—*Improvement in Sewing Machines*.—Patent dated November 17, 1863.—In connexion with the sewing mechanism are two adjustable plates and a gauge block so arranged that the material may be folded over the edge of one of the plates and between it and the block and so that the other plate will come against the previously sewn seam to regulate the distance between the plaits. In connexion with the holder are a detachable plaiting straight-edge and a corder, so arranged as that either of the latter can be used in connexion with the former. In connexion with the presser-foot are removable shoes which clasp the foot and are changed as required for the varying character of the material operated upon.

Claim.—First, the employment, in connexion with a mechanism for sewing seams, of two adjustable plates or straight-edges B and D and an adjustable block or stop F, when the said plates or straight-edges B and D are so made and arranged as that while one serves to have the plait formed over it and regulates the width of the plait, the other acts, in conjunction with the previously sewn seam, as a gauge to regulate the distance between the plaits, substantially as herein before set forth.

Second, the employment, in connexion with a single supporting arm or holder A, of a plaiting plate B, and a corder G, when these several parts are so constructed as that either of the last-named two may be used in combination with the first-named, substantially as and for the purposes hereinbefore described.

Third, the employment, for the purpose hereinbefore explained, of removable or changeable presser-foot shoes or bottom pieces H, which are so constructed and combined with the presser-foot as that they may be clasped or sprung on to the latter, in the manner substantially as hereinbefore described.

No. 40,658.—ALZIRUS BROWN and L. G. KNIFFEN, of Worcester, Mass., and THOMAS H. DODGE, of Nashua, N. H.—*Improvement in Harvesters*.—Patent dated November 17, 1863.—The improvement consists in devices for raising the finger bar by means of the lifting apparatus in connexion with a cramping bar and link, which connect the shoe with the pole iron attached to the shaft; the finger bar is attached to a shoe, which is suspended at two points by a hanger iron from the main frame. Jointed at the rear hinge of the shoe is a bar which connects by means of a link with the pole iron; fastened to the edge of the main

frame is a notched bar, which as the lifting lever is depressed, traverses in a staple on its side, and by being hooked into one of the notches, retains the main frame at an elevation desired, being there retained by a spring and staple. Underneath the tongue is a draught iron, which is chained to the main frame which carries the cutter bar, and in driving tends somewhat to raise it and diminish the friction of the bar upon the ground.

Claim.—First, the combination with the pole iron, shoe K, and main frame, of the cramping bar Q and link R, substantially as and for the purposes set forth.

Second, the combination of shoe K and hanger iron J, with the lower end of the cramping bar Q, substantially as and for the purposes set forth.

Third, the combination of bar P, having a series of catches b on one edge or face, and a retaining hook or catch m on the other, with spring j and loop k, when said parts are constructed and arranged to operate in relation to each other substantially as and for the purposes set forth.

Fourth, the combination with the main frame A, and tongue O, of the draught iron T, and chain S, constructed and arranged in relation to each other substantially as shown and described.

No. 40,659.—JIM B. FULLER, of Claremont, Sullivan county, N. H., assignor to Himself and JAMES P. UPHAM, of same place.—*Improvement in Preparing Vegetable Fibre for Paper, &c.*—Patent dated November 17, 1863.—This invention consists in curing the vegetable material in a vessel by means of steam admitted in jets around said vessel, so as to heat the mass thoroughly and produce an agitation to mix the material. This operation is performed under heat and pressure, and the uncured vegetable material is supplied near the top of the vessel, from which the cured material passes away to the grinder. The pressure is now relieved, but the heat of the fibre is maintained, and the gummy and silicious matters removed. The material is then carried away through a spiral channel, and cooled by the passage of the uncured material, which traverses other spiral channels on both sides of the heated material and in an opposite direction.

Claim.—First, curing vegetable fibre in a vessel by means of jets of steam introduced into such vessel, substantially as and for the purposes specified.

Second, an open grinder, receiving the fibrous material directly from the curing vessel, as specified, so that the grinding operation is independent of the curing operation; but the vegetable fibre is ground while hot, as set forth.

Third, separating the fibre from the overflow water by means of the sieve o and brush p, as set forth.

Fourth, heating the interior of the grinder a by the introduction of steam, for the purposes specified.

Fifth, a column of water rising sufficiently above the grinder to produce the hydrostatic pressure necessary for causing the fibrous materials to pass through the grinder, as specified.

Sixth, the double volute or spiral channels for cooling the cured vegetable fibre and imparting the heat thereof to the uncured vegetable material travelling in the intervening volute channels in the opposite direction, as specified.

No. 40,660.—A. H. KNAPP, of Newton Centre, Middlesex county, Mass., assignor to JESSE A. LOCK, S. G. COOMBS, and DAVID G. PRIEST.—*Improvement in Rotary Pumps*.—Patent dated November 17, 1863.—The piston wheel rotates inside of a cylindrical case, and drives the abutment, which rotates in a recess in an enlargement of the case, by means of the pistons, which mesh into the concavities of the abutment. The intervening spaces on the peripheries of the piston wheel and the abutment, between their pistons and the concavity, respectively, are occupied by gearing, by which their respective revolutions are made uniform. The water is received from and ejected into side cases through openings of even height at the commencement and termination of the race traversed by the piston, and a drip opening and cock is provided at the lower part of the case.

Claim.—The piston and revolving butment rotary pump; the employment of gearing cogs m m and n n, respectively, upon the intermediate portion of the peripheries of the piston wheel and butment, alternating in action, and in combination with the pistons and their concavities, substantially as and for the purpose herein specified.

Also, the water-chambers G T in the end of the pump case, separate from and opposite to the piston-chamber and butment recess, substantially as and for the purpose herein set forth.

Also, the arrangement of the inlet and outlet apertures P Q, at nearly equal height and near each other, in combination with the pistons and abutment, substantially as and for the purposes herein specified.

Also, in combination with the piston and revolving butment rotary pump herein described, the drain aperture j, passage k, and cock K, substantially as and for the purpose set forth.

No. 40,661.—HERMAN MILLER, of New York, N. Y., assignor to CHARLES T. RAY, GOLD, FRED. W. DEVOR, and CHARLES PRATT, of same place.—*Improvement in Sheet-Metal Cans*.—Patent dated November 17, 1864.—Explained by the claim.

Claim.—Making the seams or joints of sheet-metal vessels by turning in the marginal portions singly, at proper angles, and soldering the faces of the said portions together, to form a double inwardly projecting rib, substantially as herein described.

No. 40,662.—JOHN JACOB MILLER, of Chicago, Ill., assignor to Himself and ERNEST FRIEDRICH.—*Improved Apparatus for Condensing, Evaporating, and Cooling.*—Patent dated November 17, 1863.—The pans have corrugated bottoms; are inclined and arranged in a vertical series, so as to discharge from one to another from the top. They are arranged in a close chamber, and the upper end of each is supported by a pin, and the other end upon the pan below.

Claim.—An apparatus for either or all the purposes named, consisting of a series of corrugated or grooved pans or plates with inclined bottoms, constructed and supported as described, and arranged one above another within a close chamber, in the manner set forth.

No. 40,663.—DAVID L. STILES, of Rochester, N. Y., assignor to M. HUNTINGDON, agent of same place.—*Improvement in Stoves.*—Patent dated November 17, 1863.—Two fire-plates on the inner side of the cylinder divide off segmental flue spaces, one of which is a down-cast flue from the upper part of the fire-chamber, and communicates with the bottom flue, from whence the heated air rises through the other segmental flue. A damper in front of the flue admits air through holes in its upper portion, and through a pipe to the fire; the said pipe is cast with its flue-plate, which is also bent at its upper portion and perforated.

Claim.—The combination and arrangement of opposite flues *a* and *b* in a cylindrical body *B*, so as to form an oblong fire-chamber *D* within, and separated by curved flue-plates *C* and *C'* therefrom, one flue *a* descending from the upper part of said fire-chamber to a flue space *i* in the bottom of the stove, and the other flue *b* ascending from said flue space to the smoke-pipe, substantially as and for the purposes herein specified.

Also, the construction of the curved flue-plate *C*, with a bent perforated top *d* and draught pipe *h*, all cast in one piece, in combination with the cylinder *B*, for the purposes set forth.

Also, in combination with the induction pipe *A*, the register *G*, having the air holes *l* only in the upper half and in the outer edge of the circle, and its closed part *m* situated opposite the said induction pipe, substantially as and for the purposes herein set forth.

No. 40,664.—JOHN THOMPSON, of Rochester, N. Y., assignor to Himself and MARTIN REED, of the same place.—*Improved Hoop Machine.*—Patent dated November 17, 1863.—The timber is fed to the machine in planks of the required thickness and length, and is placed between the rest and a spring on a sliding carriage and driven up to a knife, whose irregular edge cuts one-third of the length of the hoop at a stroke, being fed by means of the revolution of the ratchet wheel and the pawl attached to the rest.

Claim.—First, the combination of the irregular shaped knife *D* with the automatically-adjusting rest *C* and adjustable gauge *b*, as and for the purpose set forth.

Second, the employment of the knife *D*, constructed with one or more offsets in its cutting edge, as described and for the purpose set forth.

Third, the combination of the wheel *E*, the spring pawl *d*, and catch *f*, or their equivalents, with the rest *C*, as and for the purpose set forth.

No. 40,665.—E. S. WRIGHT, of New York, N. Y., and E. ALLEN, of Newark, N. J., assignors to EDWARD S. WRIGHT and L. M. HILLS.—*Gun Stock Machine.*—Patent dated November 17, 1863.—This machine is intended for profiling or dressing both sides of the stock in the region of the lock, and consists in the application of a revolving cutter upon each side of the stock, being influenced in their vertical adjustment by the former upon the table of the machine.

Claim.—Holding gun stocks to be dressed in a universal joint, or its equivalent, whereby movements may be given to the stock, while being dressed, from the centre of motion of the said joint, in the manner and for the purpose substantially as herein set forth.

No. 40,666.—E. S. WRIGHT, of New York, N. Y., and E. ALLEN, of Newark, N. J., assignors to EDWARD S. WRIGHT and L. M. HILLS.—*Gun Stock Machine.*—Patent dated November 17, 1863.—Explained by the claim.

Claim.—Two vertical cutters working upon opposite sides of the stock in combination with a table and former, substantially as herein set forth.

No. 40,667.—E. S. WRIGHT, of New York, N. Y., and E. ALLEN, of Newark, N. J., assignors to EDWARD S. WRIGHT and L. M. HILLS.—*Gun Stock Machine.*—Patent dated November 17, 1863.—This machine is intended to do the "squaring down" or letting in of the breech tang. The gun stock is clamped upon the turn-table, which is itself supported upon the bed plate. A tapering cutter is fixed in the end of a revolving spindle and is applied to the stock by a lever, and limited in its operations by a former or pattern, the stock being properly presented by the revolution of the turn-table.

Claim.—First, a turn-table *C*, combined with a cutter and former in the manner and for the purpose substantially as herein set forth.

Second, a conically-formed cutter, when the axis of the said cutter is set at an angle with the cut to be made, substantially in the manner described and for the purposes specified.

No. 40,668.—LOUISA E. ANDERSON, of St. Louis, Mo.—*Improved Rheumatic Liniment.*—Patent dated November 17, 1863.—One dozen eggs, one dozen garden peppers, one pint mustard, one roll brimstone, one-quarter ounce gum camphor, enclosed in a suitable vessel, are roasted before a slow fire until dissolved; while cooling, one-half pint spirits turpentine and one-quarter ounce laudanum are stirred in until the whole are completely mixed.

Claim.—The medicine or liniment compounded of the materials and in the manner substantially as set forth above.

No. 40,669.—BENJAMIN K. LIGHTFOOT, of Philadelphia, Pa.—*Improvement in Treating Tanned Leather.*—Patent dated November 17, 1863.—This application is to be used in the place of dubbing, and consists of a combination of tallow and a hydro-carbon oil containing paraffine.

Claim.—The treatment of tanned leather by the application to the same, substantially in the manner described, of petroleum or any oily hydro-carbons holding paraffine in solution, in combination with tallow or its equivalent.

No. 40,670.—CYRUS BATES, of Hardin, Clayton county, Iowa.—*Improvement in Grain Separators.*—Patent dated November 24, 1863.—The object of this improvement is to make a finer and more perfect separation than is usually accomplished, such as fine from inferior wheat, &c., and this is secured by using a sliding or adjustable screen, having a board attached and placed under the usual screens, and in connexion with it using a still lower screen provided with a trap and spout.

Claim.—The adjustable screen *D* with the board or plate *E* attached and placed in the shoe *C*, in combination with the screen *F*, provided with the trap-door *G*, all arranged to operate substantially as and for the purpose herein set forth.

No. 40,671.—JOHN S. BROOKS, of Rochester, N. Y.—*Improvement in Elevator Buckets.*—Patent dated November 24, 1863.—In this improved bucket the ends are made of cast-iron, with a flange, against which the sheet metal is fitted, the ends being fastened together by a rod running longitudinally through the bucket and fastened by a nut and screw.

Claim.—The combination of cast metal ends or heads with sheet metal front and back, in elevator buckets, as and for the purposes shown and described.

No. 40,672.—JAMES BROWN, of Oldgate, London, England.—*Improved Mode of Protecting Ships' Bottoms.*—Patent dated November 24, 1863.—The invention consists in covering the sides and bottoms of ships exposed to water with enamelled or glazed plates attached by any adequate means.

Claim.—The covering of the bottoms and sides of ships or other partially or entirely submerged surfaces with glazed or enamelled plates of iron, and applied in the manner and for the purpose above described.

No. 40,673.—HUGH CAMPBELL, of Newtown, Fairfield county, Conn.—*Improvement in Lubricators.*—Patent dated November 24, 1863.—This grease cup is fitted with a steam-tight cover, and connected with the steam pipe of the engine above its connexion with the steam chest, so as to force the oil or tallow to the interior of the cylinder for the purpose of lubricating the piston, by the pressure of the steam used for working the engine.

Claim.—A grease or tallow cup fitted with a movable cover and a steam pipe, and constructed and arranged substantially in the manner described for the purpose specified.

No. 40,674.—CHARLES SHENNOCK, of Brooklyn, N. Y.—*Improvement in Corkscrews.*—Patent dated November 24, 1863.—The invention consists of a tube provided with slots, and a corkscrew hinged to a plug sliding in said tube, so that as the corkscrew is protruded at the end of the tube, it is bent down with the shank into one of the slots, and being retracted to the middle of the tube, is ready for action.

Claim.—The case or tube *A*, provided with the slots *a* and *b*, in connexion with the slide *B*, provided with a pin *c* fitted in the slot *a* of the case and the corkscrew *C*, or other tool attached to the slide by a joint *f*, substantially as herein set forth.

No. 40,675.—ISAAC H. COLLIER, of Poughkeepsie, N. Y.—*Improvement in Harvesters.*—Patent dated November 24, 1863.—This is an improvement in the method of hanging the finger bar from the frame of the machine and making it adjustable vertically. It consists of a rigid finger bar and extension rod, which is hinged to a slide, which is vertically adjustable in a box at the forward part of the frame, the extension rod sliding in a guide under the other cover; the finger bar is hinged by means of a link, or clevis, and a bolt, at the point of junction of the finger bar and extension rod over the shoe.

Claim.—First, the combination of the slide *C*, rigid finger bar *D* *E*, shoe *F*, and hinge *H*, substantially as and for the purpose described.

Second, the combination of the right finger bar *D* *E*, hinged slide *C*, and guides *E* *K*, the whole constructed and operating substantially as herein described.

Third, the slide *C*, with its box *B*, when the slide is hinged to the finger beam or shoe, by means of links *H* and a bolt *I*, substantially as herein described.

No. 40,676.—J. D. CONQUE, of Lynden, Whitesides county, Ill.—*Improvement in Grain Dischargers for Harvesters.*—Patent dated November 24, 1863.—The grain, as it is cut, falls upon a platform, which forms a wing to a shaft supported in bearings behind the cutting apparatus; a tilting trough is placed immediately behind the cutter so as to catch the butts of the straw and keep them even; when sufficient has collected, the driver, by means of a lever, connecting rod, and crank, rotates the platform, dropping the grain behind the machine.

the tilting platform dropping the bats of the straw, and the platform, completing its revolution, returning to its former position.

Claim.—The revolving platform D, in combination with the tilting trough B, arranged and applied to a harvester, substantially as and for the purpose herein set forth.

No. 40,677.—F. CURTIS, of Newburyport, Essex county, Mass.—*Improvement in Fusible Safety Plugs*.—Patent dated November 24, 1863.—No particular compound is claimed, but the invention consists in protecting a fusible safety plug with a thin coating of a metal less liable to corrode than the metal of which the plug is composed, and thus prevent corrosion of the highly fusible metal.

Claim.—The protection of fusible safety plugs for steam boilers and other apparatus, substantially as herein described, with a coating of metal which is less fusible and less likely to corrode, and which is thin enough to offer no appreciable resistance to pressure when the metal or alloy of which the body of the plug is composed is softened or melted by heat.

No. 40,678.—JAMES EATON, of Boston, Mass.—*Improvement in the Lubricating of Spindles*.—Patent dated November 24, 1863.—The spindle-bearing is made semicircular; the lubricator consists of a case with an open side and containing within it a piece of felt, sponge, or other suitable fibrous substance saturated with oil. The open side of the box is laid against the spindle, the oily pipe being in connexion therewith.

Claim.—The movable case containing the lubricating substance, and having one of its sides open, in combination with the semicircular main-bearing D, which allows the spindle to come in contact with the lubricating substance, substantially as herein described.

No. 40,679.—HORACE FISHER, of Waterford, Saratoga county, N. Y.—*Improvement in Knitting Machine Burrs*.—Patent dated November 24, 1863.—The object is to make the wings of the burr removable so as to replace them when injured. They are secured to a cylindrical hub whose rim is provided with oblique slots to receive the wings; the latter are made of thin steel, and have a slot in them which fits over the uncut portion at the end of the slot in the rim of the hub. The centre pin passes through the neck of the hub, and its conical head bears against the diagonal lower edge of the wings.

Claim.—First, wings, W-shaped, as described, with slots *c* adapted to fit the rim of the box-shaped hub and the conical head *p* of the pin.

Second, the conical centre pin P *p*, fitted to the said wings, so as to hold them firmly in place when screwed up, and with its central bore for the axis on which the burr revolves.

Third, the combination of the wings, centre pin, and box-shaped hub, substantially as described and for the purposes set forth in this specification.

No. 40,680.—JOSEPH F. FLANDERS, of Boston, Mass.—*Improved Machine for Smoothing or Hides Preparatory to Tanning*.—Patent dated November 24, 1863.—The object of this machine, the devices being stated at length in the claim, is to "sleek," or "put out," the hide, so as to stretch it as may be required to remove the wrinkles.

Claim.—A combination of two endless sleeking aprons A A', and machinery for rotating them in opposite directions, with a table E, or its equivalent, for supporting the skin or hide, the same being so that while such aprons may be revolving and the said hide may be brought into contact with the sleekers of the aprons, it shall be sleeked or "put out" by them, as described.

Also, a combination composed not only of one or two endless sleeking aprons A A', or the mechanical equivalent thereof, and mechanism for rotating or operating such apron or aprons, or the equivalent thereof, but a table or bed E, for supporting a skin or hide, and a mechanism for elevating the table or bed, so as to force the skin or hide into contact with the sleeking mechanism.

Also, in combination with one or more sleeking aprons A A', a rotary table E, and a means of supporting and sliding it underneath the sleeking apron or aprons.

Also, the combination of one or two sleeking aprons A A', their table E, and a pressure or pressure bar G, to operate substantially in manner and for the purpose as specified.

Also, the combination of steadying and restoring springs I, or their mechanical equivalents, with the table or its carriage, and the sleeking apron or aprons, the whole operating substantially as and for the purpose set forth.

Also, the arrangement and combination of one or more bars H, or the mechanical equivalent thereof, with the sleeking apron, its supporting rollers, and the table beneath them.

Also, the arrangement of the sleekers *a a b b b* on the apron, whereby, while in operation, they shall be caused to scrape or press the hide more or less, in lateral as well as in longitudinal directions.

No. 40,681.—CLINTON FOSTER, of Prairie City, McDonough county, Ill.—*Improvement in Corn Planters*.—Patent dated November 24, 1863.—The corn is received from the hopper into the orifices on the periphery of the sunken face of the roller; from thence it is discharged by reciprocating plungers and dropped into the furrow made by the front of the preceding share, the grain is covered by the projecting flange on the wheels. The capacity of the cells is limited by the position of the plungers, and this is adjusted by the rotation of the arm influencing the position of the wrists from which the plungers derive their motion.

Claim.—First, the pistons or plungers L, connected by rods *n* with the cranks K, on the axles *R* of the wheels B, the latter being provided with flanges *k*, having holes *e*, in combination with the arms M attached to the axles E, and the semicircular rack N attached to the frame A, all arranged substantially as and for the purposes set forth.

Second, the gauges or flanges *m* on the wheels B B, in combination with the bevelled surface *i*, and the groove or space in their peripheries, as and for the purpose set forth.

No. 40,682.—JOHN W. FREE, of Richmond, Wayne county, Ind.—*Improved Washing Machine*.—Patent dated November 24, 1863.—The reciprocating wash-board is shod with a half-round piece of rubber or gutta-percha which gives an elastic rubbing pressure upon the clothes.

Claim.—The piece E, in combination with the wash-boards F and D, roller B, handles G, and hinges H, when arranged, constructed and operated for the purpose and in the manner set forth.

No. 40,683.—MERRILL A. FURBUSH, of Philadelphia, Pa.—*Improvement in Looms*.—Patent dated November 24, 1863.—In this loom an endless roller chain is used for determining what warp threads shall be lifted and depressed by means of reciprocating bars in combination with hook jacks and levers connected with the heddles, and this invention consists of two reciprocating frames with their respective cross-bars, and sliding in the guide pieces to operate the hook jacks. The two-armed lever is attached by stud pin to the lugs on the respective frames to cause them to reciprocate in contrary directions.

Claim.—First, the reciprocating frame D, with its cross-bar K, and the reciprocating frame D', with its cross-bar K', both being arranged to slide in the guide pieces B and B', or their equivalents, and to operate in conjunction with the hook jacks H, and other appliances herein described, substantially as and for the purpose set forth.

Second, the two-armed lever F, with its projecting stud pins *b* and *b'*, adapted to the sliding frames, substantially as specified.

No. 40,684.—THOMAS B. DE FOREST, of Birmingham, New Haven county, Conn.—*Machine for Making Tags*.—Patent dated November 24, 1863.—The eyes having been punched on a central line of a strip of metal, they are fed mechanically to the machine, which cuts them off, giving the required configuration to their margins.

Claim.—First, forming the tags from a strip of metal having eyes formed in a line through its centre equidistant.

Second, feeding such strip of metal through the cutting or stamping-out mechanism by means of a mechanical feed.

No. 40,685.—JOHN W. DRUMMOND, of New York, N. Y.—*Improvement in Looms*.—Patent dated November 24, 1863.—The object is to avoid the concussive motions of a loom, and the invention consists of a progressive weaving operation in which the shuttle is rolled across the fabric, and can be carried to an indefinite distance as required; the west or filling thread is laid up progressively as the shuttle advances; the heddles are operated by a progressive movement to raise the warps sufficiently for the shuttle and at the part where it is passing.

Claim.—First, the mode of operation for operating the shed, as described.

Second, the mode of operation for carrying the west thread across, as described.

Third, the mode of operation for laying up the west thread, as described.

Fourth, the combination of the mode of operation for opening the shed, with the mode of operation for carrying the west thread across, as described.

Fifth, the combination of the mode of operation for carrying the west thread across with the mode of operation for laying up the west thread, as described.

Sixth, the combination of the mode of operation for opening the shed, for carrying the west thread across, and for laying up the west thread, as described.

No. 40,686.—SAMUEL GALLAND, of Jefferson City, Mo.—*Improved Liniment for Rheumatism, &c.*—Patent dated November 24, 1863.—Composed of alcohol, eight ounces; laudanum, one ounce; pulverized capsicum, two ounces; oil camphor, one ounce; oil sassafras, half an ounce; oil of cedar, half an ounce.

Claim.—The within described composition, or rheumatic liniment, compounded of the ingredients, in the relative proportions, quantities and manner set forth and specified, for the purposes named, as a new article of manufacture and trade.

No. 40,687.—EDWARD H. GRAHAM, of Yonkers, Westchester county, N. Y.—*Improvement in Revolving Fire-arms*.—Patent dated November 24, 1863.—The barrel under the impulse of the lever and link slides longitudinally in company with the axis pin of the cylinder. The rear end of the barrel enters the chambers in the cylinder and is open throughout.

Claim.—First, the sliding barrel so combined with the revolving cylinder as to move longitudinally therewith and therefrom, substantially as and for the purpose herein specified.

Second, the lever E, and link *j*, combined with each other and with the frame and sliding barrel of the fire-arm, substantially as and for the purpose herein specified.

Third, giving the cylinder axis pin of a revolving fire-arm a longitudinal motion back and forth, substantially as and for the purpose herein specified.

No. 40,688.—JAMES HANCHETT and JOSEPH R. GILL, of Charleston, Cole county, Ill.—*Improved Washing Machine*.—Patent dated November 24, 1863.—The tub has a stationary fluted board at one end, and a reciprocating, swinging, valved dash-board, which is operated by lever and link, connected to the curved bar, which has its fixed and movable bearings in an extension, provided with holes, in which the vibrating bar is set so as to give a greater or less stroke to the reciprocating dasher.

Claim.—First, the swinging pressure board or plunger D, provided with a valve *f*, in combination with the stationary pressure board G, provided with oblique or inclined flutes or projections, all arranged as and for the purpose specified.

Second, the combination of the arm H, bent or curved bar I, shaft J, bar M, link N, and lever O, arranged substantially as shown, for the purpose of operating the swinging pressure board or plunger D.

Third, the fixed and movable bearings K K', provided each with a series of holes *a*, for regulating the operation of the pressure board or plunger D, relatively with the board G, as set forth, when used in combination with a catch *p* and toggle lever H I, substantially as described.

No. 40,689.—MOORE HARDAWAY, of St. Louis, Mo.—*Improvement in Horseshoe Machines*.—Patent dated November 24, 1863.—The formers are attached to the face of a disk, and the bar is laid upon them and carried between side clamps which double back the heels of the shoes; they are discharged by means of pins which project through the disk under the impulse of a cam which presses against the plate to which the pins are attached.

Claim.—The arrangement and combination of the rotating disk C, forms *f*, and clamps *g g'*, all being constructed and adjusted to operate substantially as and for the purpose set forth.

No. 40,690.—SMITH HEAD, of Millersburg, Dauphin county, Pa.—*Machine for Sawing Laths, Palings, &c.*—Patent issued November 24, 1863; antedated November 11, 1863.—The two serrated wheels are journaled in the swinging frame which descends to operate in conjunction with the circular saw on the bed. This is for cutting the slats into bolts. The gang of saws on the vertical shaft cut the bolts to the width, and saws rotating at right angles to the latter reduce the scantling to palings of the required thickness, the lumber being fed thereto by the devices recited in the third claim.

Claim.—First, the serrated wheels R R, shaft G, and gravitating frame F, in combination with the bed piece A and circular saw O, when arranged to operate in the manner and for the purpose specified.

Second, the vertical shaft H, having two or more circular saws V V secured on its upper end, in combination with the adjustable head block I and two or more saws P P secured on a shaft C placed at right angles to the shaft H, when arranged to operate in the manner and for the purpose specified.

Third, the shaft J, provided near its lower end with a serrated wheel L, the slide K, and foot lever N, in combination with the head block I, when arranged to operate in the manner and for the purpose specified.

No. 40,691.—WILLIAM HILL, of New York, N. Y.—*Improvement in Side-Saddle Trees*.—Patent dated November 24, 1863.—This tree is constructed of wood and strengthened with iron straps. The improvement claimed is in the configuration of the parts which are made to conform to the shape required in the finished article, and avoid the necessity of so much building up, padding, &c.

Claim.—A side-saddle tree, having its side pieces C C', pommel A, and cantel B, constructed, arranged, and combined in the manner as herein shown and described.

No. 40,692.—JOHN F. HINMAN, of Battle Creek, Calhoun county, Mich.—*Improvement in Lubricating Axles*.—Patent dated November 24, 1863.—A lubricating orifice leads from the periphery of the hub into the hollow around the spindle; this is covered by an elastic band which is lapped back for the purpose of introducing the oil, and resumes its place when free.

Claim.—The combination of the elastic band E and its groove *a* with the cover F and oil orifice D, in the manner herein shown and described, for the purpose described.

No. 40,693.—THOMSON KINGSFORD, of Oswego, N. Y.—*Improvement in Machinery for the Manufacture of Starch*.—Patent dated November 24, 1863.—The precipitated starch is washed up by a suspended revolving gate which is caused to rotate just above the surface of the starch.

Claim.—The washing up of starch deposits by causing a current or currents of water to pass rapidly over their surface by means of a revolving wing or gate moving just above the surface of the impacted or cohering starch, and capable of ready adjustment to its depth in the containing vessel, substantially in the manner hereinbefore described.

No. 40,694.—CONRAD B. LASHER, of New York, N. Y.—*Improvement in Railroad Switches*.—Patent issued November 24, 1863; antedated November 9, 1863.—The wheel has

an inner flange making a concavity in the rim of the wheel between the two flanges, which is adapted with an oblique or switch rail so as to compel the wheel to take the required direction.

Claim.—The switch rail *i*, fitted substantially as specified, in combination with the flange *j*, on the car axle or wheel, to give direction to the car from the main track upon the turnout, as set forth.

No. 40,695.—DAVID LIPPY and JAS. S. BRADLEY, of Mansfield, Richland county, Ohio.—*Improvement in Thrashers*.—Patent dated November 24, 1863.—A screen is arranged in the box in which the elevator works so as to remove dust and fine offal; the grain from the shoe falls on a screen which removes the chaff and cockle from the wheat, and deposits them in separate receptacles; the grain from the cylinder passes to the conveyer or apron, while the straw is raised and carried from the machine by a carrier; the grain falls into a shaking shoe, where it is winnowed, and from thence to the vibrating cleaning screen.

Claim.—First, the screen R' in the elevator box Q, arranged in combination with the elevators R, to operate in connexion therewith, as and for the purpose herein set forth.

Second, the screen N, placed within a box O below the shoe M, and arranged to operate in connexion therewith, as and for the purpose specified.

Third, the combination of the grain conveyer F, straw carrier D, shoe M, elevators R, fan G, and screen N, all arranged in combination with the threshing cylinder B and concave C, to operate as described.

No. 40,696.—AZEL S. LYMAN, of New York, N. Y.—*Improvement in Separating Fibres of Straw, &c.*—Patent dated November 24, 1863.—The invention consists in macerating the fibre without interruption by continuously supplying the material and water to the apparatus by a forced circulation under pressure through the macerating boiler, thus avoiding the interruption and cooling incident to the ordinary plan of charging and discharging. The apparatus is so arranged that the heated macerated fibre heats the incoming material.

Claim.—First, the mode of making the macerating process continuous by supplying and discharging the material, and the water necessary to effect maceration by means of a continuous forced circulation through the boiler or macerating apparatus, effected by a pump, or its equivalent, substantially as herein specified.

Second, saving the heat of the discharging pulp or macerated material by retaining it under pressure after it has left the boiler, or macerating apparatus, and passing the incoming fibrous material and water in a contrary direction to the discharge through a suitable system of pipes or passages properly arranged in relation to the discharge pipes or passages, substantially as herein described.

Third, forcing the boiled material from the boiler through a mill or other grinding or rubbing apparatus by the combined or simultaneous action of the pump, or its equivalent, through which the circulation through the boiler is produced, and of the pressure due to the heat of the steam or water in the boiler, substantially as herein specified.

Fourth, the employment in the pump by which the circulation through the boiler is produced of cutting valves, operating substantially as and for the purpose herein set forth.

Fifth, the employment for transferring the heat from the discharging to the incoming material of twin or double pipes F F, substantially as herein described.

No. 40,697.—JAMES B. LYONS, of Milton, Litchfield county, Conn.—*Improvement in Butter-Worker*.—Patent dated November 24, 1863.—The roller rotates on a horizontal shaft, and is shaped as a frustum of a cone; a table beneath it is free to revolve under the roller, and the latter has projections which agitate a perforated salt-box above and cause it to shed salt upon the butter.

Claim.—The construction and arrangement of a spirally-fluted conical roller, in combination with an inclined circular revolving table, placed in a tub, together with a perforated receptacle to distribute a given quantity of salt, in the manner herein described for the purposes specified.

No. 40,698.—BELA A. MANN, of West Meriden, New Haven, Conn.—*Improvement in Looms*.—Patent dated November 24, 1863.—The invention consists in the employment of hooked bars in combination with a card-prism or pattern apparatus for producing a shed; the hooks are operated by slides which move in opposite directions, being driven by the adjustable cranks on the main shaft; the hooks are attached each to a bell crank above and below, and operate them by their rise and fall.

Claim.—First, the hooked bars N in combination with a pattern mechanism, substantially as described.

Second, the employment in combination with the hooks N and a pattern mechanism of the slides L and K moving in opposite directions for operating the hooks, substantially as described and specified.

Third, the arrangement in combination with the hook-bars N of the adjustable cranks *u* and W for driving the slides L and K, substantially as described and specified.

Fourth, the arrangement of the bell cranks in combination with the hooks N, slides L and K, and pattern mechanism for operating the harnesses, substantially as described and set forth.

No. 40,699.—THOMAS J. MAYALL, of Roxbury, Norfolk county, Mass.—*Improved Machine Belting or Banding*.—Patent dated November 24, 1863.—This band consists of a compound of gutta-percha and shreds of leather, to which a portion of India-rubber may be added if desired.

Claim.—The improvement in the manufacture of machine belting or banding, which consists in forming belts or bands of gutta-percha and picked or ground leather, substantially as described.

Also, in combination with the above the admixture of India-rubber in such new belts or bands, as set forth.

No. 40,700.—THOMAS J. MAYALL, of Roxbury, Norfolk county, Mass.—*Improvement in Fulling Mills*.—Patent dated November 24, 1863.—The cloth is passed between corrugated rollers, which rub and full it, and between plain elastic rollers, which squeeze out the liquid.

Claim.—In a fulling mill the combination of a trough for containing the proper liquid, two or more elastic longitudinally fluted or corrugated rollers, and two or more elastic rollers with plain surfaces, the whole operating together upon the cloth as described.

No. 40,701.—JAMES H. MELICK, of Albany, N. Y.—*Improvement in Self-tightening Bands for Hay Forks*.—Patent dated November 24, 1863.—A slotted lapping open band is placed around the head in which the tines are set, and so arranged that in driving the tine each side of the latter binds against the end of one slot and draws the band more tightly around the head. The same effect is produced by the deflection of the tine as it springs under its load.

Claim.—First, so applying a band *a* to a rake-head, fork-head, or other like article, that the strain upon the tines of the fork in the act of use shall lighten the band thereon in proportion to the strain applied upon the lines, substantially in the manner and for the purpose described.

Second, the slotted band *a* so constructed and applied to a wooden or other head that the tine will act as a key to tighten the band upon the head, and thereby tighten the tine in the same proportion, substantially as set forth.

Third, sustaining the strains upon wooden heads or stocks of agricultural implements by means substantially as described.

No. 40,702.—JOHN D. METS, of Dubuque, Iowa.—*Improvement in Photographic Albums*.—Patent dated November 24, 1863.—The leaves are stitched together in pairs, and the connecting strips are flexible and have a filling and a central filling strip.

Claim.—First, uniting the card-receiving leaves together in pairs by means of flexible strips of cloth or other suitable material, enclosing a filling, substantially as described.

Second, so disposing the filling strips *e s f* within the flexible connecting strips *b b* that a space will be formed for the reception of the bend of the filling strip *f* when the leaves are stitched together, substantially as described.

Third, constructing a photograph album of a series of pairs of leaves stitched together, substantially as described.

No. 40,703.—OSCAR F. MORRILL, of Chelsea, Suffolk county, Mass.—*Improvement in Vapor-Burning Cooking Stove*.—Patent dated November 24, 1863.—The invention consists of the insulator clamp, projection, and stirrup, by which the conduit is properly supported and adjusted; a clearer for removing deposits from the valve-passages and a lateral opening for the removal of deposit from the jet-tube. The subject-matter of the fourth claim is a device for steadying the conduit at the point where it is recurved downwards.

Claim.—The insulator clamp as constructed or provided with the projection *y* and with the hanger or stirrup *z*, they being for the purpose as specified.

Also, the combination of the clearer *A*, as above described, with the conduit valve and its seat passage.

Also, the improved burner as made or provided with the lateral clearing port *g* and with a cap or cover *f* therefor, the same being arranged with respect to the jet-tube of the conduit substantially in manner and for the purpose as described.

Also, the combination of the steadying fork or notched projection *m* and the tenon *q*, and its mortise *p*, with the conduit and the supporting stand.

No. 40,704.—FREEMAN MORSE, of Hastings, Oswego county, N. Y.—*Improvement in Water Wheels*.—Patent dated October 24, 1863.—This wheel has spiral buckets upon it the whole extent of its penstock, the water striking the periphery of the wheel at the lower edge and passing upwards issues at the top.

Claim.—A water wheel having buckets formed upon it in the manner described, and extending from the top to the bottom of the penstock, in which it is fitted to run, in combination with the penstock when the floor of the same is level with the bottom of the inlet and water-way, so that the water shall strike the buckets of the wheel and expend a portion of its force before commencing to rise in the penstock, as and for the purpose specified.

No. 40,705.—WM. NEWLIN, of Ash Ridge, Brown county, Ohio.—*Improvement in Straw Cutters*.—Patent dated November 24, 1863.—The uprights of the knife-frame run in grooves in the standards, being raised by the spiral springs located in the standards, and drawn down by means of the attachment by the bent rod to the vibrating foot-lever.

Claim.—First, connecting the knife-gate *S* to the treadle *E'* by means of a bar or rod *g*, which at its upper end is swivelled in the sill of the knife-gate, and at its lower end is bent in the manner and for the purpose specified.

Second, the knife-gate or sash *S* adapted to move up and down in slots in the hollow standards *C C*, in combination with the enclosed spiral springs *f f*, swivelled bent rod *g*, and lever *E*, when arranged to operate in the manner and for the purpose specified.

No. 40,706.—ROBERT PALLETT, of New York, N. Y.—*Improved Pontoon Boat*.—Patent dated November 24, 1863.—The object is to make the boat readily convertible to its normal use or to be transported. The fore wheels and axle are attached by ring bolts to swinging bolsters, whose standards are pivoted to the sides of the boat; the hind wheels are axled to blocks which slide in grooves on the side of the boat. The position of the swinging bolster is secured by swivel chains.

Claim.—First, the combination with a pontoon boat of the construction described, of the swinging bolster *L L'*, and swivelled chains *J L*, constructed, arranged, and operating in the manner and for the purpose specified.

Second, in a pontoon boat constructed substantially as specified, the combination of the blocks *c c* with the dovetail tapering sockets, to permit the ready insertion and removal of the wheels *E E*.

Third, a convertible pontoon boat constructed and arranged as herein represented and described, with removable wheels applied as specified to permit its ready adaptation for use as a boat, or for transportation for use as a boat, or for transportation on land upon its own wheels.

No. 40,707.—JAMES PERRY, of Brooklyn, N. Y.—*Improvement in Making Bread*.—Patent dated November 24, 1863.—This consists of a union of the fermenting and aerated processes; the sponge is allowed to ferment sufficiently to change the normal condition of the starch, but not to produce aldehyde or acetic acid or to transform the gluten; it is then subjected to the aerative process to give it the requisite spongy consistency.

Claim.—In the manufacture of farinaceous food the combination of the fermentive and aerative processes, substantially as described and for the purposes herein set forth.

No. 40,708.—J. H. PLANK, of Pulaski, Davis county, Iowa.—*Improvement in Pumps*.—Patent dated November 24, 1863.—The two levers are pivoted to posts on each side of the pump stock; the rod of the lower passing through the upper plunger. The levers are connected by a pin and slot with which they are provided respectively.

Claim.—The levers *C* and *C'* of the first and second order respectively, fulcrumed to posts *D D*, and connected together by a pin *a* and slot *b*, in combination with the rods *E E* and plungers *B B'*, when arranged to operate in the manner and for the purpose described.

No. 40,709.—SQUIRE RAYMOND, of Genoa, Cayuga county, N. Y.—*Improvement in Horse Pitchforks*.—Patent dated November 24, 1863.—The fork is raised perpendicularly between two points of attachment of the rope, the latter being run through a swivel pulley attached to the fork arms; the latter are expanded so as to drop the load by straightening the toggle lever, one member of which is connected to each arm; this is effected by a secondary cord attached to a lever extension, and running over pulleys on the latter and the fork arm.

Claim.—First, the swivel pulley *C* applied to the fork arms or frames *A A*, substantially as and for the purpose herein set forth.

Second, the applying of the rope *F* to the extension *f* of the lever *E*, through the medium of the pulleys *i j*, arranged substantially in the manner as and for the purpose herein set forth.

No. 40,710.—MOSES S. SALTER, of Saltersville, Hudson county, N. J., assignor to CHARLES H. LADD, of Portsmouth, N. H.—*Improvement in Furnaces for Making Malleable Iron*.—Patent dated November 24, 1863.—The improvement has reference to the location of the chambers in which the processes are carried on, relatively to each other, to the fire, and to the chimney, having a bottom on a common level.

Claim.—First, the combination of one or more reducing furnaces with a welding furnace, so that the sole or hearth of either furnace shall be in the plane of or in continuity with the sole or hearth of the others, substantially as herein set forth.

Second, the arrangement of one or more reducing furnaces at right angles, relatively to a welding furnace, when the soles or hearths of the respective furnaces are all in the same plane, substantially as herein set forth.

Third, in reducing and welding furnaces located at an angle in respect to each other, and having substantially one sole or hearth in common, the arrangement of a fire chamber in the welding furnace and of a chimney in the reducing furnace or furnaces, so that the flame or heated gases shall pass from end to end throughout the whole extent of the furnaces, substantially as herein set forth.

Fourth, the combination of a welding and one or more reducing furnaces located at an angle in respect to each other, of a single sole or hearth contracted laterally at the junction of the reducing furnaces with the welding furnace.

Fifth, locating the working doors of the reducing furnace or furnaces in close vicinity of and underneath the chimney, so that the air which may enter the furnace shall be carried off without coming in contact with the ore to be reduced, substantially as herein set forth.

Sixth, forming an interior corner lining of the welding furnace, by means of a cast-iron bevel tube open at both ends and extending along the border of the hearth, substantially as herein set forth.

No. 40,711.—THEODORE SHARP, of Louisville, Ky.—*Improvement in Cider Mills*.—Patent dated November 24, 1863.—This consists of a flanged toothed cylinder and a single concave vibrating from flange to flange across the face of the cylinder.

Claim.—First, the single concave constructed and arranged in the manner described to vibrate across the face of the main cylinder and between its flanges, as and for the purpose set forth.

Second, the combination of a single concave constructed substantially in the manner described, with a flanged main cylinder and hopper arranged as and for the purposes set forth.

No. 40,712.—GEORGE L. SMITH, of Brooklyn, N. Y.—*Improvement in Furnace Grates*.—Patent dated November 24, 1863.—The upper edge or top of the grate-bearer is bevelled so that the ashes or cinders which pass through the grate openings will not lodge on the bearer and prevent the passage of air.

Claim.—The forming of grate-bearers, for steam boiler and other furnaces, with the bevelled or contracted top or upper surface A, on which the grate bars rest, substantially as and for the purpose set forth in the specification.

No. 40,713.—GEORGE SNEDECOR, of New York, N. Y.—*Improved War Turrets*.—Patent dated November 24, 1863.—The concentric rings of armor are dovetailed together or united by dovetailing interposed key blocks.

Claim.—Uniting the two or more series of iron plates or slabs, of which a gun turret or other portion of a vessel or fortification is composed by means of dovetail tongues and grooves, when the faces of such tongues and the backs or bottoms of the grooves are presented inward and outward, or in a direction to receive the impact of projectiles, substantially as herein described.

No. 40,714.—HENRY ST. JOHN, of New Haven, Conn.—*Button Key*.—Patent dated November 24, 1863.—The two legs of the key are sprung together and inserted through the eye of the button and retained by the crook in one of the legs.

Claim.—A button key, one leg of which is straight, the other curved, substantially as described, so that both legs may be inserted into the eye of a button, in the manner and for the purpose specified.

No. 40,715.—ARCHIBALD STURROCK, of Doncaster, Yorkshire, England.—*Improvement in Locomotive Tenders*.—Patent dated November 24, 1863; patented in England May 6, 1863.—The wheels of the tender are driven by an engine or the tender, which is run by steam from the locomotive boiler. The exhaust steam from the tender cylinders is condensed in a chamber under the false bottom of the water tank.

Claim.—First, the employment of and fitting auxiliary cylinders and engines on or to the tender, and connecting them through ordinary connecting rods to the wheels of the tender, said tender cylinders receiving steam from the ordinary boiler which supplies the engine proper, substantially as described.

Second, forming the water tank in the tender with a false bottom, and leading the exhaust steam from the tender cylinders into the chamber between the two bottoms, substantially as set forth.

No. 40,716.—WILLIAM SWIFT, of Brooklyn, N. Y.—*Improvement in Invalid Bedsteads*.—Patent dated November 24, 1863.—The frame of the stretcher is supported at the ends by cleats at the head and foot of the bedstead, and upon this is a jointed frame capable of being raised to suit the flexions of the body and limbs, and of being supported in such positions with canvas adapted to the requirements of the bed-ridden.

Claim.—An invalid attachment for bedsteads, composed of the two parallel bars A A resting either in a fixed or movable manner on cross-rails B B, attached to the bedstead, and having the folding bars s s s' s' c attached to them, provided with canvas C D, all being arranged substantially as herein set forth.

No. 40,717.—ANSON P. THAYER, of Syracuse, Onondaga county, N. Y.—*Improvement in Steam Ploughs*.—Patent dated November 24, 1863.—The spades are spiral blades, following a cylindrical shape, and are attached at their ends to disks. The gearing on the cylinder frame is attached by stirrup couplings to the main gearing, so as to admit of the vertical motion of the said frame. The wheels, by which the power is transmitted to the rotary

cylinders, are arranged in three or more pairs so as to vary the speed of the digger under the varying characters of soils. The tongue is stiffened between guides, to each end of which the guiding rope is attached, and from which it passes over the tiller wheel.

Claim.—First, the spades, constructed and operating in the manner set forth.

Second, the couplings G G and I I, operating in combination with the wheels E E and L L and shafts F F, the screws S S and slatted posts r r, for the purpose of raising and lowering the cylinder c and spades s in a vertical line, and admitting the gearings E E and L L to be in a working position at all points as described.

Third, the wheels Q, in combination with the shaft D and counter shafts P P, for the purpose set forth.

Fourth, the slotted frame A or guides, in combination with the grooved pulleys f and gages g, for the purposes described.

No. 40,718.—AMZI H. VAN GIESON, of Newark, N. J.—*Improvement in the Manufacture of Leather*.—Patent dated November 24, 1863.—The improvement consists in uniting the grain surface of a finer leather to the body of another leather, so as to secure the fineness of surface with the necessary strength, as, for instance, uniting the finer surfaced calf hide with a backing consisting of a split of coarser hide; the two are united by a cement insoluble in water.

Claim.—The combination by the means above described of a grain surface of fine leather with a body of heavier texture, substantially as set forth.

No. 40,719.—G. W. WHITE, of Monroeton, Bradford county, Pa.—*Improvement in Water Wheels*.—Patent dated November 24, 1863.—The improvement is in the shape of the buckets, which present a concave or V-shaped recess for the first impingement of the water, and then receding, give it a prolonged surface to bear against in its downward motion, the lip tending to prevent its lateral escape. The second claim explains itself.

Claim.—First, constructing the buckets d of the wheel so as to have two inclined surfaces 1 2 to form a concave or V-shaped face, and having lips f at their outer edges, as and for the purpose specified.

Second, placing the wheel F in the lower part of a case B, which is inserted in the penstock A, in connexion with the open top of the wheel, whereby the water is allowed to pass directly from the penstock to the wheel, and the water, after acting upon the wheel, allowed, in case of back-water, to pass over the top of the wheel as set forth.

No. 40,720.—GEORGE R. WILMOTT, of Meriden, New Haven county, Conn.—*Improvement in Expanding Tompions for Fire-arms*.—Patent dated November 24, 1863.—This consists of two disks, in one of which the thread of the bolt catches, and against the other of which the shoulder of the bolt impinges, and between which disks is a rubber ring covered with a soft fabric, and which is pressed against the inside of the bore, by the action of the screw drawing the disks together.

Claim.—First, the employment in a tomption, in combination with an expanding packing of vulcanized gum, of an outer covering of leather, cloth, felt, velvet, plush, or other soft unadhesive material, which contains no elements that can corrode metal and an interposed flexible material, such as unvulcanized gum, which is impervious to the sulphur of the vulcanized gum, substantially as herein described.

Second, the use in an expansible tomption of the casing or tube k in the described combination with the screw C, elastic ring d and plates A and B, for the purpose specified.

No. 40,721.—LORENZ WOLF, of St. Louis, Mo.—*Improvement in Gang Ploughs*.—Patent issued November 24, 1863; antedated November 11, 1863.—The first named improvement is in the box, in which the plough standards are clamped at their adjusted height; it consists of a plate, whose turned-over edges enclose the lid through which a pin passes. The hind end of the plough-beam has a hole forming a socket for the vertical standard over the caster wheel, and on this the plough-beam is raised by a lever whose fulcrum is on the standard and which is linked to the beam. A bent rod is attached by two posts to the beam and rides upon the axle so as to raise the beam when the axle is rotated laterally in turning the machine.

Claim.—First, the employment of the standard box f f' f' e i, constructed and arranged as herein described for the purposes set forth.

Second, the within-described arrangement and combination of the levers r n with reference to the beam C and stem or wheel standard l of the improved gang plough, substantially in the manner and for the purposes herein set forth.

Third, the use of the rocker iron k, formed, constructed, and arranged to operate substantially in the manner and for the purposes herein set forth.

No. 40,722.—WILLIAM C. BAKER, of New York, N. Y.—*Improvement in Steam Generators*.—Patent dated November 24, 1863.—The object of this improvement is to construct a steam generator, consisting of a coil of pipe, or series of small tubes, which shall be free from the usual objections to that form of boiler; and this is done by making an immediate connexion between the upper and cooler portion of the coil and the lower or hotter portion, so that the disastrous effect of forcing the water out of the lower portion is obviated.

Claim.—A steam generator, formed of a coil or series of connected pipes, substantially as described, in combination with the means shown, or its equivalent, for inducing the supply of water to the lower tubes from the upper portion of the coil, substantially as described, for the purposes set forth.

No. 40,723.—S. D. GILSON, of Syracuse, Onondaga county, N. Y., assignor to Himself and JOSEPH HALL, of Rochester, N. Y.—*Improvement in Force Pumps*.—Patent dated November 24, 1863.—The cage in which the valves are placed is inserted at right angles to the direction of the water by means of a screw plug which forces it up to its position; the cage is attached to the plug by means of a screw, and the valves work in vertical guides, the inner valve in the outer and the outer valve in the flanges of the cage, each valve having its seat on the upper and lower flanges respectively of the cage.

Claim.—First, the arrangement of the two valves E F in a cage G, so that the water is both taken into the pump and discharged therefrom through the said cage, substantially as and for the purpose herein specified.

Second, the arrangement of the cage G in a casing B, which is inserted into and removed from its place in a direction at right angles to the axis of the cage and to the movements of the valves, substantially as herein described.

Third, in combination with the arrangement of the two valves and valve seats in the cage, the fitting of the valves one within the other in such manner that each constitutes a guide for the other within the cage, substantially as herein specified.

Fourth, the attachment of the valve casing to the cap C by a screw bolt D, or its equivalent, to allow the said casing to be withdrawn from the cap, substantially as herein set forth.

No. 40,724.—THOMAS GEORGE HAROLD, of Brooklyn, N. Y., assignor to Himself and JOHN W. KISSAM, of same place.—*Improvement in Locks*.—Patent dated November 24, 1863.—This consists of a lock case in two parts fitted to screw or lock together and prevented from turning by the bolt or hasp; it has stationary and turning blocks containing divided stop pins, whereby the position of the pins can be changed to effect a permutation of the lock by opening the case when unlocked. A curved hook bolt is provided, which extends from the turning block to the curved interior of the lock case, so that the hook bolt is sustained by the case, and the strain from the hasp or bolt on the hook is not taken on the divided stop pins.

Claim.—First, a lock case of two parts, fitted to screw or lock together and prevented from turning by the bolt or shackle, as specified, in combination with the stationary and turning blocks and divided stop pins, whereby opportunity is afforded for changing the position of the said stop pins and adapting them for a different key, as set forth.

Second, the hook-shaped bolt extending from the turning block and contiguous to and supported by the curved interior of the lock case, in combination with the divided stop pins, and with the hasp or bolt is taken by the lock case instead of the divided pins, as specified.

No. 40,725.—H. A. KING and JACOB LOUGHMASTER, of Seal, Wyandott county, Ohio, assignors to H. A. KING, N. H. KING, and A. A. KING, of same place.—*Improvement in Beehives*.—Patent dated November 24, 1863.—The devices have reference to the structure of the hive, the supported honey-board forming a horizontal perforated partition, the attachment of the slide, the overhanging cap, and the pivoted shutter.

Claim.—First, the fitting of the honey-board E on rebates l t within the hive in the manner and for the purpose specified.

Second, the cross-bar k at the upper end of the slide f, provided with the bevelled notches j j, to fit over the bevelled surfaces i at the upper ends of the front and back of the hive, for the purpose specified.

Third, securing the cap H on the hive, by having the former of sufficient dimensions to fit over the top of the body A, and securing strips s within the cap H to rest on the top of the body A and support the cap, as set forth.

Fourth, the flap or slide w attached to the hive, and provided with the holes a' c', in combination with the holes v b' in the side of the hive, and the groove t, in the inner surface of the side of the hive, as and for the purpose specified.

No. 40,726.—RALPH S. MERSHON, assignor to Himself and JOHN M. HARPER, of Philadelphia, Pa.—*Improvement in Watch Keys*.—Patent dated November 24, 1863.—Two pins are attached to the post, and two cam-faced teeth are on the sleeve, with a spring upon the latter, so that in turning to wind up the watch the teeth engage with the pins, and in reversing the movement the cam-faces slip over the pins.

Claim.—A pin or pins in one part, and two teeth in the other part, operating together in the manner and for the purpose substantially as described.

No. 40,727.—DANIEL K. PEOPLES, of Philadelphia, Pa., assignor to Himself and JOHN PEOPLES, of same place.—*Improved Floor Clamp*.—Patent dated November 24, 1863.—The clamp is temporarily bound to the joist by its hooked arms, which nip under the lower edge. The handle is turned which revolves the nut and impels the screw head against the board to close the joints.

Claim.—The frame C and its hooked arms E and E', in combination with the screw F and G, or their equivalents, the whole being constructed, arranged, and operating substantially as and for the purpose herein set forth.

No. 40,728.—AUGUSTUS H. TAIT, of Jersey City, N. J., and WILLIAM H. HOLBROOKE, of New York, N. Y.—*Improvement in the Manufacture of Paper Pulp*.—Patent dated November 24, 1863.—The straw is cut into lengths of three-quarters of an inch; it is then ground between burrstones to divide the fibres and separate in the form of dust the silicious and similar particles which are removed by screening; it is then boiled, and the colored water run off; treated to a boiling solution of caustic alkali and washed; treated to a boiling acidulous solution and washed; then to a solution of chloride of lime; then again to the alkaline and acidulous solutions, and bleached.

Claim.—First, the passing of straw between grinding surfaces in the manufacture of paper pulp, substantially in the manner and for the purpose hereinbefore described.

Second, treating the stock after it has passed through a weak alkaline and chlorine treatment, with or without acid, to a second application of weak alkali and chlorine, with or without acid, substantially as above described, for the purpose of making paper pulp.

No. 40,729.—WILLIAM B. AITKEN, of Philadelphia, Pa.—*Improvement in Journal Boxes of Railroad Cars*.—Patent dated December 1, 1863.—On the upper side of the journal are two bearings, held in their places by a support or seat on the upper end, and by cross ledges or ribs securely fastened to or cast with the journal box on the lower side. Between the bearings, in the middle of the under side of the seat, is a longitudinal rib supporting the inner ledges of the bearings, which can be removed to equalize the wear. At the inner end of the journal box is a chamber containing a packing ring formed of two pieces of leather riveted together and encircled by an elastic rod to compress it around the shaft. This rod or wire is held and tightened by adjusting screws. Surrounding the flange at the end of the journal is a lubricating collar, held in its place by an open circular spring interposed between it and the flange. The collar is made in the same way as the packing ring.

Claim.—First, combining and arranging the reversible bearing D D, or their equivalents, with the support block E and box A, with the conversing support ribs e e, substantially as described and for the purposes set forth.

Second, the combination and arrangement of the packing ring F, chamber G, spring ring H, and adjusting screws I I, with the shaft B, the whole being constructed and arranged to operate substantially as and for the purposes set forth.

Third, arranging the lubricating collar J on the outer edge of the journal C, by means of the spring ring K, or its equivalent, substantially as described and for the purpose set forth.

No. 40,730.—ROYAL M. BASSITT, of Birmingham, New Haven county, Conn., and GEORGE MALLORY, of Watertown, New Haven county, Conn.—*Improvement in Chimneys*.—Patent dated December 1, 1863.—This invention consists in forming that part of the chimney that is exposed to the weather in such a way as to fit over the brick-work on which it is superimposed, and to fit section on section if needful, it being adapted to receive caps of different patterns, according to the requirements of the design.

Claim.—Forming a chimney of cast-iron, substantially as described.

Also, making the cap c separate from the chimney body, and the two in such manner that different designs of cap may be employed on the same pattern of body or case, as hereinbefore specified.

No. 40,731.—R. C. BRISTOL, of Chicago, Ill.—*Improvement in Slide Valve for Steam Engines*.—Patent dated December 1, 1863.—This improvement consists in the application of straight parallel pieces or ways of hard metal fitted into or under the projecting lips or extensions above the rollers, corresponding in their plane to like pieces fitted into or upon the valve seat under the rollers, the rollers traversing between these ways; the face of the valve being grooved transversely.

Claim.—First, the combination of the parallel overhanging ways formed in the ends of the valve with the parallel ways of the seat composed of separate metal, and the friction rollers, the said ways being in a plane corresponding with the face of the valve, substantially as and for the purposes set forth.

Second, the valve with its face grooved as described, in combination with the straight or parallel ways, having rollers between them for the purpose of making the valve self-fitting and relieving such rollers in part from the load.

Third, constructing the valve with a grooved face, and arranging the same with respect to friction rollers, in such manner that it is free from the rollers during the self-fitting of the valve to its seat, and afterwards is mainly supported upon the rollers and operates to always be thus supported, substantially as herein described.

Fourth, the combination of horizontal or parallel ways, friction rollers, and grooved valve substantially in the manner and for the purpose set forth.

No. 40,729.—WILLIAM H. BRUNT and JOSEPH W. McELROY, of Pittsburg, Allegheny county, Pa.—*Improvement in the Manufacture of Steel*.—Patent dated December 1, 1863.—The claim is sufficiently explanatory.

Claim.—The process of making steel direct from pig-iron in an ordinary puddling furnace, throwing into the furnace pulverized charcoal or other carbon when the iron begins to granulate, and closing up the furnace to retain the gases evolved therein, as herein described.

No. 40,733.—AARON B. CHAPMAN, of Pittsfield, Berkshire county, Mass.—*Improvement in Ploughs*.—Patent dated December 1, 1863.—Near the termination of the mould board is a vertical concave-faced roller, which rotates against the soil as it is delivered from the plough; this is adjustable at its upper end in a slot in the brace, which runs from the off-plough handle to the beam, and is retained in position by a pin passing through the lever by which it is vibrated and the cross-piece at the rear of the beam, and by a screw shaft and nut.

Claim.—First, the roller G, constructed, as shown and described, with concave sides, and mounted upon a vertical or nearly vertical shaft at the rear of the mould board E in the manner and for the purposes specified.

Second, the lever J, employed in connexion with a screw shaft H and nut K, or equivalent devices, to adjust the roller G and secure it in any position.

Third, the combination with the roller G and lever J of the bracket I, constructed as described, and employed for the attachment and securing of the said lever and the handle A, as explained.

No. 40,734.—CHARLES M. CLINTON, of Ithaca, Tompkins county, N. Y.—*Improvement in Lamp-Lighters*.—Patent dated December 1, 1863.—This is a long conical tube, containing a wire-wound wick saturated with alcohol or other combustible fluid, and stopped at its larger end.

Claim.—The combination of the tube B, the stopper C, and the wire-wound wick, when one or more wires are used about the wick, for the purpose of preventing the destruction of the wick in the smaller part of the tube, and to draw the wick out of the tube for trimming it, as well as to centre and protect the flame about the projecting wire or wires.

No. 40,735.—SEWARD P. WEBB, of South Danvers, Essex county, Mass.—*Improved Machine for Finishing Leather*.—Patent dated December 1, 1863.—This machine consists of a hollow bed, on which the leather is laid, and a swinging bar suspended from a frame and standard, and vibrated by a pitman journaled to a pin upon the rim of a wheel; this vibrating frame consists of a dicing staff, rock shaft, and pitman, and is hung upon the centre of the rock shaft; the pitman from the fly-wheel is journaled to both pitman and staff, and as the wheel revolves it raises the pitman of the frame, the rock shaft vibrates, and the dicing staff is lowered in contact with the leather; on its return motion the staff is raised from contact.

The dicer is projected downwards relatively to the staff by a lever which slides the dicer rod upon the staff; a wheel precedes the dicer to remove dirt, and a scraper follows to "loose" down the grain; a scraper reached at the end of the stroke cleans the dicer.

Claim.—The peculiar mechanism for obtaining the compound movement of the dicing staff D, the same consisting of the fly-wheel E, the connecting rod F, the rocker lever C, and pitman c, arranged so as to operate substantially as hereinbefore specified.

Also, the combination and arrangement of the brush H, or leather-cleaning mechanism, with the dicer a and its staff D.

Also, the combination and arrangement of the adjustable smoothing tool I with the dicer a and its staff.

Also, the combination and arrangement of the scraper e, or cleaning mechanism, with the dicer a and its curved bed G.

No. 40,736.—JOSEPH CORGNARD, of Nantes, France.—*Improvement in Shuttle for Sewing Machines*.—Patent dated December 1, 1863.—The invention consists in furnishing the cavity or inside of a sewing machine with a revolving bobbin or spindle, from which the thread passes through polished metallic eyelets out of the shuttle.

Claim.—The combination of a polished tension roller or cylinder held within the cavity of the shuttle, as described, with polished metallic eyelets lining the holes of the shuttle through which the thread passes, substantially as herein set forth.

No. 40,737.—SETH L. COLE, of Burlington, Vt.—*Improvement in Producing Oil and Spirit of Turpentine from Pine Wood*.—Patent dated December 1, 1863.—The process consists in the dry distillation of turpentine from pine wood.

Claim.—The discovery or invention of producing oil or spirits of turpentine and other analogous oils directly from wood, using for that purpose the apparatus hereinbefore described, or any other substantially the same, and which will produce the intended effect.

No. 40,738.—C. O. CROSBY, of New Haven, Conn.—*Improvement in Band Ruffles*.—Patent dated December 1, 1863.—The claim requires no explanation.

Claim.—As a new article of manufacture, the within described band ruffle produced from a strip of fabric shirred, crimped, or plaited, and combined with a band also made from a single strip of fabric, and the band and ruffle folded and stitched with two rows of stitching, in the manner substantially as herein specified.

No. 40,739.—C. O. CROSBY, of New Haven, Conn.—*Improvement in Band Ruffles*.—Patent dated December 1, 1863.—The claim requires no explanation.

Claim.—As a new article of manufacture the within described band ruffle, produced from a single strip of fabric, folded and plaited, crimped or shirred, and stitched through the band and ruffle with two rows of stitching, substantially in the manner herein set forth.

No. 40,740.—THOMAS N. CROW and JAMES N. CROW, of Mott Haven, Westchester county, N. Y.—*Automatic Dancer*.—Patent dated December 1, 1863.—This invention consists of a jointed figure suspended by an elastic rod, and caused to move under the impulse of a spring foot-board.

Claim.—First, the employment or use of the spring-board A, or its equivalent, in combination with the figure B, having jointed limbs, and otherwise constructed and operating in the manner and for the purpose substantially as specified.

Second, the combination of the elastic rod C with the figure B and spring-board A, substantially as and for the purpose described.

No. 40,741.—CHARLES DANIEL, of Sigel, Pettis county, Mo.—*Improvement in Rotary Harrows*.—Patent dated December 1, 1863.—The draught pole is connected by channelled rollers to a ring in the centre of the star-shaped frame of the harrow; the hook-shaped teeth on the points of the frame catch in the soil and give a rotating motion.

Claim.—First, a rotary harrow with a star-shaped frame A, constructed and operating in the manner and for the purpose substantially as described.

Second, the central guide ring B, in combination with the star-shaped frame A and with the grooved rollers c attached to the draught pole C, substantially as and for the purpose set forth.

Third, the prongs E, secured to the corners of the star-shaped frame A, and operating in combination with the teeth D and draught pole C, substantially as and for the purpose specified.

No. 40,742.—JOHN S. DAVISON, of Cranberry, Middlesex county, N. J.—*Improved Air-tight Cork*.—Patent dated December 1, 1863.—This invention consists in the interposition of a layer of impermeable material between the layers of cork.

Claim.—The application of a layer of gutta-percha (or other substance which will prevent the admission of air) to stoppers of cork, so as to render them impervious to the air in the different ways herein described, or by other means substantially the same, the whole being arranged substantially as and for the purposes set forth.

No. 40,743.—CYRUS DEAN, of St. Catharine's, Lincoln county, C. W.—*Improvement in Fire Boxes of Locomotives*.—Patent dated December 1, 1863.—The fire-pan is solid, and the air is admitted through openings governed by dampers, and over the edges of the pan into the fire. The angle-plates form a funnel-shaped fire bottom.

Claim.—First, making the fire-pan B solid or pan-like, without grate bars or openings, for the purposes and substantially as described.

Second, arranging the draught flues and dampers E so that the air will pass over the fire-pan, and feed the fire from the four sides and at a convenient distance above the bottom of the fire-pan, substantially as described.

Third, the combination of the angle-plates C with the solid fire-pan B, substantially as set forth.

No. 40,744.—GEORGE H. FELT, of New York, N. Y.—*Improvement in Signal Codes for Rockets*.—Patent dated December 1, 1863.—By designating by rockets the number on the top of the column, and then the number on the side, the intersection will show the information required. Other arbitrary characters may be made to represent numerals.

Claim.—First, the combination in columns of spaces representing words, letters, figures, or combinations of the same, any one of which can be designated by the corresponding numbers of the column and layer, the intersection of which will be the space required, substantially as and for the purposes herein specified.

Second, arranging these columns on leaves, which leaves are made to slide in and out of frames, whereby the relative position of the spaces are changed, substantially as and for the purposes specified.

Third, arranging these columns on both sides of the frames and movable leaves, substantially as and for the purposes herein specified.

Fourth, designating the colors or number by characters, instead of numerals, substantially as and for the purposes herein specified.

No. 40,745.—JOHN FORBES, of Halifax, Province of Nova Scotia.—*Improved Means for Attaching Skates*.—Patent dated December 1, 1863.—Explained by the claim.

Claim.—The foot-plate C, pivoted to the runner A, or connected to it by a hinge, and provided with a fastening formed of a projection p at the back of the runner, and a catch K on the foot-plate, or other suitable arrangement, and also provided with a sliding plate F, which is connected with the runner A by means of a link J, in combination with the clamps H E E & c, all arranged to operate substantially as and for the purposes herein set forth.

Also, the manner of applying or arranging the clamps *b b* H, so that the same may be adjusted to suit boots or shoes of different sizes, to wit: by having the plate G in which the oblique slots *k k* are made attached to the sliding plate F, by screws *g g*, which pass through oblong slots *i i* into the plate F, and having the clamp H attached to the plate F, by screws *j j*, which pass through oblong slots *k k* in the plate F, as herein described.

No. 40,746.—WILLIAM R. FOWLER, of Anne Arundell county, Md.—*Improved Fly Expelling Fan*.—Patent dated December 1, 1863.—The shanks of the vanes are attached by thumb-screws in the sockets on the vertically adjustable sleeve, which rotates under the impulse of the clock-work in the base of the stand.

Claim.—The sleeve M, rods I I, thumb-screws *a a* and revolving shaft G, when the whole shall be constructed, arranged, and operated as and for the purpose herein described.

No. 40,747.—DAVID G. GARRETSON, of New York, N. Y.—*Improvement in Dies for Cutting Stencil Plates*.—Patent dated December 1, 1863.—The outer edge of the die is vertical, and the face of the letter is occupied by a concavity, so leaving a cutting edge all round.

Claim.—As an improved article of manufacture, a die for cutting stencil plates, formed by sinking a groove of semicircular or an approximate form within the outline of the letter or figure of the die, and having the outer surfaces of the outline vertical, or nearly so, substantially as herein set forth.

No. 40,748.—BENJAMIN F. GOSSIN, of Cincinnati, Ohio.—*Improvement in Machines for Making Railroad Chairs*.—Patent dated December 1, 1863.—The bar from which the chair blanks are made is rolled with two ribs upon it at right angles to the bar. This being cut into lengths, is passed between two rolls, and the lips bent down over the former, which is placed inside to give the interior shape corresponding to the base of the rail. The rolls derive their motions from a reciprocating rack, which causes them to draw in the chair and mandrel, and on the return motion of the rack a downwardly projecting pin pushes back the mandrel, while the chair is retained by a rabbeted projection on the table.

Claim.—First, bending the lips of wrought-iron railroad chairs, by means of a pair of rolls rotating on axes perpendicular to the base plate of the chair, and acting simultaneously on the outsides of the two lips, in combination with a suitable mandrel for forming the interior of the chair, all substantially as hereinbefore described.

Second, the combination of the washers *g* and slots K, arranged and employed as described, for the purpose of adjusting the machine to different widths and thicknesses of chairs.

Third, the arrangement of a pair of rolls B B' rotating horizontally, and in the plane of the chair plate, in combination with the rabbeted table J and mandrel L, all constructed and operating substantially as set forth.

Fourth, the combination of the rabbeted table J for retaining the finished chair while the mandrel is being expelled, with the finger *k* depending from the rack H for expelling the mandrel by the return motion of the said rack, as explained.

No. 40,749.—THOMAS HANSON, of New York, N. Y.—*Improvement in Direct-acting Engines*.—Patent dated December 1, 1863.—Explained by the claim.

Claim.—The employment of two piston valves attached to a tubular valve-stem, substantially as described, in combination with the rod sliding in the said valve-stem, and operated at first by a tappet arm on the piston rod, and then by pressure on its cam, and communicating motion to the valve rods by a lost motion, substantially as described.

Also, combining the piston valves of the pump with the piston valves of the engine, by a rod passing through and working in the tubular stems of the said valves to operate them, in combination with the mode of operating the said rod, partly by a tappet on the piston rod, and partly by pressure on the double-inclined cam attached to the said rod, substantially as and for the purpose described.

No. 40,750.—GEORGE E. HAYES, of Buffalo, N. Y.—*Improvement in Dentists' Lamps for Vulcanizing*.—Patent dated December 1, 1863.—The two burners are supplied from two reservoirs; in one the quantity of burning fluid is measured, and the supply from the other is cut off by the melting of a strap of fusible alloy, when the vulcanizing box has reached a certain temperature.

Claim.—First, the combination in a spirit-lamp for vulcanizing or other purposes, of two burners, one of which is supplied by a chamber *d* containing a measured quantity of spirit, and the other connected with a reservoir by means of an automatic cut-off, substantially as herein specified.

Second, the cut-off, consisting of a lever H encircling the flexible supply-pipe *c*, and a wire S, or its equivalent, having its ends united with fusible solder, applied in combination with the vulcanizing box E, or other apparatus, to operate substantially as herein specified.

No. 40,751.—ELIHU HOAG, of Rensselaerville, Albany county, N. Y.—*Improvement in Churn Power*.—Patent dated December 1, 1863.—The power is derived from a weight, communicated by clock-work gearing, and regulated by a loaded box pendulum, whose arm carries two pawls, which engage the ratchet teeth of the escape wheel.

Claim.—The escape wheel H, pawls *f f*, arms *d d*, with weight *m* attached, and rock shaft L, in connexion with the rod N and bent lever O, or their equivalents, all arranged and combined with the gearing and weight, or a spring, to operate substantially as and for the purpose herein set forth.

No. 40,752.—GEORGE W. HOLLEY, of Niagara, N. Y.—*Preserving Iron from Corrosion*.—Patent dated December 1, 1863.—Clean the surface of the iron; prepare a composition as follows: take of porcelain frit 60 pounds, calcined feldspar 10 pounds, and from 20 to 40 pounds white lead; mix with water to a creamy consistence; clay and water are then added, the mixture applied, and vitrified by placing the iron in a furnace.

Claim.—Protecting the surface of iron from corrosion by means of a glaze or coating, the composition for said glaze or coating being formed and applied substantially as herein set forth and described.

No. 40,753.—JOAB H. HUBBARD, of Hartford, Connecticut.—*Improved Artificial Fuel*.—Patent dated December 1, 1863.—The materials recited in the claim are rendered plastic with water, and moulded or massed for burning.

Claim.—Congealing into a mass for a fuel as follows: to fifteen tons of anthracite coal or coal dust one ton of plaster of Paris, or one ton of clay, or half and half of each, to render it (the coal dust) useful for fuel, substantially in the manner and for the purpose as described.

No. 40,754.—JOHN D. HUMPHREYS, of London, Great Britain.—*Improvement in Steam Engine Governors*.—Patent dated December 1, 1863.—The throttle valve is connected with the collar of a loose sleeve, which is rotated by means of a pulley driven by a band from the engine to be governed, and which is controlled in a longitudinal direction by a screw placed on its shaft, and driven at a uniform rate by a supplementary engine in such a manner that while the main engine is working regularly and in unison with the supplementary engine the relative position of the sleeve and the screw remains unchanged; but when any variation takes place in the rotation of the two engines, the corresponding variation of the screw and the sleeve causes the longitudinal movement of the latter to be transferred to the valve.

Claim.—A governor for regulating the speed of marine or other engines, consisting of an independent or separately working engine, in combination with a fly-wheel, said governing apparatus operating in a manner substantially as herein specified.

No. 40,755.—MOSES JOHNSON, of Colebrook, Coos county, N. H.—*Device for Tethering Animals*.—Patent dated December 1, 1863.—The tethering rope is attached to a weighted bar swung by a ring to a swivelled post, so that the weighted end of the lever shall raise the rope attached to the other end and prevent the animal becoming entangled in it.

Claim.—The said tethering apparatus made substantially in manner and so as to operate as described.

No. 40,756.—LOUIS PIERRE JOSSE, of Paris, France.—*Improvement in Grain Separators*.—Patent dated December 1, 1863; patented in France November 25, 1862.—Explained by the claim.

Claim.—The general arrangement and combination of parts of the above-described apparatus for separating or cleansing wheat or other grain or seeds, and separating therefrom the chaff, dust, or other extraneous matters or impurities mixed therewith, in which apparatus the separation of the chaff or lighter parts from the grain or seeds or heavier parts is effected by imparting a suitable horizontal reciprocating motion to a triangularly-shaped shallow box or boxes in which fall the grain or seeds to be cleansed, by the effect of which motion and the configuration of the said box or boxes the chaff or lighter parts rise to the top of the grain, seeds, or heavier parts, and travel and leave the said box or boxes in an opposite direction to that of these latter parts, substantially as described.

No. 40,757.—GEORGE KAMMERL, of New York, N. Y.—*Improvement in Endless Saws*.—Patent dated December 1, 1863.—The steel links consist of plates pivoted together, serrated on their edges and passed over rollers, so as to be presented properly to the material under treatment.

Claim.—The peculiar chain saw blade formed of a number of toothed steel links, rolling as an endless chain continually in one direction over the required pulleys in the manner which this specification and drawings clearly show.

No. 40,758.—JOHN KIRKMAN, of Peoria, Ill.—*Improvement in Constructing Wagons, Carriages, &c.*—Patent dated December 1, 1863.—The frame of the wagon, as well as the tongue, hounds and reach, are made of angle iron. The tongue has a slot in which the bolt of the doubletree works; the latter has a link which is attached at its other end to springs, to each of which is attached a rod, jointed at their rear ends to arms pivoted to the rear axle of the wagon; at the junction of each arm with the said rods is a rubber which presses on the wheel when there is no draught upon the doubletree.

Claim.—In combination with a wagon constructed as described, the springs I' I', rods I I, eccentrically pivoted arms or rods *f f*, and rubbers *g g*, all arranged and operating substantially as set forth.

No. 40,759.—JAMES H. LEE, of Leavenworth, Kansas.—*Improvement in Operating Wagon Brakes*.—Patent dated December 1, 1863.—The lever is drawn towards the notches in the rack by a spring, so as to make it engage with them when simply pulled forward by a cord. Another cord operates a cam which disengages the lever from the rack.

Claim.—First, the combination with the brake lever B of a spring G to throw the said lever into the rack F automatically when drawn forward.

Second, the combination of the lever I, spring D, and lever K, or cam I', operating to release the brake lever B and retract the brake, substantially in the manner described.

No. 40,760.—J. C. LEFFEL, of Shelby, Shelby county, Mo.—*Improvement in Corn Planters*.—Patent dated December 1, 1863.—The seed slide is operated by an arm on the rock shaft which is vibrated by foot levers; the other claims explain themselves.

Claim.—First, the rock shaft J, provided with the treadles g g, and connected with the slide bar D, through the medium of the arm f, for the purpose of operating the slide bar D, as set forth.

Second, the covering shares L L curved or bent of semicircular form in their transverse section, rounded at their front ends and gradually contracted toward their back ends, as set forth.

Third, constructing the runners A A, so as to be of bevelled or taper form in their transverse section, as and for the purpose specified.

No. 40,761.—ORRIN D. LULL, of Watkins, Schuylar county, N. Y.—*Improvement in Patching Minie Bullets*.—Patent dated December 1, 1863.—Explained by the claim.

Claim.—The use in a cartridge case of any suitable form of a patch or wrapper W, constructed with a central aperture w2, and a number of leaves w' w' w', adapted for wrapping around the base of the ball without wrinkling, doubling, or lapping; all as hereinbefore described and for the objects specified.

No. 40,762.—JOHN MANROW, of Sacramento, Cal.—*Improvement in Fruit Presses*.—Patent dated December 1, 1863.—The pressure is brought to bear upon the press lever by means of the revolution of the windlass upon which the rope is wound; this revolution is effected by a weighted lever, and causes the rope to wind and unwind over the upper and lower rollers, respectively, the ends remaining fast. The other special devices are explained in the claims.

Claim.—First, the windlass B, provided with two ropes l l', in connexion with the lever I, having the follower rod or slide bar J attached by a joint t, and secured on its fulcrum by a strap or rod s, all being arranged to operate in the manner and for the purpose herein set forth.

Second, the curb N, constructed of four sides n n' n' n', perforated with oblique holes as shown, in connexion with the perforated boards O, provided with channels b', all arranged to operate as specified.

Third, the slide bar E, provided with the two pawls F F, which are fitted between stationary pins k k, and arranged in such relation with the toothed wheel C of the windlass, to operate as described.

Fourth, the combination of the windlass B, ropes l l', lever I, arranged as shown and with the follower or slide bar J attached as described, the curb N, with perforated sides, and the perforated boards O, and with or without the boarded or weighted lever A', all arranged to operate as herein described.

No. 40,763.—AMASA A. MARKS, of New York, N. Y.—*Improvement in Artificial Limbs*.—Patent dated December 1, 1863.—The wearing part of the limb is made of a combination of sponge rubber and hard rubber, or of sponge rubber and wood; the more elastic material to occupy the salient portions, and the hard filling to give the requisite rigidity and afford means for attachment to the wooden stump.

Claim.—Making feet and hands for artificial limbs of "sponge" or soft rubber, combined with "hard" rubber or wood, as and for the purpose herein set forth.

No. 40,764.—JAMES H. MAYDOE, of Eaton, Madison county, N. Y.—*Improvement in Card Agitator*.—Patent issued December 1, 1863; antedated July 25, 1863.—An openwork frame of rods, shod at one end with a cutting edge and provided at the other end with a handle, an additional handle being pivoted to the frame by which its upward and downward movements are controlled.

Claim.—First, a card agitator, consisting of a series of rods, arranged relatively as described, in combination with a shoe or scraper, provided with a thin edge, so as to pass under the card and close to the bottom of the vat, for the purposes set forth.

Second, in combination with my improved card agitator, a handle, so located upon the machine as that the forward end of said machine may be conveniently elevated or depressed during the operation thereof, substantially and for the purposes set forth.

Third, the employment of two handles arranged relatively as described, so as to enable the operator to lift the forward part of the machine by one, and move it forward and backward by the other, as specified.

No. 40,765.—GUGLIELMO MELLANO, of New York, N. Y.—*Improvement in Bandages for the Testicles*.—Patent dated December 1, 1863.—Explained by the claim.

Claim.—The application to suspensory bandages of a set of strings, braids, or tapes, which are run through the bag in a circuitous or round manner, and made to come out at the sides of the same, which, when drawn in opposite directions to each other, will contract such instrument or bag to any desired dimension, thereby adapting the bag to any case, and make equal compression upon diseases existing within the testes or their appendages, thus relieving, preventing, or curing such diseases.

No. 40,766.—SAMUEL H. MITCHELL, of El Paso, Woodford county, Ill.—*Improvement in Cultivators*.—Patent dated December 1, 1863.—The ploughs are secured to beams connected by swivel bars to an axle, and are adjustable vertically and horizontally. The special devices are explained in the claims.

Claim.—The arrangement and combination of transversely adjustable swivel bars c, hinged plough beams D, notched bars H H, doubletree I, and bar J, and connecting rods k, and axle A, provided with a number of holes b b, intended to receive the swivel bars c c, to which the beams D D are attached by means of pivots d, the swivel bars c c, adjustable in the holes in the axle so that the beams can be brought closer together or further apart, according to the width of the furrows; all constructed and operating in the manner and for the purpose shown and described.

No. 40,767.—J. A. and J. W. MILLER, of La Grange, Ind.—*Improvement in Grain Separators*.—Patent dated December 1, 1863.—The grain, after passing over two screens in the shoes, passes down and in at the end of the revolving riddle which has detachable sectional screens; the chest, &c., from the upper shoe is conducted by a spout out of the machine or into a drawer.

Claim.—First, constructing the revolving conical screen E, with sectional removable or detachable screens k, arranged as described, so as to admit of coarser or finer screens being applied or used as occasion may require.

Second, the combination and arrangement of the shoe C, fan B, spout D, concave chute D', and revolving screen E, as and for the purpose set forth.

Third, the spout F, at the bottom of the shoe C, in combination with the spout G, opening f, in the side of the box or case A, slide I, and drawer H, or other receptacle, all arranged as and for the purpose set forth.

No. 40,768.—OSCAR F. MORRILL, of Chelsea, Suffolk county, Mass.—*Improvement in Sled Irons*.—Patent dated December 1, 1863.—This is specially intended for such irons as are heated by a flame from a gas-burner which is passed through them, and consists of a number of posts which connect the upper and lower plates, and which serve to arrest the flame and collect the heat.

Claim.—My improved sled-iron, as constructed with its heat-intercepting posts arranged in two ranges, disposed with respect to one another, and the induction and eduction passages, substantially in manner as specified.

No. 40,769.—SAMUEL REMINGTON, of Ilion, Herkimer county, N. Y.—*Improvement in Drop Presses*.—Patent dated December 1, 1863.—The shifting rod brings the two rolls into close connexion and presses the strap against the driving roll, which revolves continuously so as to cause the drop weight to rise, the projection on the weight passing a catch on the tripping rod; when a certain point is reached another projection disconnects the shifting rod which lets the former projection down upon the catch of the tripping rod, from which it is dropped at pleasure by the revolution of the rod.

Claim.—The employment of the lever f and its pin or screw a, segment g, and its adjusting holes with the adjustable roll e', when combined with the roll e, and the shifting rod i, or its equivalent, as and for the purpose herein specified.

No. 40,770.—MARTIN RICH, of Horicon, Dodge county, Wis.—*Improvement in Grain Drills*.—Patent dated December 1, 1863.—The improvement consists in adapting the same machine to sowing either broadcast or in drills by the device of transferring the seed hopper from the front to the rear end of the frame. The drill tooth is made oblong in shape and of unusual length, to enable the tooth to be set backwards or forwards and yet present its aperture to the hole in the drag bar, and allow the seed to drop into it. A bifurcated bar drags from the frame to prevent the trash from impeding the action of the teeth.

Claim.—First, a seeding machine so constructed that the seed hopper may be transferred from the front to the rear end of the frame, thereby adapting the same machine to sowing either broadcast or in drills, substantially as set forth.

Second, the drill tooth with the upper end constructed in the elongated form for the purpose set forth.

Third, the cleaner s for freeing the teeth from rubbish, constructed and operated substantially as described.

No. 40,771.—THOMAS SHARP, of Chicago, Ill.—*Improvement in Railroad Frogs*.—Patent dated December 1, 1863.—The adjustable rail revolves at a central point upon a pivot passing

ing through the bed of the frog at the point where the lines of the two tracks cross each other, instead of having two sections of rails on the frog with notches for the passage of the flanges on the wheels.

Claim.—Operating the adjustable bar E by means of the projection D thereon, the rods F G, and elbow lever I, when constructed, arranged and operated in connexion with the switch lever H, as and for the purposes herein specified.

No. 40,772.—CHRISTIAN SHARPS, of Philadelphia, Pa.—*Method of Charging Metallic Cartridges.*—Patent dated December 1, 1863.—The detonate in a fluid condition is introduced into the case, and the latter being revolved, the detonate is driven by the centrifugal force into the hollow of the flange.

Claim.—Charging metallic cartridge cases with detonate by introducing into each case a proper quantity of detonate in a fluid or semi-fluid state, and by a rapid revolving motion of the case projecting and packing the detonate into the interior of the flange or enlargement of the case substantially as described.

No. 40,773.—JOSEPH SINGER, of Chicago, Ill.—*Improvement in Cooking Apparatus.*—Patent dated December 1, 1863.—This is a cooking apparatus consisting of two boilers arranged over a furnace or lamp. A plate with a central perforation is placed over the fire or flame, causing the latter to impinge upon the centre of the concave pot bottom. The pot is suspended by a shoulder within the chamber above the furnace, allowing the heated products to circulate around it and escape by a flue to another pot similarly situated.

Claim.—First, adapting the lowermost vessel A for receiving the heat of a lamp or gas burner, or of a charcoal furnace, by means of a perforated removable bottom plate B applied to the perforated bottom B' of said vessel, substantially as described.

Second, the portable cooking apparatus, constructed, arranged, and operating substantially as described.

No. 40,774.—HAMILTON E. SMITH, of Pittsburg, Pa.—*Improved Washing Machine.*—Patent dated December 1, 1863.—The clothes are placed in an internal rectangular cage of slats contained within a perforated cylinder which is rotated on bearings.

Claim.—The perforated cylinder D, or its equivalent, with its internal cage, the whole being constructed and arranged to revolve in a reservoir, substantially as described.

No. 40,775.—HENRY SOGGS, of Columbus, Warren county, Pa.—*Improvement in Device for Operating Churns.*—Patent dated December 1, 1863.—The churn is suspended in a frame from standards, on which latter are segments which engage pinions on the churn frame and communicate a vertical reciprocating motion to the dasher, the cover sliding back and forth under the lateral pressure of the dasher rod.

Claim.—Placing and operating the churn H, in the swinging frame B, (including the necessary operating mechanism,) in combination with the sliding vent cover P P', so that the vent cover will slide back and forth on the top of the churn, and allow the dash rod a free perpendicular play, substantially as described.

No. 40,776.—ISAAC and STEPHEN STOUT, of Tremont, Tazewell county, Ill.—*Improvement in Cultivators.*—Patent dated December 1, 1863.—This is an improvement on Stout's patent of April 16, 1861, and consists in devices for supporting the cultivator, varying the depth of its work, securing the teeth in their position in the frame, holding them out of the ground when turning, changing the line of draught, and enabling the driver to change his attitude upon the frame from a standing to a sitting posture.

Claim.—First, the combination and arrangement of a front and rear frame in a cultivator, when constructed in the manner and for the purpose described.

Second, the combination and arrangement in the rear frame of the cultivator of a driver's seat made adjustable and a standing support for the driver, a lever catch bar, studs for the supporting wheels, and a projecting connexion f, all operating substantially in the manner and for the purpose described.

Third, the combination and arrangement in the main or front frame of the cultivator of the hinged lever, the central support for the middle plough handles and their braces, a lever-catch to regulate the depth of ploughing, and an adjusting device to change the line of draught, all operating substantially in the manner and for the purposes set forth.

No. 40,777.—A. C. TEEL, of Girard, Macoupin county, Ill.—*Improvement in Farm Gates.*—Patent dated December 1, 1863.—This panel of fence is to hang upon strips attached to the neighboring panels, that it may be pushed in half the length of a panel and then swung one-quarter round so as to make an opening the length of a panel.

Claim.—The suspending of the gate A on strips d d', attached to posts C D C' D', at the ends B B' of the fence, substantially as shown, to admit of the sliding of the gate and the turning of the same for the purpose of opening and closing it as herein set forth.

No. 40,778.—THOMAS THATCHER, of Danville, Montour county, Penn.—*Improvement in Direct-action Steam Engines.*—Patent dated December 1, 1863.—As the piston approaches

the end of its stroke the advancing plunger strikes the tappet and moves the valve so as to close the induction port at that end, and allow the steam to escape into the opening in the valve, expanding in which it completes the stroke of the valve and admits the steam to the other end of the cylinder.

Claim.—First, the two tappet levers J J', applied and combined with each other with the valve and plungers C C', substantially as herein specified.

Second, the rim or casing k k, around the exhaust port of the valve seat, in combination with the two cavities g j in the valve, substantially as and for the purpose herein specified.

No. 40,779.—WILLIAM THURBER, of Olean, Cattaraugus county, N. Y.—*Improved Machine for Fitting Pipes and other Boxes.*—Patent dated December 1, 1863.—This consists of a skeleton face plate or revolving chuck supported by self-adjusting friction rollers which run in grooves in the periphery of the revolving chuck, on the face of which carriage wheels are clamped at three points on the felloes. The centre of the chuck is open at the rear for centring and boring. The face plate is attached to an adjustable frame, which has an attached scale and indicator to give the required taper to the mortice. A reversible cone is so adjusted on the end of a shaft as to bear upon the centre hole or the edge of the hub for the purpose of centring the wheel.

Claim.—First, the skeleton face plate, or open revolving chuck, supported in its place by self-adjusting friction rollers on balanced arms, the rollers fitted to run in a groove in the periphery of the chuck, to which carriage wheels are attached, for the purpose of fitting in pipe or other boxes, constructed and operated in the manner herein specified.

Second, the adjustable frame, to which the face plate is attached, in combination with the lever arm, rule scale and indicator, to give the hole in the hub the exact taper of the pipe box being fitted.

Third, the arrangement of the hinged beam Q, the sliding bar k, and cutter a, the regulating stop k and weight m, with the reversible cone I, for centring the wheel, in the manner as described, for the purposes herein set forth.

No. 40,780.—W. W. TUTTLE, of Gratiot, Lafayette county, Wis.—*Improvement in Grain Drills.*—Patent dated December 1, 1863.—The grain is discharged from the seed box by wings on the shaft, which revolve in contact with the orifices, and is scattered by inclined plates and the chute, which is suspended beneath the frame.

Claim.—First, the wings a attached to the shaft F, and fitted in ellipsoidal recesses b, for the purpose of discharging the seed from the box E, as set forth.

Second, The scattering device formed of the spouts k i j and the box H', arranged as set forth.

No. 40,781.—GEORGE VANDER HEYDEN, of Troy, N. Y.—*Improvement in Grates for Stoves and Furnaces.*—Patent dated December 1, 1863.—The face sides of the grate bars are inclined more on the central portions of the bars, so as to graduate the size of the air passages, making them larger towards the outer edge or near the margin of the grate.

Claim.—First, a series of fire-grate bars B B B B, when the face sides of said series of bars are constructed in respectively graduated tapering forms, and such a degree of taper form of face being given respectively to the bars of the series as to produce, when the bars are properly arranged for use, respectively graduated air-draught spaces between the bars of said series, in the manner substantially as herein described and shown, and for the purposes specified.

Second, in combination with the series of fire-grate bars B B B B, as herein described, the use of inclined auxiliary fire-grate bars C C C C, so arranged in reference to the bars B B B B as to be easily detached from said bars without disturbing the same when necessary to renew a bar or bars, in the manner as herein shown and set forth.

Third, the manner of uniting two or more fire-grate bars by means of the hollow or perforated bridges or ties f f f cast upon the faces of the bars, in the manner and for the purpose substantially as herein shown and described.

Fourth, the combination of the cross-bars D D, the auxiliary cross-bars E E, the rods F F, the saddle rods G G G G, and the tie plates I I I I, when arranged and suspended within the fire-box of a furnace by means of chains or hooks, or their equivalents, in the manner as herein shown, and for the purpose set forth.

Fifth, in combination with the inclined auxiliary fire-grate bars C C C C the perforated bars k k k k, for the purposes as herein shown.

No. 40,782.—JOHN WALLACE and DANIEL CARPENTER, of Goshen, Orange county, N. Y.—*Improvement in Hay Rakes.*—Patent dated December 1, 1863.—This rake consists of a head and double row of teeth which are brought into use alternately; it drags behind the carriage, being attached thereto by arms; each tooth is maintained in position by the engagement of a spring bolt with the cam on its shaft, and the spring bolts are simultaneously with drawn by a lever operating a bar to which the row of bolts are connected.

Claim.—The arrangement of the double-shouldered cams I and spring dogs in combination with the teeth H and hinged arms F, constructed and operating in the manner and for the purpose substantially as specified.

ing through the bed of the frog at the point where the lines of the two tracks cross each other, instead of having two sections of rails on the frog with notches for the passage of the flanges on the wheels.

Claim.—Operating the adjustable bar E by means of the projection D thereon, the rods F G, and elbow lever I, when constructed, arranged and operated in connexion with the switch lever H, as and for the purposes herein specified.

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Claim.—Charging metallic cartridge cases with detonate by introducing into each case a proper quantity of detonate in a fluid or semi-fluid state, and by a rapid revolving motion of the case projecting and packing the detonate into the interior of the flange or enlargement of the case substantially as described.

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Claim.—First, adapting the lowermost vessel A for receiving the heat of a lamp or gas burner, or of a charcoal furnace, by means of a perforated removable bottom plate B applied to the perforated bottom B' of said vessel, substantially as described.

Second, the portable cooking apparatus, constructed, arranged, and operating substantially as described.

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Claim.—The perforated cylinder D, or its equivalent, with its internal cage, the whole being constructed and arranged to revolve in a reservoir, substantially as described.

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Claim.—Placing and operating the churn H, in the swinging frame B, (including the necessary operating mechanism,) in combination with the sliding vent cover P P', so that the vent cover will slide back and forth on the top of the churn, and allow the dash rod a free perpendicular play, substantially as described.

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Claim.—First, the combination and arrangement of a front and rear frame in a cultivator, when constructed in the manner and for the purpose described.

Second, the combination and arrangement in the rear frame of the cultivator of a driver's seat made adjustable and a standing support for the driver, a lever catch bar, studs for the supporting wheels, and a projecting connexion f, all operating substantially in the manner and for the purpose described.

Third, the combination and arrangement in the main or front frame of the cultivator of the hinged lever, the central support for the middle plough handles and their braces, a lever-catch to regulate the depth of ploughing, and an adjusting device to change the line of draught, all operating substantially in the manner and for the purposes set forth.

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Claim.—The suspending of the gate A on strips d d', attached to posts C D C' D', at the ends B B of the fence, substantially as shown, to admit of the sliding of the gate and the turning of the same for the purpose of opening and closing it as herein set forth.

No. 40,778.—THOMAS THATCHER, of Danville, Montour county, Penn.—*Improvement in Direct-action Steam Engines.*—Patent dated December 1, 1863.—As the piston approaches

the end of its stroke the advancing plunger strikes the tappet and moves the valve so as to close the induction port at that end, and allow the steam to escape into the opening in the valve, expanding in which it completes the stroke of the valve and admits the steam to the other end of the cylinder.

Claim.—First, the two tappet levers J J', applied and combined with each other with the valve and plungers C C', substantially as herein specified.

Second, the rim or casing k k, around the exhaust port of the valve seat, in combination with the two cavities g j in the valve, substantially as and for the purpose herein specified.

No. 40,779.—WILLIAM THURBER, of Olean, Cattaraugus county, N. Y.—*Improved Machines for Fitting Pipes and other Boxes.*—Patent dated December 1, 1863.—This consists of a skeleton face plate or revolving chuck supported by self-adjusting friction rollers which run in grooves in the periphery of the revolving chuck, on the face of which carriage wheels are clamped at three points on the felloes. The centre of the chuck is open at the rear for centring and boring. The face plate is attached to an adjustable frame, which has an attached scale and indicator to give the required taper to the mortice. A reversible cone is so adjusted on the end of a shaft as to bear upon the centre hole or the edge of the hub for the purpose of centring the wheel.

Claim.—First, the skeleton face plate, or open revolving chuck, supported in its place by self-adjusting friction rollers on balanced arms, the rollers fitted to run in a groove in the periphery of the chuck, to which carriage wheels are attached, for the purpose of fitting in pipe or other boxes, constructed and operated in the manner herein specified.

Second, the adjustable frame, to which the face plate is attached, in combination with the lever arm, rule scale and indicator, to give the hole in the hub the exact taper of the pipe box being fitted.

Third, the arrangement of the hinged beam Q, the sliding bar k, and cutter a, the regulating stop k and weight m, with the reversible cone I, for centring the wheel, in the manner as described, for the purposes herein set forth.

No. 40,780.—W. W. TUTTLE, of Gratiot, Lafayette county, Wis.—*Improvement in Grain Drills.*—Patent dated December 1, 1863.—The grain is discharged from the seed box by wings on the shaft, which revolve in contact with the orifices, and is scattered by inclined plates and the shute, which is suspended beneath the frame.

Claim.—First, the wings a attached to the shaft F, and fitted in ellipsoidal recesses b, for the purpose of discharging the seed from the box E, as set forth.

Second, The scattering device formed of the spouts k i j and the box H', arranged as set forth.

No. 40,781.—GEORGE VANDER HEYDEN, of Troy, N. Y.—*Improvement in Grates for Stoves and Furnaces.*—Patent dated December 1, 1863.—The face sides of the grate bars are inclined more on the central portions of the bars, so as to graduate the size of the air passages, making them larger towards the outer edge or near the margin of the grate.

Claim.—First, a series of fire-grate bars B B B B, when the face sides of said series of bars are constructed in respectively graduated tapering forms, and such a degree of taper form of face being given respectively to the bars of the series as to produce, when the bars are properly arranged for use, respectively graduated air-draught spaces between the bars of said series, in the manner substantially as herein described and shown, and for the purposes specified.

Second, in combination with the series of fire-grate bars B B B B, as herein described, the use of inclined auxiliary fire-grate bars C C C C, so arranged in reference to the bars B B B B as to be easily detached from said bars without disturbing the same when necessary to renew a bar or bars, in the manner as herein shown and set forth.

Third, the manner of uniting two or more fire-grate bars by means of the hollow or perforated bridges or ties f f f cast upon the faces of the bars, in the manner and for the purpose substantially as herein shown and described.

Fourth, the combination of the cross-bars D D, the auxiliary cross-bars E E, the rods F F, the saddle rods G G G G, and the tie plates I I I I, when arranged and suspended within the fire-box of a furnace by means of chains or hooks, or their equivalents, in the manner as herein shown, and for the purpose set forth.

Fifth, in combination with the inclined auxiliary fire-grate bars C C C C the perforated bars k k k k, for the purposes as herein shown.

No. 40,782.—JOHN WALLACE and DANIEL CARPENTER, of Goshen, Orange county, N. Y.—*Improvement in Hay Rakes.*—Patent dated December 1, 1863.—This rake consists of a head and double row of teeth which are brought into use alternately; it drags behind the carriage, being attached thereto by arms; each tooth is maintained in position by the engagement of a spring bolt with the cam on its shaft, and the spring bolts are simultaneously withdrawn by a lever operating a bar to which the row of bolts are connected.

Claim.—The arrangement of the double-shouldered cams I and spring dogs in combination with the teeth H and hinged arms F, constructed and operating in the manner and for the purpose substantially as specified.

No. 40,782.—**PETER WATSON**, of Oswego, N. Y.—*Improved Stave-cutting Machine*.—Patent dated December 1, 1863.—In this machine the stave is sawed from the bolt which traverses on a curved track, which determines the bilge of the stave; it is cut by a disked circular saw, and the carriage is moved back and forth by an automatic movement, and without reversing the motion of the driving shaft, but by alternately throwing the gear wheel in connexion with one or the other of two racks under the carriage. The belt is fed transversely to the saw by means of the devices recited in the third claim.

Claim.—First, the combination of the lever D', shaft P, wheels R and S, and racks T and U, substantially in the manner and for the purpose described.

Second, the combination of the double-racked arm j with the pawls k and n, arranged and operating substantially as specified.

Third, the combination and arrangement for conjoint operation of the pawls k and n, the stop d, and the spring catch c, substantially in the manner and for the purpose described.

No. 40,784.—**PETER WETCH**, of Oswego, N. Y.—*Improved Machine for Jointing Staves*.—Patent dated December 1, 1863.—In this machine the relative distances between the saws and the position of the gauge are adjustable, so as to suit any width of stave, and the bilge and bevel of each are proportionate to its width. The stave is clamped to a reciprocating carriage, and the saws have their bearings in carriages, which are pivoted on a common centre, so as to make the saws, whether near or far apart, revolve in a plane longitudinally vertical to the axis of the figure, to which the pointed edges of the stave are radial.

Claim.—The combination of the carriage Y, slide W, wheel S, shaft R, shaft N, and lever M, with the jointing saws, substantially in the manner and for the purpose described.

Also, the combination of the gauge V with the lever M, so that it is operated at the same time and in the same proportion as the saws, substantially in the manner and for the purpose set forth.

No. 40,785.—**MARIAN J. WELLMAN** and **J. J. GREENOUGH**, of New York, N. Y.—*Improvement in Chimneys and Shades for Lamps and other Lights*.—Patent dated December 1, 1863.—To protect the paper shade, the extension of the chimney is made of wire gauze or perforated metal, with an inner shade of the same material.

Claim.—The employment of perforated metal or wire gauze for the chimneys, shields, or screens aforesaid, by which the temperature is kept low, as and for the purposes set forth.

No. 40,786.—**ALBION WHEELER**, of Mallory, Clayton county, Iowa.—*Improvement in Potato Diggers*.—Patent dated December 1, 1863.—The potatoes are raised by the hooked tines on the rotary digger, pass to the rear over the slatted conveyor and the apron, to remove the dirt, and are discharged into a basket carried on the carriage attached in the rear.

Claim.—The arrangement of the hinged adjustable platform F with castor wheel d, in combination with the digging cylinder E, conveyor H, and slatted apron I, all constructed and operating in the manner and for the purpose herein shown and described.

No. 40,787.—**GALLUS WOEBER**, of Davenport, Scott county, Iowa.—*Improvement in Carriage Springs*.—Patent dated December 1, 1863.—One of the leaves has lugs, which, with the pins connecting them, embrace the other leaves and prevent lateral displacement.

Claim.—The lugs h projecting from the edges of the leaf d of a spring A, and operating in combination with the pins g and leaves c b, in the manner and for the purpose substantially as specified.

No. 40,788.—**H. G. WOOD**, of Buffalo, N. Y.—*Improvement in Cooking Stoves*.—Patent dated December 1, 1863.—The fire-pot is suspended in an air chamber, which connects with the flue spaces surrounding the oven.

Claim.—The fire-pot D suspended or supported in an air chamber E which surrounds the fire-pot on all sides except underneath it, in combination with an oven having flue spaces G G' leading from the air chamber and surrounding the oven, arranged substantially in the manner set forth.

No. 40,789.—**GEORGE J. BERGEN**, of Galesburgh, Knox county, Ill.—*Improvement in Corn Planters*.—Patent dated December 1, 1863.—This improvement has relation to that class of planters which require a driver and a dropper, and consists of two frames coupled together, one to carry each person; and the special points of the invention refer to adjustments for securing effectiveness and precision, and for balancing the machine.

Claim.—First, the combination in a seed planter of a front frame carrying the seeding mechanism and a dropman's seat, and a rear frame carrying a coupling windlass and a driver's seat with the slotted coupling, substantially as described for the purposes set forth.

Second, balancing the front and rear frames of a seed planter by a windlass, substantially in the manner and for the purposes set forth.

Third, the windlass C to balance the front and rear frames, or control the depth of planting in a seeding machine, or to regulate the weight of the tines upon the team, as set forth.

Fourth, the combination of the chain fastened to either frame, with the windlass, and running spirally around it to vary the leverage, substantially as described and set forth.

Fifth, the revolving seat for the dropman combined with a seed planter, constructed and operating as and for the purpose described.

Sixth, the combination of the dropman's seat with the driver's seat and with the windlass, substantially as described and for the purposes set forth.

Seventh, the indicating spring with its ribs, constructed and operating substantially as described.

Eighth, the slotted joint connecting the front and rear frames, when the draught of the rear frame is effected alone by this coupling, and so as to allow a vertical movement of the front or rear frame, as and for the purpose set forth.

No. 40,790.—**LOUIS BORNEMANN**, of Hudson City, N. J., assignor to **AUGUST HAMANN**, of Hoboken, N. J.—*Swivel Hook for Watch Chains, &c.*—Patent dated December 1, 1863.—The construction of the parts is such that by the turning of the screw barrel the hook is opened without the intervention of a hinge, the movable part of the hook sliding in and out.

Claim.—First, the semicircular shank d of the movable part C of the hook, in combination with the screw barrel c and shank a of the stationary part A, constructed and operating in the manner and for the purpose substantially as shown and described.

Second, the stop e in the end of the semicircular shank d, in combination with a groove, or its equivalent, in the stationary shank a, as set forth.

No. 40,791.—**WILLIAM BUDD**, of Philadelphia, Pa., assignor to **LOOMIS G. MARSHALL** and **ANDREW COCHRAN**, of same place.—*Improved Non-fusible Fuel*.—Patent dated December 1, 1863.—The invention consists in preparing the clay, molasses, and water, so as to develop their ultimate glutinous properties preparatory to mixing in the coal and adding thereto the petroleum.

Claim.—The combination of the several materials as hereinbefore set forth, with or without the proportions and manipulation, so as to make a non-fusible fuel; also the use of molasses in any other compound for fuel.

No. 40,792.—**FREDERICK W. COLLINS**, of Morris, Otsego county, N. Y., assignor to himself and **WILLIAM H. PRATT**.—*Improvement in Training Hops*.—Patent dated December 1, 1863.—A post is set to each hill of such a height as to support the vine to the bearing point, from whence cords, wire, &c., connect the summit of the post with each adjacent post.

Claim.—An apparatus for training hops reduced by the combination of a pole in each hill of the proper height only to support the hop to the bearing point with cords or twine, or their equivalents, connecting each of these poles with the poles of each adjacent hill, substantially as and for the purposes set forth.

No. 40,793.—**JACOB FARMWALT**, of German township, Holmes county, Ohio, assignor to **ARTHUR GRAHAM**, of Clark's P. O., Coshocton county, Ohio.—*Improvement in Horse Rakes*.—Patent dated December 1, 1863.—The rake bar is attached by links to the axle, and is raised vertically to discharge the hay by means of the compound levers which are pivoted together, and which are retained as required in their upward forward position by engagement with the rack teeth.

Claim.—The jointed arms H H and brace guides J J, in combination with the shaft C, provided with spring teeth and axletree F, when arranged in the manner and for the purpose set forth.

Also, the levers K and L, with their respective pivot joints and rack R, in combination with the shaft C, jointed arms H H, when arranged in the manner as and for the purpose described.

No. 40,794.—**SAMUEL D. GOODALE**, of Cincinnati, Ohio, assignor to **L. C. and D. C. GOODALE**, of same place.—*Stereoscopic Apparatus*.—Patent dated December 1, 1863.—This apparatus is specially adapted for the uses of public exhibition of stereoscopic scenes, including facilities for transportation. The lenses are in a hinged holder, which, when out of use, is folded back and closed by a flap. The holder consists of tripod, central standard, and braces, which are hinged and collapsible. Blinds are attached to catches which move in segmental slots. The reflectors occupy the lower part of the case, and are intended for night illumination. The lips below hold the cover temporarily. The scenes are placed in holders arranged radially on a rotating shaft.

Claim.—First, the stand or tripod, formed of the members A B B B C C C C' C' C', as and for the purpose set forth.

Second, the arrangement of hinged lens-holder G g and flap F f, together with their catches H and I, both holder and flap being capable of being closed or opened by a single movement, in the manner described.

Third, the arrangement of blinds J J', catches K K', and segmental slots L L', as set forth.

Fourth, the arrangement of reflectors M, box D, and scene holder S, substantially as set forth.

Fifth, the provision of lips N N' beneath the box, for the purpose stated.

No. 40,785.—HENRY HOFFMAN, of New York, N. Y., assignor to CHARLES WHEELER, of the same place.—*Improvement in Blinds for Windows, &c.*—Patent dated December 1, 1863.—This consists of a series of corrugated overlapping plates forming a shade, which are united by an extension lever pivoted to upright levers connected to the plates, and the whole capable of being retracted upwards and collapsed so as to be stowed away within the jamb and coping of the window or doorway.

Claim.—The construction of blinds, shutters, awnings, or reflectors, consisting of a series of plates P P₁ P₂ P₃ P₄, combined with the levers D D' E I' F K' G L' and H N', with their several pivots and connecting levers intended to be attached to a door or window by an arrangement for raising or lowering the same, substantially as described.

No. 40,796.—CHARLES H. PARSHALL, of Detroit, Mich., assignor to PARSHALL and DUNCAN.—*Improvement in Balanced Valves for Steam Engines.*—Patent dated December 1, 1863.—This invention consists of an induction and eduction steam valve, balanced both as to the steam and atmospheric pressures on it; and which when used upon a horizontal or inclined seat will also be balanced relatively to its own weight. The plate is supported over the cover, leaving a central space between the top of the valve of the cover, which has communication with the atmosphere by means of a curved, open pipe.

Claim.—First, the plate B, interposed between the valve O V and the cover H of the valve chest, and supported by standards L L' L'' L''', substantially as herein shown and described.

Second, the combination of the balanced valve O V, plate J, cover H, and curved pipe Y, all constructed, arranged, and operated as specified.

No. 40,797.—WILLIAM ROBINSON, of Wembdon, Bridgewater, Somersetshire, England, assignor to GEORGE B. TURRELL, of New York, N. Y.—*Improved Cask Washing Machine.*—Patent dated December 1, 1863; patented in England December 30, 1859.—The barrel is clamped in a frame which has a circular motion in an annular guide, which latter is supported on bearings, on which it is made to revolve at right angles to the former motion. This creates a compound motion as the axis of the cask is constantly assuming a different angle to the horizon, and as constantly the frame in which it is clamped is rotating in a vertical plane.

Claim.—An apparatus, substantially such as herein described, whereby a compound motion can be imparted to the cask, barrels, or other vessels simultaneously in two or more directions.

Also, the combination of the rotating frame B, serrated ring C, screw clamp D, carriages E, and eccentrics E, constructed and operating in the manner and for the purpose substantially as herein shown and described.

No. 40,798.—CHARLES H. WHEELER, of West Roxbury, Norfolk county, Mass., and JAMES A. BAZIN, of Canton, Norfolk county, Mass., assignors to CHARLES H. WHEELER aforesaid.—*Stereoscope.*—Patent dated December 1, 1863.—The eye-glasses are pivoted on a head-piece which is hinged to the bed-plate, on which are two slides, one carrying the scene-holder and the other a plate with orifices forming a field piece.

Claim.—First, the board or bed-plate A, in combination with the hinged eye-glass C and longitudinally sliding picture-holder B, constructed and operating in the manner and for the purpose substantially as shown and described.

Second, the longitudinally sliding adjustable field piece E, in combination with the bed-plate A, hinged eye-glasses C, and adjustable picture-holder B, as and for the purposes set forth.

Third, connecting the eye-glasses C to the head-piece D by means of a pivot f, substantially as and for the purpose described.

Fourth, the spring catch e, in combination with the hinged head piece D, bed-plate A, and eye-glass C, constructed and operating as and for the purpose set forth.

Fifth, the combination of the parts a b c of the bed-plate with each other and with the picture-holder B, substantially as and for the purpose herein set forth.

No. 40,799.—WALTER K. MARVIN, of New York, N. Y.—*Improvement in Protecting the Walls of Fire-proof Safes from Corrosion.*—Patent dated December 1, 1863.—The joints are filled and the surfaces coated with silicate of soda, which may be vitrified by heat after application.

Claim.—The method herein described of protecting the parts of fire-proof safes from dampness or corrosion by the employment and application as a coating of the surfaces of the iron in contact with the filling, and for hermetically sealing the joints of liquid quartz, substantially as hereinbefore set forth.

No. 40,800.—WALTER K. MARVIN, of New York, N. Y.—*Improved Composition for Filling Fire-proof Safes.*—Patent dated December 1, 1863.—Explained by the claim.

Claim.—The herein-described compound for filling safes and other fire-proof structures, the same consisting in the combination with calcined and powdered gypsum of alum in pieces, imbedded in and interspersed through the mass of plaster in such relative proportion

so that the water of crystallization of the alum, which may be evolved by heat, shall supply the requisite quantity of water to set the plaster, substantially as and for the purposes set forth.

No. 40,801.—FREDERICK BECK, of New York, N. Y.—*Improvement in Covering Cords, Wires, &c.*—Patent dated December 1, 1863.—The invention consists in the use of flock or powder, obtained by grinding woollen rags, &c., or of bronze powder, &c., first drawing the wire or cord through a solution of gum or liquid cement, and afterwards drawing it through the flock or powder.

Claim.—The employment or use of flock or powder, obtained by grinding woollen, worsted, or cotton rags, or paper, or other material, in combination with a solution of glue, or other suitable cement, for the purpose of covering cords or wires, substantially as set forth.

No. 40,802.—DANIEL E. HAYWARD, of Melrose, Middlesex county, Mass.—*Improvements in Attaching Rubber Soles to Boots and Shoes.*—Patent dated December 1, 1863.—The nails are so presented to the plastic rubber that the latter embraces and is vulcanized upon their heads; the nails are then driven through and clinched on the inside of the insole. A canvas cloth may be interposed between the insole and outer sole, which adds to the toughness of the article at the upper side of the outer sole.

Claim.—First, securing nails or rivets a to the rubber sole B by vulcanizing the sole on to the nails or rivets, substantially in the manner described.

Second, the canvas cloth c, when the nails or rivets a are passed through it, and the cloth and nails are attached to the sole in the manner substantially as set forth.

No. 40,803.—HENRY A. AMELUNG, of New York, N. Y.—*Improved Composition for Covering Hams.*—Patent dated December 8, 1863.—Tissue paper or cloth, coated on one side with a solution of gum shellac and alum in alcohol and oil, thoroughly boiled, is applied to the surface of the ham. The outer surface of the paper is then coated with the same solution by means of a brush, which presses the paper into every aperture or cavity of the ham, making, when dry, a perfectly air-tight covering.

Claim.—A covering for ham or other meat, consisting of paper or cloth soaked in a solution made of the ingredients herein specified, and mixed together in about the proportion and substantially in the manner described.

No. 40,804.—JACQUES AMBOS, of Barcelona, Spain.—*Improvement in Generating Gases for Heating and Illumination.*—Patent dated December 8, 1863.—This improvement consists in the formation of a gaseous compound in a furnace with facilities for the addition, in the furnace, of tar, oil, petroleum, &c., when required. The gas then passes off to retorts heated to redness, in which coal or resin oil gas is being generated.

Claim.—First, the formation of a gaseous compound, as hereinbefore described, and the mixing of the same with gas arising from the distillation of coal, or from the decomposition of oils, resins, tars, or fatty bodies, to manufacture gas suitable for lighting and heating.

Second, the apparatus for generating the gaseous compound, constructed and acting substantially as hereinbefore described and illustrated in the accompanying drawings.

No. 40,805.—JACQUES AMBOS, of Barcelona, Spain.—*Improvement in Gases for Motive Power.*—Patent dated December 8, 1863.—This invention consists in a new method of generating gases in a furnace surrounded by a water jacket, which acts as a steam boiler; coal is used to produce said gases, with the addition, if necessary, of tar, oil, petroleum, or fatty matter. The gas then passes through a bed of incandescent fuel, and, after being mixed with atmospheric air, is introduced into the cylinder and exploded by an electric spark or red-hot platinum wire.

Claim.—First, the production of a gaseous mixture composed of oxide of carbon, of hydride of azote and of a small proportion of carbonate of hydrogen, said compound being combined with air and used as motive power, in the manner hereinbefore set forth.

Second, the apparatus for generating the gaseous mixture to be used in the manner substantially as hereinbefore described and illustrated in the accompanying drawings.

Third, the generation of steam by the heating of water in the jacket of the cylinder of the said gas engine and in a boiler surrounding the furnace of the said gas-generating apparatus, substantially as hereinbefore described.

No. 40,806.—SAMUEL BABCOCK, of Middletown, Middlesex county, Conn.—*Improved Snap Hook.*—Patent dated December 8, 1863.—The invention consists in the arrangement of the parts in which the eye and hook are in one piece, and the tongue has lips to embrace the hook and a recess for a leaf spring.

Claim.—The improved manufacture of a snap hook as made, not only with its eye in one piece, with its hook and with its tongue not only provided with lips to embrace the shank of the hook and form a joint therewith, but with a recess arranged substantially as described, and for the purpose of carrying a straight or leaf spring disposed within such recess, in manner as hereinbefore explained.

No. 40,807.—WILLIAM BARNY, of Utica, N. Y.—Improvement in Skates.—Patent dated December 8, 1863.—The object of this improvement is to provide a firm and readily adjustable attachment for the boot to the sole of the skate, which is accomplished by boot clamps with pendant lips, operated by a cone in a chamber under the ball of the foot; also, an improvement in the shape of the runner, and in the dovetail mode of fastening the runner at the toe, and by a heel pin with a countersunk head.

Claim.—First, the construction of the clamps with the pendant lips, connected and arranged as I have described, and the mode of operating them which I have described.

Second, the construction and use of the skate runner of the flattened form with the elevated edges spread apart for greater base, and for other purposes as described, in combination with the deep wooden stock with bearing sheaves as described, and for the purposes described.

Third, the mode of fastening the runner to the wooden stock, by means of the dovetail device at the toe, as described; and the heel pin passing directly through the runner at the heel, with head countersunk, in the manner described and for the purposes described.

Fourth, the whole being constructed, combined, and arranged substantially in the manner herein set forth.

No. 40,808.—WILLIAM H. BAKER, of Marathon, Courtland county, N. Y.—Improvement in Telescopes.—Patent dated December 8, 1863.—The object of this invention is to provide a safe attachment for the lenses, eye-piece, &c., of a telescope exposed to concussion on a fire-arm. This is done by a spring, which, passing along the bore of the telescope, presses against the lenses, &c., or catches in notches. Also, to provide means for securing the disk and strap safely to the gun.

Claim.—Supporting the lenses or their settings and diaphragm which compose the eye-piece of the telescope by means of a spring or springs, thereby making a fastening that may be more readily removed, and rendering the lenses less liable to work loose or be broken by the jerk or concussion to which they are exposed in use.

Also, the notch C' in the setting of the object lens, in combination with the spring on the tube which holds the setting in and prevents it from working out by the recoil of the gun when it is fired.

Also, the spring clasp for holding the fore end of the telescope to the barrel of the gun.

Also, securing the disk P to the adjusting screw by turning the edge of the socket over the edge of the disk, as described.

Also, fastening the telescope to the disk P by means of the ears T T, strap S, and pin R, in combination with the spring or springs between the disk and telescope and between the telescope and strap S.

No. 40,809.—WILLIAM H. BAKER, of Marathon, Courtland county, N. Y.—Improvement in Locks for Fire-arms.—Patent dated December 8, 1863.—This invention consists in a modification of several parts of the ordinary lock, to wit, attaching the mainspring rigidly to the hammer, making the swivel, which is provided with notches to hold the sere, to extend an arm through the lock plate for attachment to the hammer.

Claim.—In combination with a cock or hammer, having its mainspring rigidly attached to it as described, the swivel or link H, provided with notches for the sere to hold the hammer at full or half cock.

Also, in a lock constructed as described, extending the arm of the sere or link through the lock plate, to make a connexion between the sere and the cock.

No. 40,810.—O. BEECHER and R. E. RODGERS, of Philadelphia, Pa.—Improvement in Railroad Journal Boxes.—Patent dated December 8, 1863.—The invention consists in certain arrangements for securing the oiling of the axle and prevention of foreign matter getting into the journal-box, all within the compass of the inside of the box.

Claim.—First, the oiling roller K, frame J, and weighted lever M, or its equivalent, the whole being constructed and arranged within a journal box and operating substantially as and for the purpose herein set forth.

Second, the partition I, oil chamber L, frame J, and oiling roller K, the whole being arranged substantially as set forth for the purpose specified.

Third, the annular flange G, or its equivalent, secured to or forming part of the wheel or axle, and arranged to project into the interior of the box, substantially as and for the purpose described.

Fourth, the annular flange H, secured to or forming a part of the wheel or axle, and arranged in respect to the annular flange E of the box, substantially as and for the purpose herein set forth.

No. 40,811.—J. H. BLAISDELL, of Boston, Mass.—Improved Soda Water Apparatus.—Patent dated December 8, 1863.—The objects of this improvement are to provide a means for the simultaneous discharge of the soda and the sirup into the glass, to discharge the soda through two different deliveries at one motion and from the same source, the latter being effected by a discharge concentrically around the other, to form a chamber or enlargement which shall obviate the necessity of a condensing bottle.

Claim.—In a soda apparatus the arrangement of one outlet for soda within another, substantially as described.

Also, the arrangement around or adjacent to the soda outlet or outlets of the various outlets for sirups and other fluids, substantially as described.

Also, the arrangement in a soda apparatus of the diaphragm *a* and disk *q*, or the equivalent thereto, so as to act under pressure as described, to admit into two or more passages, and to shut off therefrom, the soda supplied from a common source.

Also, the formation of a chamber in a soda discharge pipe, so as to operate to check the velocity of the discharge under pressure, and thus supersede the employment of the condensing bottle, substantially as set forth.

Also, the condensed arrangement of outlets, so that while each is separate from the others, they are all within the compass of and can each of them discharge into an ordinary drinking glass, without removal thereof, from a fixed position.

No. 40,812.—VIRGIL W. BLANCHARD, of Bridport, Addison county, Vt.—Improvement in Harvesters.—Patent dated December 8, 1863.—The improvement consists in a method of throwing the sickle in and out of gear, or of varying its speed by bringing it into connexion with a circle of cogs of a larger or smaller radius on the face of the driving wheel; of providing the points of suspension of the cutter bar with springs to reduce the jolting; an arrangement for keeping the finger bar and cutter in working position while raised; the construction of the parts for raising the cutter bar by the motion of the lever, and an arrangement for securing in its relative position the bar to which the finger bar is hinged.

Claim.—First, the employment or use of a sliding shaft E, one or two, provided with arms H, in combination with two concentric circles of cogs *b b'* attached to the driving wheel D, or to a wheel connected therewith for the purpose of varying the speed of the sickle I, and throwing the same in and out of gear, substantially as set forth.

Second, the employment or use of springs G G, applied to or connected with the shaft or shafts E, in the manner shown, or in any equivalent way for the purpose of equalizing the movement of the sickle, or causing it to operate smoothly without jars or concussions, as set forth.

Third, the curved stay bar T attached to the bar O and shoe P, substantially as shown, in combination with the rollers *c'*, connected to the finger bar S, as shown, and the cylindrical pin *w*, by which the finger bar is attached to the shoe; all arranged as shown, to admit of the finger bar and sickle being raised and lowered, and at the same time serve to hold or retain the same in a proper working position.

Fourth, the connecting of the cylindrical pin *w* to the lever U, by means of the chain *e'* passing over and around the pulleys *f' g'* in the bar O, and around the pulleys *A'* on the frame A, and attached to the lever U, for the purpose of raising the finger bar and sickle as set forth.

Fifth, securing the bar O, or staying the same in proper position, by means of the roller *v* placed in the arm Q, and fitted in the pendant frame R, attached to the frame A, substantially as herein described.

No. 40,813.—NATHAN F. BRYANT, of East Boston, Mass.—Improvement in Railway Carriages.—Patent dated December 8, 1863.—The object of this improvement is to adapt a railway carriage to run upon tracks of different widths, and it is accomplished by providing the wheel axle with a sliding box or sleeve moving endwise within the housing which is fastened to the carriage frame, the housing being open at the bottom except as provided with a removable stopper, which excludes dust and supports the chock which slides vertically within the housing at its lowest position, keeping it in connexion with the housing.

Claim.—The combination of the sliding box *e*, made either with or without the oil chamber and either a stationary or a movable bearing, the housing *f*, and the axle *a*.

Also, the combination of such parts and the chock H, arranged and applied to them so as to operate with them substantially as specified.

Also, the combination of the movable stopper *s* with the housing *f* and its chock H, the said stopper being for the purposes or to operate as specified.

Also, the housing as made and provided with the packing groove *t*, and the packing *w*, to encompass the sliding box, in manner and for the purposes specified.

Also, the combination of the centraliser or lip *s'* with the housing or truck frame, or carriage thereof, when the latter has its wheels so applied as to be capable of being adjusted by means of a wheel changing track to either of two tracks of different gauges.

No. 40,814.—ALBERT BOTTOM, of Bridgeport, Conn.—Improved Channelling Tool.—Patent dated December 8, 1863.—This is a combination of a straight and an arc-formed cutter so arranged relatively to each other, that while the first cuts a score in the sole or other article, the other cuts from within the said score a strip whose transverse section is of semicircular or segmental form, producing a channel of corresponding form.

Claim.—The combination of the straight cutter A, and the arc-formed cutter B, for cutting a score and a channel within it of the form substantially as herein specified.

No. 40,815.—OSCAR C. BURDECK, of New Haven, Conn.—Improvement in Machines for Making Nuts.—Patent dated December 8, 1863.—Upon *a*, bench is a stationary and travers-

ing head. The moving head has attached to its forward face a projecting hollow punch, the size of the nut to be made. The stationary head has a hollow die adapted to receive the hollow punch, and also a stationary centre die, the size of the hole through the nut, and the size also of the hollow of the tubular punch. A sleeve surrounding this centre die assists in holding the blank steady, and retreats with it before the force of the punch, and on the removal of the pressure discharges the nut from off the centre die.

Claim.—First, a die constructed as described in two parts *a* and *b*, and the said two parts combined with a movable punch *L* and a fixed punch *N*, to operate in the manner and for the purpose specified.

Second, the combination of the sleeve *i*, punches *L* and *N*, when the same are arranged in the manner described, and combined with a die constructed as and for the purpose specified.

No. 40,816.—VICTOR H. BUSCHMANN, of Baltimore, Md.—*Improvement in Feeding Device for Saw Mills.*—Patent dated December 8, 1863.—This device consists in a method of regulating the feed and guide rollers in a machine for slitting or resawing lumber, so that while they have a lateral motion on each side of a central line they shall preserve their parallelism and adjust themselves to boards of different thicknesses; the rollers are pivoted at each end in sockets, which traverse on rods which connect the uprights of the frame; a pressure by means of levers is brought to bear upon the sides of these sockets, and the levers on each side are connected with a rod, so that they move together, and these two rods are connected with a weight on a central rod which causes all the levers to act simultaneously upon each of the sockets.

Claim.—First, applying the required pressure to the feed and guide rollers, by means of a single force acting equally upon opposite sides of both roller-carrying frames, by mechanism constructed and operating substantially as described.

Second, hanging or supporting the roller-carrying frames, constructed as described, in such manner that while they will always preserve their parallelism to each other, they are allowed to yield equally on each side of a central line, and accommodate themselves to boards of different thicknesses, substantially as described.

Third, the use of adjustable bearings *i*, or their equivalents, in combination with the roller frames *b b* and pressure plates *g*, constructed and operating substantially as and for the purposes described.

Fourth, a central weight or other similar force in combination with a guide applied and operating substantially as and for the purposes described.

No. 40,817.—JONATHAN H. BYE, of Sterling, Whiteside county, Ill.—*Improvement in Construction of Buggies.*—Patent dated December 8, 1863.—In this improvement the V-shaped springs are a continuation of the fathoms and make part of the same, being attached by bolts to the fore axle and to the fore bolster: the coupling consists of two hounds which bifurcate near the axle, giving a double attachment—one to the axle, the other to the hind bolster; forward, the two hounds are prolonged into a curved end which runs in a guide under a bar, in which it traverses as the carriage is on the lock.

Claim.—First, the combination of the fathoms *a a* with the springs *b b* and *c c*, for the purpose and in the manner herein described.

Second, the combination of the coupling *m m* with the rear springs *s s* and *r r*, the curved continuation *n o n* of the coupling *m m*, the beam *j*, with its guides formed by *l* and *i i*, and the flexible bar *k*, substantially as set forth.

No. 40,818.—ANTHONY CHABOT, of San Francisco, Cal.—*Improvement in Filters.*—Patent dated December 8, 1863.—This apparatus consists of a porous tube or tubes set upon a flanged disk and covered with a flanged disk cap, so as to be water-tight, and connecting at their lower ends with a common discharge pipe. This concern is placed in a tank, and the water being admitted around it, percolates through the sides of the vessels, and is collected and discharged; provision is made for flushing the pipes for discharging the sediment by valve and waste pipe, and for changing the course of the water so as alternately to use the porous cylinders by an inward and outward flow through them, so as to loosen and discharge the sediment and refuse that have collected on their sides and around them.

Claim.—First, combining one or more porous tubes with a pipe *B*, by means of a flange *a* on the pipe for the reception of one end of each tube, a cap *C* for the reception of the other end, and a bolt *D*, substantially as herein described.

Second, in a filtering apparatus constructed substantially as specified, the herein described arrangement of chambers and passages for conveying the water to and from them, operating as explained to provide for the cleansing of the filters by reversing the flow of water through them without reversing or changing the position of the filter or filters.

Third, the combination and arrangement of the porous tube or tubes *A*, pipe or pipes *B*, tank *E*, trunk *G*, chamber *F*, openings *f g h i*, and gates or valves *f' g' h' i'*, to operate substantially as and for the purpose herein specified.

No. 40,819.—CHARLES B. CLARK, of Mount Pleasant, Henry county, Iowa.—*Improved Window-Sash Fastener.*—Patent dated December 8, 1863.—This fastener, attached to the sash and operating against the window strip, consists of two rollers made to rotate by teeth on a

circular flange with its convexity towards the window strip, so that as the sash is moved, the lever being held apart by a spring, one or other of the rollers will bear against the strip and be rolled up into the wedge-shaped space between the strip and the circular flange. The pressure together of the levers loosens both rollers and admits of the sash being moved as may be desired. The pressure of the lower roller will prevent the sash from falling, and of the upper roller from being elevated, except by the use of the lever.

Claim.—The circular flange *B*, or its equivalent, and the peculiar-shaped rollers *C C*; the same being combined and operated substantially and for the purposes as set forth.

No. 40,820.—WILLIAM C. CLARK, of Portland, Me.—*Improvement in Railroad Car Coupling.*—Patent dated December 8, 1863.—The coupling pin is so constructed, that as the link is thrust against it, in the contact of the bunter bars, it gives way, swinging upon a pivot, and as soon as the obstacle is past, drops and firmly retains it; in addition to this, it is so hung upon its pivot, that by the withdrawal of a latch, it may be lifted out to allow the disengagement of the cars.

Claim.—The application of the pin to the bunter bar, so that the pin may be capable not only of swinging on a fulcrum in manner and under circumstances as stated, but of being raised off the fulcrum in order to disconnect the link from the bunter bar.

Also, the combination of the latch or its equivalent with the pin and its supports as described, when such pin may be applied to the bunter bar, substantially in manner and so as to operate as specified.

No. 40,821.—ADAMS R. COOPER, of Mason City, Ill.—*Improved Washing Machine.*—Patent dated December 8, 1863.—The machine consists of a rectangular frame and box with a furnace beneath, and a series of grooved rollers in an independent frame moved by a crank on one of them, which actuates the others by bands; these all rotate in one direction, and underneath them is an endless apron running upon similar rollers to the above, and all kept in motion by the meshing together of the teeth of the upper and lower rollers. The clothes pass between these series of rollers and back underneath the apron, to be withdrawn or again operated upon.

Claim.—First, the combination of the furnace, the boiler, and the washing mechanism, substantially in the manner as described for the purpose set forth.

Second, mounting the upper rubbing and squeezing rollers in an independent skeleton frame, substantially in the manner described for the purpose set forth.

Third, the combination of three or more rollers leaving a differential motion, with two or more rollers carrying an endless apron over a board between them, substantially in the manner and for the purpose described.

No. 40,822.—WILLIAM CRAIG, of Urbana, Champaign county, Ill.—*Improvement in Corn Planters.*—Patent dated December 8, 1863.—The machine consists of a couple of seed boxes mounted on a wheeled frame, in the rear part of which are loose rollers with flanges, the latter so gauged as to act as seed coverers following in the wake of the shares. A button on the end of the tongue serves to keep the forward side of the frame in an elevated position when required, and the driver's seat, which is over the rollers, slides by transverse holes through its ends on supporting rods so as to shift fore and aft to adjust the weight.

Claim.—First, the roller *C*, constructed of sections *a' a' a' a'*, which are provided with flanges *b'*, as shown, for the purpose specified.

Second, the button *L*, attached to the back part of the draught pole *B*, and arranged as shown, for the purpose of keeping the front part of the frame *A* elevated, and the shares *F* above the surface of the earth when required.

Third, arranging or placing the driver's seat *M* on supports *N*, the upper parts of which are horizontal and are fitted in slots made longitudinally in the ends of the seat *M*, to admit of the adjustment of the latter, as set forth.

No. 40,823.—CHARLES H. DASCONE, of Cleveland, Ohio.—*Improved Seat and Cane.*—Patent dated December 8, 1863.—This cane divides at the mid length and the upper section, being divided longitudinally, and the two pieces rotating on each other by a pivot, unite with the lower section to form a tripod. The handle or knob becomes the pivot uniting the legs of the tripod.

Claim.—The herein-described improvement in combined cane and seat, consisting of the sections *A B B*, canvas *S*, head figure 3, and pin *D*, the several parts being constructed and united in the manner and for the purpose herein set forth.

No. 40,824.—S. B. DEAN, of Boston, Mass.—*Improvement in Apparatus for Adjusting Ordnance in Boring Mill.*—Patent dated December 8, 1863.—This is designed for supporting the muzzle of the gun during the boring operation, and for readjusting it if the weight shall have thrown the centre of the gun out of line. It consists of a wedge operated by set screws and an inclined bed, and side screws for lateral adjustment.

Claim.—The arrangement of the bearing, the incline *c*, wedge *d*, screws *g* and *i*, and uprights *k*, or their equivalents, all operating together substantially as and for the purpose set forth.

No. 40,825.—TIMOTHY EARLE, of Smithfield, Providence county, R. I.—*Improved Nut-Cracker*.—Patent dated December 8, 1863.—The nut is placed between an adjustable rest and a jaw which has a cam surface at the back and is advanced laterally by rotation.

Claim.—First, a crusher *m*, which has a lateral motion imparted to it by the action of a cam surface *c*, or its equivalent, in combination with a stationary back rest *g*, substantially as described, for the purposes specified.

Second, the use of a back rest *g*, which can be adjusted for nuts of various sizes, when applied to a nut-cracker, substantially as described.

No. 40,826.—JOSIAH ELLS, of Pittsburg, Pa.—*Improvement in Files*.—Patent issued December 8, 1863; antedated December 1, 1863.—The blade has a semicircular flange and a recess, and is firmly clasped between the bracketed ferule in which the handle is inserted, and the key piece which occupies the recess of the blade and the slot in the bracket.

Claim.—The hollow or concave bracket *b* and groove *p*, in combination with a blade *a* having a semicircular flange *c* and arched recess *k*, and the key (Fig. 3) for securing and strengthening the blade, substantially as herein set forth.

No. 40,827.—THOMAS B. DE FOREST, of Birmingham, New Haven county, Conn.—*Machine for Making Tags*.—Patent dated December 8, 1863.—This machine receives a strip of paper from a reel and punches eyelets, ornaments, and cuts or stamps out pieces of a given size and discharges them as complete tags. The paper is fed through the machine, having eyelets inserted at given intervals, a presser foot holding down the material, which has a guide on each side to regulate its position.

Claim.—First, an automatic feeding mechanism, in combination with an eyeletting mechanism, whereby eyelets may be set at given intervals, substantially as set forth.

Second, the combination of an eyeletting mechanism, a feeding mechanism, and a stamping or cutting-out device or mechanism, whereby the material may be eyeleted and cut apart into pieces of given size with the eyelet in a given position in each.

Third, an eyeletting or eye-forming mechanism, in combination with a stamping or cutting-out device or mechanism, whereby the eye-forming operation and cutting out are both performed in an organized machine without moving the material (or handling it) more than once.

Fourth, the punch *a* *ab*, operating previously to the insertion of the eyelet in combination with the eyeletting mechanism and cutting-off dies *D4 P1*, to perform the successive operations of punching out, setting the eyelet, and cutting apart the material, substantially as set forth.

Fifth, the employment of the presser foot *g*, or its equivalent, in combination with the eyeletting mechanism, as and for the purpose substantially as described.

Sixth, the employment of the hammer *L*, or its equivalent, in connexion with the eyeletting mechanism, to insure the flow of eyelets through the supply passage or chute *Q*, substantially as hereinbefore set forth.

No. 40,828.—A. H. EMERY, of New York, N. Y.—*Improvement in Percussion Fuse for Shells*.—Patent dated December 8, 1863.—The plunger of the percussion fuse is so fastened in the projectile as to be safe for handling, but unloosed when fired from the gun, so as to be free to move forward and explode the cap on the concussion of the projectile, the thread which held it being stripped off by the force of the explosion in the gun.

Claim.—First, the combination and use of the flange *D* and thread *F* with the plunger *C*, substantially as and for the purposes herein described and set forth.

Second, the combination and use of the washer *E*, when combined with the shell *H*, flange *D*, and screw thread *F*, substantially as and for the purposes herein described and set forth.

No. 40,829.—BARTHOLOMEW ERBE, of Snowden, Alleghany county, Penn.—*Improvement in Latches*.—Patent issued December 8, 1863; antedated October 24, 1863.—The bolt of the lock is capable of being rotated so as to answer for a right or left-hand lock.

Claim.—The use and employment of a round latch head, when the same is connected with the internal moving parts, so as to revolve on its axis in the manner substantially as described for the purpose set forth.

No. 40,830.—JOHN ERICSSON, of New York, N. Y.—*Improved Port-Stopper for Vessels of War*.—Patent dated December 8, 1863.—The crank-shaped piece which closes the port-hole is supported in bearings independent of the turret, and swings out of the way of the gun when the latter is run in battery.

Claim.—First, the construction of a port-stopper in the form of a crank, substantially as herein specified.

Second, the arrangement of a port-stopper to turn about an upright axis, or nearly upright axis, situated some distance within, or behind and opposite, or nearly opposite to the centre of the port, substantially as and for the purpose herein specified.

Third, the attachment of the bearings for the pivots or journals of the port-stopper, to supports which are detached from the wall of the turret or other defensive structure in the immediate neighborhood of the port, substantially as herein described.

No. 40,831.—GEORGE FREY, of New York, N. Y.—*Improved Bed Bottom*.—Patent dated December 8, 1863.—The lower frame is supported on legs and supports the upper by the interposition of elliptic springs. The upper frame has a hinged section to adapt it to a reclining posture.

Claim.—The combination of two frames, *A C*, one being provided with movable legs and the other with an adjustable head-piece, and both being connected with each other by elliptic springs *D*, in the manner and for the purpose substantially as herein shown and described.

No. 40,832.—JAMES FULLER, of Saxonville, Middlesex county, Mass.—*Improved Process of Removing Burs from Wool*.—Patent dated December 8, 1863.—The wool is steeped for 15 minutes in a solution of sulphuric acid, of a strength of 8 water to 1 acid; it is then dried and passed through a wool-picker, and afterwards immersed in a solution of alkali and Irish moss, which neutralizes the acid and restores the character of the wool. The effect of the acid is to make the vegetable matter brittle and easy of removal.

Claim.—The treatment of wool, as described, viz: by applying to it, in connexion with the treatment of it, an acid solution, a picker, and an alkaline solution, as set forth, a solution of Irish moss, or its equivalent, the whole being substantially as specified.

No. 40,833.—M. C. GARDNER, of Rochester, N. Y.—*Improvement in Car Coupling*.—Patent dated December 8, 1863.—The pin is supported in a horizontal position by means of the weight balls which lie upon it, and have a vertical motion in a groove at right angles to the line of draught.

Claim.—The method herein described of supporting the pin *P*, by means of the balls *C*, moving in holes or grooves at right angles to the line of draught, the whole operating in the manner and for the purpose substantially as described.

No. 40,834.—ALEXANDER GORDON, of New York, N. Y.—*Improvement in Registering Marine Logs*.—Patent dated December 8, 1863.—This invention is to register the directions of the distances run by the ship, as well as the distances themselves, and consists of an arrangement substantially like the ordinary "Patent Log," combined with a compass and a registering apparatus for dropping pellets, which score the distance into a compartment of the compass.

Claim.—The combination with the registering marine log of a compass divided into compartments *zz*, for the reception of pellets or their equivalents and an apparatus for dropping a pellet into one of said compartments whenever the vessel has made a certain distance, the delivering tube or portion of the said dropping apparatus being so controlled as to always point in the direction in which the vessel is moving through the water, and the whole operating substantially as and for the purpose herein specified.

No. 40,835.—CHARLES GRATH, of St. Louis, Mo.—*Improved Composition for Lubricating*.—Patent dated December 8, 1863.—Composed of paraffine oil, grease, rosin and lye; the latter formed by a solution of lime, alum, soda, potassa, and sugar of lead, in water.

Claim.—The production of an axle and machine grease made from paraffine oil with the combination of the substances above specified.

No. 40,836.—DUDWIG HAECKER, of Attenburg, Kingdom of Hungary.—*Improvement in Brewing with Malt*.—Patent dated December 8, 1863.—A paste is formed of corn groats, with from 12 to 20 per cent. of barely malt, and with water at a temperature of 120° Fahrenheit; water is added gradually until the mash has a temperature of 165°, and eventually 200°. It is then left to stand awhile, and then cooled to 158°; the barley malt is then added and it is boiled with hops in the usual manner.

Claim.—First, the within-described process of disclosing the starch of corn and preparing the saccharified extract from corn mixed with barley malt, in about the proportion heretofore specified, by the three manipulations substantially as set forth, said manipulations being conducted either in one and the same or in different vessels, as may be desirable.

Second, exposing maize, when the same is mixed with barley malt, about in the proportion herein specified, to the action of boiling water, substantially as and for the purpose set forth.

No. 40,837.—CALVIN J. HOLMAN, of Oshkosh, Winnebago county, Wis.—*Improved Sawing Machine*.—Patent dated December 8, 1863.—This saw is intended for sawing staves, and is in the form of a short cylinder, supported on drums placed within it; the drums are mounted on shafts, on which are gears which mesh into a spur wheel on the shaft. Each drum is made in two parts with an interval between them, the thin edges being secured by a set screw so as to be adjusted further back as the saw wears narrower.

Claim.—The combination of the shaft *s* and spur-wheel *d* with the drums *a a a a*, and their movable collars *pp*, with the gears *cccc*, arranged substantially in the manner and for the purpose specified.

No. 40,838.—JAMES A. HENDRICK, of Providence, Luzerne county, Penn.—*Improvement in Grinding and Polishing Tools.*—Patent issued December 8, 1863; antedated November 21, 1863.—In this machine a pattern is attached to a rock-shaft which is connected by a pitman to another rock-shaft, which has the tool socketed to it, the shafts being placed on a carriage sliding on the grindstone frame, in connexion with an adjustable bearing, placed for the pattern to work against and arrest the operation.

Claim.—The two rock-shafts *I I*, fitted in a sliding frame *H*, having a lateral reciprocating movement, and provided respectively with the sockets *Q V*, with the tool and pattern fitted in them, and operated from the grindstone shaft *C*, as shown, or in any equivalent way, in combination with the grindstone *B* and the adjustable bearing *S*, or its equivalent, for the purpose herein set forth.

No. 40,839.—THOMAS STERRY HUNT, of Montreal, Canada East.—*Improvement in Composition for Bank Note and other Inks.*—Patent dated December 8, 1863.—The basis of the ink is a compound of tannic acid (peroxyde of tin) and a small proportion of oxide of chromium or other metallic oxides.

Claim.—The new use and application of the said mineral compounds, as an ingredient or basis of an ink for printing from engraved plates, from types, or for other kinds of printing.

No. 40,840.—JOHN HURCHISON, of Three Rivers, St. Joseph's county, Mich.—*Improvement in Grain Cleaners.*—Patent dated December 8, 1863.—This is a cleaning arrangement to operate upon the grain as it passes from the hopper to the eye of the runner. Its feed is adjusted by a sliding sleeve, and it then falls into a scattering dish, and from thence to a slanting board, whose lower edge gives the grain a tendency upwards towards the fan, which acts as a constant suction to draw the lighter grain and refuse away from the spout leading to the millstones.

Claim.—First, the combination of the hopper, the sliding sleeve, and the rotating dish or scattering cup, substantially in the manner and for the purpose described.

Second, the combination of the scattering dish, inclined board *E*, and beak *e*, with the suction spout, as described, for the purpose set forth.

Third, the combination of a sliding sleeve, cut-off, a cant board, and a suction spout with a fan, substantially in the manner described, for the purpose set forth.

Fourth, the combination of the hopper, the toll dish, and the slide valve, as and for the purpose set forth.

No. 40,841.—LEMUEL P. JENKS, of Boston, Mass., assignor to LEVI L. TOWER, of same place.—*Inkstand.*—Patent dated December 8, 1863.—The vessel and the cup are united by an India-rubber ring. The ink is obtained by a slight pressure upon the cup while dipping with the pen.

Claim.—The combination of the elastic ring *G* with the reservoir *F* and the dipping cup *c*, and for the purposes shown.

No. 40,842.—WILLIAM JONES, of St. Louis, Mo.—*Improvement in Potato Diggers.*—Patent dated December 8, 1863.—The machine is preceded by a rake to remove the vines, &c., out of the track of the digger, which immediately follows, and consists of a number of inclined bars, which slide under the hill of tubers and lift them, with their adhering and adjacent soil, and discharge them into a sifting box, from which they are discharged into the cells of the revolving apron and carried to the box on the rear of the frame. The depth and adjustment of the clearer and digger are regulated by spring and a lever.

Claim.—First, the clearer *D*, arranged on the front end of the machine and combined with the bar *E* for operating the same; the whole to be constructed and arranged substantially in the manner set forth.

Second, the rods *K* and springs *J*, in combination with the hinged platform *H*, as and for the purpose set forth.

Third, in combination with the digger *G* the sifter *N*, constructed and operated as set forth.

Fourth, in combination with the digger and sifter, constructed as set forth, the endless apron *m*, for the purpose of receiving and delivering the potatoes, as described.

No. 40,843.—T. S. LAMBERT, of Peekskill, Westchester county, N. Y.—*Improvement in Ventilating Railroad Cars.*—Patent issued December 8, 1863; antedated December 4, 1863.—The air to be admitted to the car is passed in a sinuous course over surfaces of ice arranged in a series of shelves.

Claim.—The application of ice to assist in the ventilation of railroad cars *E*, and for other purposes, substantially as set forth.

The construction of a closet with shelving or draws for ventilation by means of passing air over the surface of ice, substantially as set forth.

No. 40,844.—T. S. LAMBERT, of Peekskill, Westchester county, N. Y.—*Improvement in Mode of Facing the Walls of Buildings.*—Patent dated December 8, 1863.—The facing plate has a backwardly projecting lug or plate, which is introduced between two courses of the backing.

Claim.—The construction of facing for the inner or outer surface of walls of buildings, each piece of which facing is finished with a shoulder offset or arm, to be the means of fastening it to the wall, in the manner and for the purpose substantially as set forth.

No. 40,845.—T. S. LAMBERT, of Peekskill, Westchester county, N. Y.—*Improved Roller for Wringing Machines.*—Patent dated December 8, 1863.—A covering of cordage laid on spirally.

Claim.—The application of any kind of cordage to form the surface of rollers in wringing machines, in the manner and for the purposes substantially as set forth.

No. 40,846.—JACOB J. LOWNDS, of New York, N. Y.—*Pen and Pencil Case.*—Patent dated December 8, 1863.—The pencil and pen are arranged at opposite ends in the respective tubes, and the pen is protruded by the revolution of the spirally-grooved tubes, which engage the pen of the pen slide.

Claim.—The two tubes *A B* arranged to slide one within the other, in combination with the spirally-slotted tubes *E F*, pen slide *C*, and pencil *I*, all arranged as and for the purpose herein set forth.

No. 40,847.—CHARLES F. MACY and SETH MARTIN, of Little York, Nevada county, Cal.—*Improvement in Hose Nozzles.*—Patent dated December 8, 1863.—The hose nozzle is designed for mining purposes, and the improvement consists of radial flanges, which are intended to cause the water to issue in a direct current without tendency to spread and scatter.

Claim.—A hose pipe provided with internal radial plates, substantially as and for the purpose herein set forth.

No. 40,848.—THOMAS J. MAGEE, of Cincinnati, Ohio.—*Improved Sofa Bedstead.*—Patent dated December 8, 1863.—The bedstead, with its hinged frame, suspended legs, braces, &c., folds up at the back of the sofa. The precise arrangement of the parts are more readily drawn than described.

Claim.—The arrangement of sofa or lounge *A*, folding frame *B*, arms *C C'*, springs *D* and legs *F F'*, and cords *G G'*, the whole forming a combined sofa and self-unfolding bedstead, substantially as set forth.

No. 40,849.—W. D. MANN, of Detroit, Mich.—*Improved Mode of Slinging Accoutrements.*—Patent dated December 8, 1863.—The cartridge box is worn in the front of the person, and acts as a counterbalance to the other accoutrements.

Claim.—The manner herein described and represented of slinging the cartridge box of an infantry or cavalry soldier so as to have the weight thereof counterbalanced by the other accoutrements and arms usually worn upon the body, and the weight of the whole borne upon the shoulders, substantially as described.

No. 40,850.—DANIEL MCNAB, of Moscow, Hillsdale county, Mich.—*Improvement in Excavators.*—Patent dated December 8, 1863.—The shovel or scraper is suspended by pivots from a frame on wheels, and is driven into the ground and filled by the motion of the wagon. It is discharged by stopping the wagon and the draught thrown upon the chain which upsets the scraper and dumps the load into the wagon box.

Claim.—First, the scraper *B*, with its grooves *P* and pulley *K*, suspended by chains *E E* on pivots *N*, and operating substantially as described.

Second, the bar *G*, the hooked king-bolt, the shifter *F* and the brake *D*, the whole constructed, combined, and operating substantially as described, and for the purposes specified.

No. 40,851.—DON JOHN MOZART, of New York, N. Y.; LEVI BEACH, of Farmington, Hartford county, Conn.; and LAPORTE HUBBELL, of Bristol, Hartford county, Conn.—

Improvement in Clock and Watch Escapements.—Patent dated December 8, 1863.—The escapement wheel is applied directly to the verge or balance wheel staff, without the intervention of lever or other contrivances; an increase or diminution of the motive force making but little appreciable effect on the time-keeping, owing to the point on which the pressure of the escapement-wheel is applied. The verge has a central longitudinal groove in a flattened portion, which leaves a bevelled face on each side of the central depression; into the latter the point of the tooth projects and is freed by the vibration of the verge, the return motion admitting the point of another tooth.

Claim.—First, constructing a staff or verge in such manner that the pallets or points of repose are adapted to receive the teeth of a common ratchet scape wheel, substantially as described.

Second, the concave bevelled surfaces *j j* and groove or channel *i*, formed in the solid cylindrical verge, substantially as described.

Third, the application of the scape wheel *d*, or its equivalent, to the verge *b'*, when constructed substantially as described.

Fourth, giving the vertical adjustment to the support for the verge of the escapement by means substantially as described.

No. 40,852.—JOHN PRINGLE, of Jersey City, Hudson county, N. J.—*Improvement in Hydrants*.—Patent dated December 8, 1863.—The improvements are in the plug, with its three passages and the weighted handle which closes the valve. The openings in the plug are for the passage of the water to the spout and the reflux of the water in the passage above, after shutting off the supply, so as to avoid the effect of freezing.

Claim.—First, the plug *a*, with three passages *g h i*, and held in place by a cap *c* over its thick end, in combination with the lever *b*, rod *e*, slip-weight *E*, and pipes *B C*, all constructed and operating in the manner and for the purpose substantially as set forth.

Second, the weight *E*, made in two parts and united by a dovetail, in combination with the rod *e* and plug *a*, constructed and operating as and for the purpose directed.

No. 40,853.—WILLIAM S. PRATT, of New York, N. Y.—*Improvement in Sewing Machines*.—Patent dated December 8, 1863.—This machine makes the ordinary running stitch with a common needle and continuous thread. One pair of rollers holds the needle in position and the other feeds the fabric to the needle and carries the latter back after the stitch is made; a needle-driver acts against the head of the needle as a lady's thimble. The fabric is drawn over a lip which, in connexion with the bar, makes the stitch. The feed-motion is regulated by means of the adjustable pawl which operates on the ratchet wheel.

Claim.—First, a sewing machine making a running stitch and using an ordinary sewing needle, operating substantially as described, in which the needle is not stationary, but is carried or driven forward through the cloth in making the stitch, and then carried backward with the fabric, preparatory to the making another stitch.

Second, the arrangement of the lip *d*, in combination with the needle *g* and the rollers *a* and bar *e*, for making the stitch, substantially as described.

Third, the combination and arrangement of the ratchet *o* and impelling arm or pawl with the mechanism rotating the rollers *a a' b b'*, substantially as and for the purposes set forth.

Fourth, the combination of the adjustable arm or pawl *n* with the ratchet *o*, for the purpose of regulating and varying the length of the stitch, substantially as described.

No. 40,854.—PHINEAS M. RANDALL, of San Francisco, Cal.—*Improvement in Quartz Mills or Crushers*.—Patent dated December 8, 1863.—Explained by the claim.

Claim.—A rotary muller, provided at its face side with grooves of involute or other form which will convey or force the substance acted upon from the periphery of the muller toward its centre, and thence upward through the muller, so that the substances may be expelled by centrifugal force toward the periphery of the muller, and then pass down again underneath the muller, to be forced toward its centre as before, as herein set forth.

No. 40,855.—JOHN H. RANCH, of New York, N. Y.—*Improvement in Pen and Pencil Cases*.—Patent dated December 8, 1863.—The objects in view were to obtain a pen which should be short when closed up, admit of extension at either end, and allow the use of a large pen. The devices are sufficiently recited in the claim.

Claim.—First, the tube *B*, placed centrally or concentrically in the tube *A*, in combination with the detachable pen-slide tube *D*, all arranged as shown to admit of the tube *D*, when shoved into tube *A*, passing over the tube *B* for the purpose of enabling a large pen *G* to be used.

Second, constructing the pen-slide *E* of two tubes *a b*, one being fitted over the other with the shank of the penholder *F* between them, as and for the purpose specified.

Third, the slide *H* on the head *F'*, provided with a flange *g*, or its equivalent, when said slide is used in connexion with the tubes *A D*, for the purpose set forth.

Fourth, the ring or band *f* within the tube *D*, and attached to the pencil-slide *E* when used in connexion with the tube *B* in the tube *A*, to preserve the nib or point of the pen when the tube *D* is shoved into tube *A*, as described.

Fifth, the combination of the tubes *A B D*, pen-slide *E*, and the head *E'*, with slide *H*, all arranged substantially as and for the purpose herein set forth.

No. 40,856.—LUCIUS E. REYNOLDS, of Mendon, Adams county, Ill.—*Improvement in Compound Projectiles for Ordnance*.—Patent dated December 8, 1863.—One of these projectiles fits the bore of the piece from which it is fired, and the other fits a bore in the former, having behind it a charge of powder and fulminate, which is exploded on the impact of the projectile, giving it an additional force.

Claim.—The combination of the major and minor projectiles, the interposed charge and the fulminate priming, substantially as herein described, the whole forming a compound projectile operating as herein set forth.

Also, the protecting ring *e*, applied substantially as and for the purpose set forth.

No. 40,857.—RICHARD H. RODGERS, of New York, N. Y.—*Stamp Cancellor*.—Patent dated December 8, 1863.—The face of the stamp is a perforated plate, and in the interior is an ink reservoir, the contents of which are pressed out by a plunger, whose range of stroke is regulated by a gauge, and the return motion made by a spring.

Claim.—The ink reservoir *A* with perforated stamp, plate *J* attached to its lower end in connexion with the plunger *D* and diaphragm *E*, either or both, and with or without the gauge *H*.

No. 40,858.—FRANCIS SHENTON, of Slatington, Lehigh county, Pa.—*Improvement in Joint for Slat and other Frames*.—Patent dated December 8, 1863.—The corners are notched into each other, and a spline piece or fin inserted in the corner and pinned.

Claim.—A joint formed of notching the sides and ends as described, in combination with the spline or piece *J* and pins *K K*.

No. 40,859.—MILES H. SKIFF, of Cornwall Bridge, Litchfield county, Conn.—*Improvement in Cultivators*.—Patent dated December 8, 1863.—This invention consists in hinging a carriage that carries the cultivator teeth on or to the axle that supports and carries a second frame, so that said carriage shall not only have a lateral parallel motion, but also a tipping motion, so that, when the machine is being moved from field to field, or otherwise, the teeth of the cultivator may be held up out of the way of obstacles, and locked down when they are in use.

Claim.—The combination of the carriage *F*, that carries the cultivator teeth or ploughs, with the axle *A*, and with the main frame *C* carried on said axle, so that the driver from his seat may, at pleasure, move said carriage laterally, or tip it up or let it down, and fasten it down, substantially in the manner and for the purpose herein described and represented.

No. 40,860.—ROSWELL J. STANLEY, of Mount Morris, Livingston county, New York.—*Improvement in Hay Elevating Forks*.—Patent dated December 8, 1863.—The gripping jaws are pivoted together, and each is operated by a lever; between the latter is a double link, to the junction of which the suspending and hoisting rope is attached. The weight has the effect of drawing the jaws closer together, and the load is discharged by the contact of the levers with the floor above, which spreads them until the catch falls under the end of one and retains them in their open position.

Claim.—The double fork composed of the two stocks *A A'*, with their attached tines, the two arms *C C'*, two links *D D'*, and the catch lever *G*, and spring catch *d*, or their equivalent, attached to one of the arms *C C'*, the whole combined and operating substantially as and for the purpose herein specified.

No. 40,861.—WILLIAM R. STEPHENSON, of West Greenville, Mercer county, Pa.—*Improvement in Trusses*.—Patent dated December 8, 1863.—The back support of the truss is made by branching the springs and making the branches overlap and the ends imbringe on pads, two on each side of the spine, their relative proximate position being regulated by the adjusting holes in the straps which hold the pins of the pads. The hernial pad-arm is pivoted on the spring, and has an adjustment by means of a catch and ratchet.

Claim.—The combination of the adjusting straps *C C'* and body-branching, overlapping springs *A A'* with each other and with the swinging arms *D D'* and pads *E E'* in the manner herein shown and described.

No. 40,862.—D. S. STEWART, of Wapello, Louisa county, Iowa.—*Improved Evaporator for Sorghum Juice*.—Patent dated December 8, 1863.—One pan over the furnace and two communicating therewith are located over the two flues, the entrances to which are controlled by dampers.

Claim.—First, the combination and arrangement of the pans *B C C'*, the furnace *A*, and flues *D D'*, substantially as and for the purpose set forth and described.

Second, the arrangement of the valves *T T'* in combination with the flues *D D'*, for the purpose of varying the heat under the pans *C C'*, as described.

Third, the entire apparatus herein described, consisting of the pans *B C C'*, arranged as shown, the furnace *A* with flue *F*, the flues *D D'*, and chimneys *M M'*, and valves *T T'*, the whole combined and operating as and for the purpose described.

No. 40,863.—LOUIS E. SUFFERT, of St. Louis, Mo.—*Improvement in Cooking Stoves*.—Patent dated December 8, 1863.—This consists of a removable chamber or box provided with holes for cooking utensils, and to be placed on the top of the cooking stove.

Claim.—The removable heating jacket or chamber to be placed on top of the stove, furnace, or any other fireplace, Fig. 6a, substantially as described above.

No. 40,864.—WILLIAM A. SWEET, of Syracuse, Onondaga county, N. Y.—*Improvement in Harvesters*.—Patent dated December 8, 1863.—The pitman is attached to the cutter-bar head by a roller, which is retained in its place by the slot *c* and way guide, which also forms the upper guide for the knife; the cutter-bar head is attached to the knife by means of a long shank projecting from the former.

Claim.—First, the attaching or securing of the cutter-bar head C to the sickle B, by providing said head C with a shank *c* of taper form, interposed between the cutter-bar *b* and the teeth *a* of the sickle, substantially in the manner as and for the purpose herein set forth.

Second, the peculiar construction and arrangement of the slot cap E and way guide F, substantially as shown, for the purpose of forming a guide for the pitman D and for the retaining of the journal *g* within the cutter-bar head C, as set forth.

No. 40,865.—CHARLES F. TAYLOR, of New York, N. Y.—*Improvement in Machines for Exercising the Human Body.*—Patent dated December 8, 1863.—The patient lies on the lounge, and the pads being adjusted to the body over the region of the liver and stomach, a reciprocating motion is imparted to the shaft which rolls and agitates the region of the body affected by dyspeptic symptoms.

Claim.—The arms G G, provided with adjustable pads M M, and attached to the reciprocating bar C, substantially as shown, for the purpose specified.

Also, the arms G G, pads M M, bar C, serpentine cam E, and lounge A, all arranged and combined for joint operation, as and for the purpose specified.

No. 40,866.—GEORGE TERRY, of New York, N. Y.—*Improvement in Combining Springs for Motive Power.*—Patent issued December 8, 1863; antedated October 3, 1863.—The strength of the springs are exerted on one shaft, and the latter operated with a force and duration equal to the power of one spring, and for an increased length of time in proportion to the number of springs so attached.

Claim.—The combining or connecting together of a series of springs, in the manner substantially as herein described, so that said springs will be wound up simultaneously by the turning of a common shaft, and, when wound up, be made to exert their power or act in an uniform combined manner upon said shaft, as set forth.

No. 40,867.—WILLIAM THURBER, of Olean, Cattaraugus county, N. Y.—*Improvement in Lifting Jacks.*—Patent dated December 8, 1863.—The bed of the truck is supported by wheels and a spring, and the lever which lifts the slide on which the axle is imposed hangs by a stirrup from a swinging rack suspended from the standard.

Claim.—First, the combined arrangement of the truck wheels I I, the spring shoe *k*, and pointed spikes *k k*, operating in the manner as and for the purposes herein set forth.

Second, the combination of the hanging rack *a*, the stirrup *j*, the supporting spring *e*, and the lever E, with the notches *i i*, for changing the fulcrum to get more or less power on the lever, in the manner herein specified.

No. 40,868.—T. J. TOWNSEND, of Baltimore, Md.—*Improvement in Shutter Fastenings.*—Patent dated December 8, 1863.—A casing and pipe are attached to the window frame and contain a rod and stiff link chain, which operate the pintle on which the blind or shutter is set. As the handle of the rod projects into the room it may be operated from the inside.

Claim.—The wheel A, chain F, and bar E, placed respectively within a case C and pipe D, in connexion with the hinge F' of the blind or shutter applied to the wheel A, or shaft B thereof, the case and pipe being applied to the window frame, and all arranged substantially as and for the purpose herein set forth.

No. 40,869.—AARON TRAVIS, of Peekskill, Westchester county, N. Y.—*Improvement in Pruning Hooks.*—Patent dated December 8, 1863.—This hook has two bends in the blade, and the interior edge is sharpened from hilt to point.

Claim.—A pruning hook A, constructed in the form herein shown, with cutting edge on the various parts *c c* and *d*, as set forth.

No. 40,870.—ERASMUS TUCKER, of Poplar Grove, Howard county, Ind.—*Improvement in Sugar Evaporating Apparatus.*—Patent dated December 8, 1863.—A regulator is placed under the pan nearest to the furnace, and consists of alternate water pans and perforated plates, the latter covered at will by dampers, which are thrust in laterally from the exterior. The pans are three, and on an ascending level as they recede from the main furnace, while the last has an auxiliary furnace and may be worked separately.

Claim.—In combination with an evaporating pan, an intermediate heat regulator H, consisting substantially of alternate shallow water pans and perforated plates, when constructed and operated substantially in the manner and for the purposes described.

Also, in combination with the intermediate heat regulator H the dampers *g h*, for the purpose of regulating or shutting off the heat from the pan, substantially in the manner herein described.

Also, in combination with the evaporating pans, set at different levels, the two chimneys E F and dampers *k m*, for the purpose of heating the first pan B independently of the others, substantially in the manner and for the purposes set forth.

No. 40,871.—CLARK TURNER and J. A. JACKSON, of Triangle, Broome county, N. Y.—*Improved Machine for Drying and Renovating Feathers.*—Patent dated December 8, 1863.—This is a revolving feather receptacle, with a central steam-chamber and tubes leading radially

ally from the latter to the exterior of the receptacle; the said tubes have perforations leading to the place occupied by the feathers, and have plugs which close the outer orifices of the tubes when required.

Claim.—The revolving feather receptacle A, in combination with the steam-chamber C, provided with perforated tubes D D passing into the sides of the receptacle A, and having valves E fitted within them, and all arranged as shown, to operate in the manner as and for the purpose herein set forth.

No. 40,872.—GEORGE I. WASHBURN, of Worcester, Mass.—*Improved Condenser.*—Patent dated December 8, 1863.—The air-tight tank in which the engine steam is condensed is placed at the upper end of the longer leg of the syphon, which supplies the water to condense the steam. The object of the present improvement is to regulate the supply of condensing water and prevent the accumulation of steam in the tank. This supply is made intermittent, and provision is made for a continuance of the supply, if pressure occurs within the tank. A valve is provided to prevent reflux of water in the supply pipe; also devices for equalizing the pressure throughout the tank, condensing the steam above the diaphragm, and for the escape of steam in the event of excessive pressure.

Claim.—First, an intermittent syphon condenser, constructed and operating substantially as herein described.

Second, the employment or use in a condenser of the construction specified, of a water-chamber A' to contain a supply of water which may descend by its own gravity in the event of pressure occurring within the tank.

Third, the check valve *b*, employed for the purpose described, in combination with a condenser of the construction specified.

Fourth, the combination of the perforated diaphragm J and syphon pipe M with the tank A and chamber A', for the purposes set forth.

Fifth, the combination of the safety valve *l* with a condenser of the construction described.

No. 40,873.—JAMES WEED, of Muscatine, Iowa.—*Improvement in Plant Protectors.*—Patent dated December 8, 1863.—This is an improvement on the inventor's former patent of October 21, 1862, and consists in the method of arranging the shutters of the protector so as to facilitate adjustment, on or off the structure or frame, around the plants. The shutters are applied by means of a rocker or rolling hinge.

Claim.—The employment or use of rockers D, of circular or sector form, attached to shutters B, to admit of the adjustment or manipulation thereof, substantially in the manner as and for the purpose herein set forth.

Also, the supplementary shutters *j l* attached respectively to the framing or structure and shutters, substantially as and for the purpose set forth.

Further, connecting the rockers with the base of the structure, or with ways attached thereto, by means of cords, as and for the purpose specified.

No. 40,874.—ZENAS WHEELER, of San Francisco, Cal.—*Improved Machine for Amalgamating Gold and Silver.*—Patent dated December 8, 1863.—Spiral ribs are fixed on the periphery of the rotary miller and reversely spiral ribs on the inner side of the pan, to operate in connexion with curved grooves in the face or under side of the miller and reversely curved grooves in the bottom of the pan. The miller is connected to the shaft by a universal joint.

Claim.—First, the fixed spiral ribs *h* on the periphery of the rotary miller D and reversely spiral ribs *e* on the inner side of the pan A, in combination with the curved grooves *g* in the face or under side of the miller D and reversely curved grooves *d* in the bottom of the pan A, when arranged for joint operation in the manner and for the purpose specified.

Second, connecting the miller D to the shaft G by a universal joint composed of the yoke F and ring *i*, provided at four equidistant points around its periphery with journals *j j h h*, the former working in bearings in the lower end of the yoke F, and the latter in boxes attached to the upper side of the miller D, as and for the purpose specified.

Third, in combination with the miller D and pan A, the curved plates L, supported at their outer ends in slides *n*, and at their inner ends in a frame M, which is supported on the upper end of the shaft G in such a manner that the plates L will follow any adjustment of the miller, and thus bear the same relation to it, whether in its highest or lowest working position, as specified.

No. 40,875.—S. B. WILLIAMS, of Leavenworth, Kan.—*Improvement in Latches for Gates.*—Patent dated December 8, 1863.—This bolt is so arranged that it may be made to protrude more or less, as required, to compensate for the shrinking of the gate. This is accomplished by making depressions in the upper edge of the bolt, into either of which can be applied the set screw, which holds the bolt in the case and slide in position.

Claim.—The securing of the bolt D of the latch within the case A and to the slide B by means of the set screws E, substantially as shown, to admit of the longitudinal adjustment of said bolt, for the purpose herein set forth.

No. 40,876.—W. A. WOOD, of Hoosick Falls, Rensselaer county, N. Y.—*Improvement in Combined Rake and Reel for Harvesters*.—Patent dated December 8, 1863.—The rake is located under the main frame end of the reel, and is moved around by a vertical shaft driven from the main gear of the harvester, while it receives a rising and falling motion during its circuit from a cam arranged around its shaft. Its motion is in harmony with that of the reel, whether it be continuous or intermittent, though its circuit is different and not over the same space as that of the reel.

Claim.—The combination of an independent rake and reel, when arranged to work together substantially in the manner and for the purpose herein set forth.

No. 40,877.—EMMA C. WOOSTER, of New York, N. Y.—*Improvement in Ruffles*.—Patent dated December 8, 1863.—The piece of cloth is fluted or crimped, and a portion of the fluting flattened down into a plait and sewed.

Claim.—The two-ply ruffle herein described, composed of a single piece of cloth folded, fluted, or crimped, and sewed or stitched, substantially as herein specified.

No. 40,878.—GEORGE F. S. ZIMMERMAN, of Frederick, Md.—*Improved Washing Machine*.—Patent dated December 8, 1863.—The segmental faced rubber is pivoted in a frame which is hinged to the concave and standard, the whole being adapted to set in or on a common washtub.

Claim.—In a washing apparatus that is to be set and used in a common washtub, the hinging of the frame *d*, that carries the rubber *f*, to the stationary or under portion *b*, for the purpose and in the manner herein described and represented.

No. 40,879.—LORENZ BOMMER, assignor to the AMERICAN SPIRAL SPRING BUTT HINGE MANUFACTURING COMPANY, of New York, N. Y.—*Improved Spring Hinge*.—Patent dated December 8, 1863.—Explained by the claim.

Claim.—First, the hollow cylinder *D*, or its equivalent, when applied to the sectional spring hinge, essentially as and for the purpose herein set forth.

Second, the annular groove *p* in cap *E*, or its equivalent, in conjunction with pins *ff*, as and for the purpose herein set forth.

Third, the combination of cylinder *D*, caps *E F*, spring *C*, or their equivalents, substantially as and for the purposes herein set forth.

No. 40,880.—JOHN HAMILTON BROWN, of Boston, Mass., assignor to Himself and JAMES E. FARWELL, of same place.—*Machines for Nailing Shoes*.—Patent dated December 8, 1863.—This machine has its shear or cutter arranged with respect to the nail-driver and nail-strip carrier, but has combined with the said shear or cutter and the nail-driver a cam and a lever, which, through the downward motion of the nail-driver, will be caused to force the shear forward against the nail-strip so as to sever a nail therefrom. It also contains a machine for feeding the nail-plate along for the separation of nails from it, and a spring within the channelled stock to bear the nail-strip against the side of the tube. The driver has within it a spiral spring to react and elevate it after the blow of the hammer, impinging at its upper end against the boss, and at its lower on a bearer stationary within the channelled stock.

Claim.—The improved machine, as not only having its shear or cutter arranged with respect to the nail-driver and nail-strip carrier, substantially in manner as described, but as having combined with the shear and nail-driver a mechanism, viz: the lever *D* and cam *c*, or the mechanical equivalent thereof, which through or by the downward movement of the said driver shall be caused to force the shear forward against the nail-strip in a manner to cause a nail, by the conjoint action of the channel *a* and the said shear, to be separated from the strip.

Also, the improved machine as not only so made, but as provided with a feeding mechanism, constructed, arranged and applied to the nail-strip carrier substantially as and so as to operate by means as described.

Also, the arrangement of the spring *N*, either with or without the auxiliary carrier *L*, with the nail carrier, the channelled stock and the shear, made to operate with such stock as specified.

Also, in the nailing machine not only the arrangement of the spring within the driver, but its combination with the bearer to work within such driver, substantially as specified.

No. 40,881.—FREDERICK FICKEY, Jr., Baltimore, Md., assignor to WM. H. FICKEY of the same place.—*Improvement in Tobacco-smoking Pipes*.—Patent dated December 8, 1863.—In the smoke chamber of this pipe a piece of porous absorbent material is placed to absorb the nicotine, but distinct from the portion in which saliva accumulates. The arrangement of the chambers and passages is recited in the claims, and illustrated.

Claim.—First, the combination and arrangement of the chambers *A B C* and *D*, the smoke passages *a b c* and *d*, and the saliva cup, in the manner described as shown.

Second, placing a sponge or similar material in such a position in a tobacco pipe that while it shall absorb and retain the nicotine, it shall not be liable to come in contact with and absorb the saliva which may accumulate in the pipe, substantially in the manner and for the purpose described, and this irrespective of any special form or arrangement of chambers so long as the principle herein set forth is maintained.

No. 40,882.—THOS. GEO. HAROLD, of Brooklyn, N. Y., assignor to Himself and JOHN W. KISSAM of same place.—*Improvement in Locks*.—Patent dated December 8, 1863.—This is an improvement on Harold's patent of August 5, 1862. The tumblers that have the decoy notches are a series of concentric rings, one within another, and are secured by a centre pin or bolt, the changes being effected by moving rings surrounding the notches of the pipe-shaped tumblers, the rings having but one notch for the passage of the shackle or bolt. The lunge of the shackle is attached to a ring surrounding the shell and between the flanges of the latter, and the position of the shackle is changeable relatively to the indicators or dials.

Claim.—First, a changeable ring *b*, notched for the passage of the bolt or shackle in combination with a notched circular tumbler, whereby the permutations or combinations may be changed as specified.

Second, the ring *g*, carrying the shackle in combination with the divided and flanged case, secured together as specified, whereby the hinge of the shackle is secured between the flanges, as set forth.

Third, the divided lock case secured together as specified, in combination with the ring carrying the shackle, when said case is provided with two or more openings whereby the position of the shackle relative to the indicators can be changed when the shackle is withdrawn, without opening said case, as specified.

No. 40,883.—WILLIAM JONES, of St. Louis, Mo., assignor to Himself and THOMAS L. SALISBURY.—*Improvement in Harvesters*.—Patent dated December 8, 1863.—Attached to the frame of the machine is a supplementary wheel connected with a lever by means of which the cutter-bar is elevated; the reel is retained at the required elevation by means of the engagement of gripping-hooks with racks on the posts of the reel.

Claim.—First, the arrangement of the elevating lever *S* on the front part of the main frame of a draft machine behind the cutting apparatus, in the manner and for the purpose shown and described.

Second, the arrangement of the cogged segments *B B*, grippers *P P*, and reel posts *O*, in respect to each other and to the frame of the machine, as shown and described.

No. 40,884.—JAMES H. MERRILL, of Baltimore, Md., assignor to MERRILL PATENT FIRE-ARM MANUFACTURING COMPANY, of same place.—*Improvement in Breech-loading Fire-arms*.—Patent dated December 8, 1863.—This device is intended for the use of the ordinary charge of loose powder, or of fixed ammunition. A pivoted auxiliary hammer being so placed in relation to the ordinary hammer that the former is caused to impinge upon the flange of the cartridge by the fall of the ordinary hammer.

Claim.—In combination with the ordinary hammer of a gun for exploding a cap, an auxiliary hammer *C* for exploding a metallic cartridge, said auxiliary hammer being pivoted to some stationary part of the arm, and actuated by said ordinary hammer, substantially in the manner and for the purpose set forth.

No. 40,885.—WILLIAM F. PATTERSON, of Somerset, Pulaski Co., Ky., assignor to Himself and WM. S. FORBES, of Philadelphia, Penn.—*Improvement in Percussion Fuze for Shells*.—Patent dated December 8, 1863.—The inner cylinder or plunger is held to the outer one by a wooden plug whose head abuts against the end of the outer cylinder; it is retained in its place by friction and is dislodged, allowing the hammer to strike, on the concussion of the projectile.

Claim.—The holding of the inner tube *C*, which is the hammer or plunger in its place, and to the outer tube *B* by means of a wooden pin *D*, applied and acting as herein described and represented.

No. 40,886.—HENRY E. POND, of Franklin, Norfolk Co., Mass., assignor to WILLIAM E. GEORGE, of Wrentham, Mass.—*Improved Sizing for Hats, &c.*—Patent dated December 8, 1863.—To four quarts of cold water add one and a half pounds of gum-arabic, dissolve and filter; add a quart of proof alcohol, stir it, and then, after letting it rest two hours, add an other quart of water.

Claim.—The above-described improvement in making the hydro-alcoholic solution of gum for the purpose specified.

No. 40,887.—JOSEPH RIDER, of Newark, Licking county, Ohio, assignor to Himself and E. REMINGTON & SONS, of Ilion, N. Y.—*Improvement in Breech-loading Fire-arms*.—Patent dated December 8, 1863.—The hammer and breech-plate mutually lock each other under certain conditions, so that the breech-plate cannot be removed from the bore of the gun without first retracting the hammer, nor can the hammer be thrown from its open position without first closing the breech-plate, changing their active and passive character in their two positions of open and shut.

Claim.—The so combining of the hammer and the independent breech-plate, as that they may lock and interlock with each other, substantially as herein described and represented.

No. 40,888.—J. NOTTINGHAM SMITH, of Jersey City, N. J., assignor to Himself and W. B. HEADLEY, of same place.—*Improvement in Explosive Projectiles*.—Patent issued December 8, 1863; antedated December 1, 1863.—This elongated projectile has an enlarged head provided with a frame cap and spiral wings to produce rotation; there is shell at each end provided with exploding devices connected by wires to insure simultaneous action. The exploding device consists of bent arms with nipples for caps, which are moved by concussion of the projectile. The rear hammer is enclosed separately in the many chambered rear portion of the projectile.

Claim.—The arrangement of the bent levers H H in pivot sockets in the wall of the missile, as also in relation to the front and rear shells, so as to simultaneously fulfill the two functions of direct hammers, and, through connecting wires, of operating other hammers in a distant part of the missile, substantially as herein specified.

Also, the protecting cap G, with its hollow cap arms g g, constructed, arranged, and operating substantially as herein set forth.

Also, the arrangement of the spiral wings M M in combination with the arms g g of the cap G, as herein set forth.

Also, locating separate shells in the extreme end of the projectile, and exploding them simultaneously by the connecting wires V V or their equivalents, substantially as herein described.

Also, the separate inclosed hammer chambers N N, as set forth.

Also, the peculiar construction and combination of the rear multi-chambered shell C and plug D, as set forth.

No. 40,889.—CHAS. D. TISDALE, of East Boston, Suffolk county, Mass., assignor to Himself, B. W. TISDALE, and M. B. BOYNTON.—*Improvement in Railway Car Trucks*.—Patent dated December 8, 1863.—The truck is composed of two movable frames connected by a king-bolt bar, the object being to enable the truck to be adjusted laterally, so as to enable the wheels to run on tracks of varying widths or gauges. The axle of each wheel runs in two bearings, and the respective frames are latched together, and the king-bolt frame has shoulders on the ends and holes corresponding with orifices in the casing, whereby it is bolted to maintain its extension.

Claim.—The combination of the two separate wheel frames C D, and the king-bolt bar G, or its mechanical equivalent, the whole being applied together and to the wheels, substantially in manner and so as to operate as and for the purpose hereinafter specified.

Also, the combination of the said separate wheel frames C D and their king-bolt bar G, with means substantially as described, viz: the latch bars L, and their pins f g, for connecting and disconnecting each two adjacent ends of said wheel frames, the purpose of connecting them being as hereinbefore stated.

Also, the combination of the wheel frames C D and their bar G, with the bolts I I and their holes K K, or their mechanical equivalent, applied to the frames and bar, the same being for the purpose of fixing the frame to the bar in order to preserve the wheels in their true position with respect to the railway track.

Also, the bar G, as provided with one or more shoulders e at each end, when the said bar is combined with two wheel frames C D applied to it and supporting the wheel axles, substantially as set forth.

No. 40,890.—ALBERT ALBERTSON, of New York city.—*Improvement in Lamp Chimneys*.—Patent dated December 8, 1863.—A metal chimney rests at its lower end on three or more rods of metal, which are fastened to an annular base fitting over the burner, to which it may be attached by any suitable means. The glass chimney rests with its lower end on the flange of the annular base, and at its upper end fits around the lower portion of the metal chimney without being attached to it. This allows the heated glass chimney to expand without danger of breaking, and by sliding it up enables the wick to be trimmed without removal of the whole chimney.

Claim.—A lamp chimney composed of a metal frame formed of a tube D, rods a, and a ring or base E, and a glass portion F, fitted on the exterior of the metal frame in such a manner as to be capable of being raised and lowered thereon substantially as set forth.

No. 40,891.—J. S. BROWN, of Washington, D. C., assignor to Himself and C. P. STIMETS, of New York, N. Y.—*Toy Automaton*.—Patent dated December 8, 1863.—This walking figure is caused to progress with an imitation of nature, moving the feet alternately in arcs of circles, the stationary foot forming the centre of the arc described by the other, and this motion is produced by a system of gearing reaching down each leg to the sole of the foot, and rendered intermittent by the peculiar shape of the lower wheel, which has a part of its circumference cut away, so that only one-half of it shall protrude through the sole, and lifting the foot from contact with the floor carry it forward; the feet are adjustable vertically to vary the length of step; the bust suspended and pivoted upon a rod projecting upwards from the movements, and the movement protected by hoops or wire from the clothes surrounding it.

Claim.—Producing the walking motion by propelling each foot forward alternately in the arc of a circle, around the other foot as a stationary centre or pivot.

Also, the alternately acting wheels L L for propelling the feet forward, having an intermittent moving action, so as to make the feet progress in succession, substantially as herein set forth.

Also, adjusting the feet up and down on the legs or frame, so as to vary or adjust the steps as desired, substantially as herein specified.

Also, suspending and pivoting the bust of the automaton upon the movement thereof, substantially as and for the purposes herein described.

Also, the wire hoops or rings u u, for securing a covering around without interfering with the movement, as specified.

No. 40,892.—JOHN F. ALLEN and R. W. MCGOWAN, of New York, N. Y.—*Improvement in Printing Presses*.—Patent dated December 15, 1863.—This press is designed for printing with a plurality of colors simultaneously. It consists of a rotary cylinder in combination with a series of cylindrical forms or type cylinders, and a reciprocating form or type bed.

Claim.—The cylinders B F F' F'' in combination with the reciprocating form bed H, all arranged to operate in the manner substantially as and for the purpose herein set forth.

No. 40,893.—S. J. ASHLEY, of San Francisco, California.—*Improvement in Operating Gun-Carriages*.—Patent dated December 15, 1863.—This invention consists in applying a system of gearing to both the front and rear sets of traverse wheels, on which the chassis working on a centre pintle is rotated, so that in case of the settling of the traverse circles or segment rails at any point the gearing will not fail to produce the traverse movement.

Claim.—The gearing together of the front and back traverse wheels by means of a system of gearing in such manner that the power is applied to produce the motion of both sets of wheels simultaneously by power applied through a crank shaft or its equivalent at or near the rear end of the chassis, or in such position as may be most convenient, substantially as and for the purpose herein specified.

No. 40,894.—J. B. ATWATER, of Chicago, Cook county, Illinois.—*Improved Apparatus for Amalgamating Precious Metals*.—Patent dated December 15, 1863.—The invention consists in the employment of a reciprocating frame or frames with bars or slat bottoms alternately elevated and depressed, so as to thoroughly disturb and mix the contents of the box in which they work.

Claim.—The employment or use of one or more reciprocating frames H, provided with arms or leaders f, having bars h or their equivalents, attached to form elevators in connexion with the tray or box A, all arranged to operate in the manner substantially as and for the purpose herein set forth.

No. 40,895.—WILLIAM S. AUCHINCLOSS, of New York, N. Y.—*Improved Port Closer for Vessels-of-War*.—Patent dated December 15, 1863.—This invention consists in an arrangement of two rollers set vertically with a groove or cavity in the side of each, which when their flat sides are opposed to each other shall close the port, and when their cavities are presented to each other shall afford an open port for the protrusion of the gun.

Claim.—First, the employment or use for a port-hole closer of two rollers A A, each being made to rotate independently of the other and provided with a cavity b, as described, so that by turning the rollers to the proper position an opening is obtained, which allows of giving to the gun any desired elevation or of training the same to an angle of 45° or more, substantially as set forth.

Second, the combination of the flanges E with the rollers A A, constructed and operating substantially as and for the purpose herein shown and described.

No. 40,896.—E. H. BAILEY, of Philadelphia, Pa.—*Improved Paddle-Wheel*.—Patent dated December 15, 1863.—This improvement consists in the construction of a wheel composed of two sets of inclined floats, with annular plates of the width of the floats on the outer edge of each, and so arranged with respect to each other that there shall be a continuous zig-zag space between the two sets.

Claim.—The two sets of inclined floats D and D' and E and E' in combination with the annular plates G and G', when the two sets of floats and the whole of the parts are constructed and arranged as set forth for the purpose specified.

No. 40,897.—JOHN G. BAKER, of Washington, D. C., assignor to SAMUEL SEELY, of New York, N. Y.—*Improvement in Corrugating Machines*.—Patent issued December 15, 1863; antedated December 6, 1863.—The invention consists in a method of corrugating sheet metal between alternating die jaws vibrated or closed by cams, the sheet metal being fed between the jaws by its own gravity, and each bite forming one angle or bend. There is likewise a provision for making a ridged or waved corrugation with the same set of jaws.

Claim.—First, corrugating sheet metals, &c., between alternating die jaws, or their equivalent, in such a manner as to form but one bend or angle in the sheet at a time.

Second, the die jaws 1 2 3 and 4, constructed and operating substantially as described.
 Third, the dogs I and J, constructed and operating substantially as described.
 Fourth, feeding the sheet of metal by its own gravity in combination with the corrugating jaws, or their equivalents, substantially as described.
 Fifth, the shoes O, constructed and operating substantially as described for the purpose of making either waved or ridged corrugations with the same set of dies or die jaws.

No. 40,898.—HORACE H. BARNES, of Mexico, Oswego county, N. Y.—*Improvement in Signal Switches for Railroads*.—Patent dated December 15, 1863.—The object of this improvement is to so connect the lamp with the switch lever, that, as the switch is adjusted and different colored lights exposed to view, the position of the switch shall be indicated during the night; this is accomplished by a segment rack on the lever, gearing into a pinion on the lantern shaft by which the light in its particolored cylindrical glass casing is rotated.
Claim.—The arrangement of the segment rack F, pinion I, shaft G, lantern J, and box K, with the switch lever C, and frame D, in the manner herein shown and described.

No. 40,899.—DAVID BELL, of Buffalo, Erie county, N. Y.—*Improvement in Machines for Bending Angle Iron*.—Patent dated December 15, 1863.—This improvement consists of a slotted table with adjustable pins, and a sliding pressure bar, whose upper side is even with the surface of the table, and is provided with projecting jaws, which, driven by a screw, catch the iron between said jaws and the pins on the table, and cause it to assume the required shape.

Claim.—Shaping angle bars for iron ship building by means of the table A, including the adjustable pins G, and sliding pressure bar B, and jaws C, operated by a screw, substantially as described.

No. 40,900.—WILLIAM F. BLANDIN, of Macomb, Macdonough county, Ill.—*Improvement in Corn Planters*.—Patent dated December 15, 1863.—The improvements in this machine are an adjustable pair of shares which follow behind the planting share to cover the corn, an arrangement of a lever, connecting rod, and crank, by which the driver can elevate the share at will; provision for spreading the corn within a limited space so that the stalks shall not crowd each other, and a connecting rod and crank by which the motion of the driving and supporting roller is communicated to the feed cylinder.

Claim.—First, the adjustable shares I I, constructed, arranged, and operating as and for the purposes herein specified.

Second, the combination and arrangement of the crank shaft O, provided with the arms a, the lever b, and connecting rod m, for the purposes shown and set forth.

Third, the removable combined tube and drill point e provided with the pin p, in combination with the hopper of a corn planter, substantially as herein shown and described.

Fourth, the combination and arrangement of the roller C, provided with the pins d, the crank shafts, k and c, the connecting bar a, seed cylinders, L L, and combined tube and drill point e, constructed and operating as and for the purposes herein described.

No. 40,901.—FRANK M. BLODGETT, of Boston Mass.—*Gaiter Boot Protector*.—Patent dated December 15, 1863.—It consists of a combination of pieces, adapted to the form of the foot and ankle, consisting of a front piece, back and leg piece, adjusted and provided with fastenings.

Claim.—The combination of the anklet or leglet A and the frontlet gaiter B, the same being arranged and applied together substantially as specified.

Also, the combination and arrangement of the leg band or back piece C with the frontlet gaiter B.

Also, the combination of the anklet A, the frontlet B, and the back band C, the whole being made, arranged, and applied together, substantially as specified.

No. 40,902.—FRANKLIN F. BLOOD, of Janesville, Rock county, Wis.—*Improvement in Gates*.—Patent dated December 15, 1863.—This invention consists in a method of hanging a sliding gate by a counterpoise weight and hanging shives, so that it may be protruded more than half its length beyond its point of support.

Claim.—A gate balanced by a weight B or by a box cased up on the standards C, and filled with sand or other substance, when combined with a friction roller b and hanging shives D, and used for the purpose as herein described and set forth.

No. 40,903.—J. K. BOYCE, of Napoleon, Henry county, Ohio.—*Improved Washing Machine*.—Patent dated December 15, 1863.—In this machine the clothes are exposed in a box to a pressure between two surfaces; the one being the side of the box, and the other a perforated board on the end of an arm working through slots in the lid of the box; the force of the blow being assisted by a pendulum or weighted arm swinging from the point of suspension on the upright frame.

Claim.—The inwardly inclined presser-board B, attached to curved rods C which extend through slots in the top of the box A, and are operated by pendulum arms D, in combination with the outwardly inclined end g and curved corner h of said box, all constructed and operating in the manner and for the purpose herein shown and described.

No. 40,904.—LEOPOLD BRANDEIS, of Brooklyn, N. Y.—*Improvement in Protecting Lead Pipe against the Action of Water*.—Patent dated December 15, 1863.—The improvement consists in treating lead pipe with a solution of caustic soda and sulphur at boiling heat and allowing it to stay ten or fifteen minutes, converting the lead into an insoluble sulphide.

Claim.—The production of sanitary pipe by the application at 212° Fahrenheit, of a strong solution of a sulphide of an alkali to the inside of lead pipe, or lead cisterns, or leaden vessels, for the purpose of forming a sulphide of lead, so that water will afterward not act on the pipe or vessel, and cannot get contaminated by running through or by remaining standing in such pipe or vessel.

No. 40,905.—TISDALE CARPENTER, of Providence, R. I.—*Improvement in Valve Gear for Steam Engines*.—Patent dated December 15, 1863.—In this invention the upward or downward movement of the cross-head with the variations in the height of the regulator slide causes the racks to turn the pinions and shafts in opposite directions, and the screw shafts cause the bars to approach or recede and move the rollers to or from the centre of the cam; the cam being basin-shaped, they have thus an increased or diminished range, and the variation in the action of the valves is produced.

Claim.—The employment in a steam or other engine of one or more right and left-hand screws f f', pinions h h, and racks i i, combined with each other with the regulator and with the induction valve operating mechanism, and co-operating substantially as described to produce the necessary variations in the operation of the valves for the regulation of the engine.

No. 40,906.—H. W. CATLIN, of Burlington, Vt.—*Improvement in Balances*.—Patent dated December 15, 1863.—This invention consists in attaching, by a rod, to one end of the scale beam a plunger immersed in a suitable vessel in quicksilver or other fluid, to serve as an adjustable counterpoise; the diagonally graduated lever arm attached to the beam vibrates vertically between the stationary index plates, permitting the weight to be read off.

Claim.—First, the plunger J connected to the scale beam E, and immersed in quicksilver or other fluid or semi-fluid contained in a proper vessel K, to operate as and for the purpose specified.

Second, the weight indicator formed of the diagonally-graduated plate M connected to the beam E, as shown in connexion with one or two stationary index plates O O, arranged substantially as set forth.

No. 40,907.—L. L. CHAPMAN, of Camden, N. J.—*Improvement in Corsets*.—Patent dated December 15, 1863.—The corset is constructed with the usual breast puff and shoulder straps, and stiffened by short springs, which bruise neither breast nor abdomen; the corset is laced and the string carried round and tied in front.

Claim.—In ladies' corsets, constructed to have the breast puffs, elastic shoulder-brace straps and stay pieces, as described and set forth, the employment of the short, straight clasp-steel springs, arranged in front so as to be entirely below and free from the puffs B B, as herein described and set forth, in combination with the single cord lacing D D in the back of the corset and adjustable in front as described, the said springs and lacing operating together in the said shoulder-brace corset combination, substantially in the manner described for the purposes specified.

No. 40,908.—J. C. CHESNEY, of Abingdon, Knox county, Ill.—*Improved Evaporators for Saccharine Liquids*.—Patent dated December 15, 1863.—Three furnaces with grate bars and fire doors are constructed one over the other, and a vertical flue behind them connecting with flues under the same number of boilers, and with dampers in their throats or forward openings, so that the heat of the three furnaces may be applied to all the furnaces or any of them.

Claim.—The employment or use of a furnace A with two or more fire-places B C, one above the other, in combination with a vertical flue E, two or more horizontal flues B' C', and suitable pans B" C", and dampers b' c', all constructed and operating in the manner and for the purpose substantially as shown and described.

No. 40,909.—MARCUS M. CLARK, of Industry, McDonough county, Ill.—*Improvement in Cultivators*.—Patent dated December 15, 1863.—Pivoted beneath the main frame are two plough beams adjustable vertically by stirrups at the rear of the frame, in which the beams are suspended. The main frame is supported upon a pair of wheels, which are capable of deflection simultaneously, right or left, to vary the course of the machine.

Claim.—The vertically-adjustable stirrups f and hinged plough beams F, in combination with the frame A, running on wheels B, which can be turned in either direction by a hand lever D; all constructed and operating in the manner and for the purpose herein shown and described.

No. 40,910.—WM. CLISSOLD, of Dudbridge, Gloucester county, England.—*Improvement in Driving Chains or Belts*.—Patent dated December 15, 1863.—This improvement consists of

an oval band or link, with slots for the insertion of coupling plates, which are retained in connexion by a pin, and the spaces inside the band links around the coupling joints filled with wooden blocks, which fit the surrounding parts and form journal bearings for the insertion and movement of the coupling pins.

Claim.—The compound links *a* with the wood-filling pieces *d d*, in combination with the coupling plates *b*, or their equivalent, substantially as described.

No. 40,911.—L. D. COWLES, of Armada, Macomb county, Mich.—*Improved Clasp for Harness Tugs.*—Patent dated December 15, 1863.—The invention consists in the employment of a box provided with a cam lever and roller and a corrugated plate to fasten the straps together, and intended to answer the purpose of a tug buckle in security and readiness of adjustment.

Claim.—The box *C* in combination with the crimped or corrugated plate *B*, and strap *A*, and the plate or lever *D*, one or more provided with the clamps formed of the projections *b b* and roller *c*, or their equivalents, all arranged to operate as herein set forth.

No. 40,912.—L. D. COWLES, of Armada, Macomb county, Mich.—*Improved Clasp for Harness Tugs.*—Patent dated December 15, 1863.—This is a method of connecting the ends of straps as in harness tugs in lieu of a buckle, and consists of a lower portion or box to which one end is firmly attached, and an upper portion or box enclosing the other end, the two boxes being connected by levers which have permanent fulcrums in the lower piece and eccentric slots, in which pins in the upper piece move by the vibration of the levers, so as by the depression of the latter to bring the upper piece firmly down upon the lower and clamp the straps together.

Claim.—The box composed of two parts *A B* connected together by the pins *e* on the part *B*, fitted in eccentric slots *f f* in plates *C C*, pivoted to the part *A*, substantially as shown, to form a new and improved clasp for harness tugs, as set forth.

No. 40,913.—GEORGE W. CREAMER, of Fillmore, Centre county, Pa.—*Improvement in Apparatus for Lifting and Removing Wheel Tire.*—Patent dated December 15, 1863.—This consists of two pairs of tongs suitably connected together by and suspended from a horizontal rod, so as to grasp opposite sides of the heated tire under the impulse of levers and rods, which actuate the loose legs of the tongs.

Claim.—First, the tongs *A A'*, *a 2*, cheeks *a 3*, rod *C*, arm *D*, handle *E*, and bar on *ax F*, employed in the manner described to elevate and convey wheel tire.

Second, in combination with two pairs of tongs, the rigid rod *B*, operating as described, to adapt the tongs to act in conjunction, and either grasp or release the tire.

No. 40,914.—PALMER R. CROSS, of Lowell, Lake county, Ind.—*Improved Washing Fluid.*—Patent dated December 15, 1863.—To make a quart of washing fluid, take washing soda, 3½ ounces; borax, 4 drachms; saltpetre, 4 drachms; alcohol, ½ of a gill; camphor, 2 drachms; spirits of hartshorn, 2 drops; oil of tansy, 2 drops; oil of cedar, 2 drops; add rain water. They must be mixed in the proper order.

Claim.—The washing fluid, composed of the herein described ingredients, in the proportions specified, substantially as and for the purposes set forth and described.

No. 40,915.—JOHN R. DAVIS, of Bloomfield, Davis county, Iowa.—*Improvement in Cultivators.*—Patent dated December 15, 1863.—Each plough-beam is supported by a link and staple from the arm of a rock-shaft, which is under the control of a foot-lever, and is thereby raised and maintained in an elevated position by hooking the end of the lever into the staple.

Claim.—In combination with the pivoted cultivator frames *I J J' K L*, also the hooked foot levers *N N' n'*, rods *P*, and staples *Q*, all constructed, arranged, and operating as specified, so that either or both the frames may be readily raised by the feet of the driver, and retained, by hooking the treadles into the staple *Q*, as explained.

No. 40,916.—C. T. DAY, of Newark, N. J.—*Improved Skate Fastening.*—Patent dated December 15, 1863.—To the sole and heel plates are affixed clamps, which move by curved slot guides or pins, under the impulse of a screw, which draws the heel clamps toward those at the toe, and, in so doing, fastens them all against the boots by a longitudinal and lateral pressure.

Claim.—The bars *FF I I*, constructed, arranged, and applied to the skate substantially as shown, so as to be capable of being moved in a longitudinal and lateral direction, and clamps or grasps the sole of the boot or shoe, in the manner and for the purpose specified.

Further, the screw rod *J* and nut *H*, applied to the bars *FF I I*, to operate in the manner and for the purpose set forth.

No. 40,917.—SILAS DODSON, of Bloomsburg, Columbia county, Pa.—*Improved Machine for Polishing Rice.*—Patent dated December 15, 1863.—This machine is intended for polishing after hulling, and the object is to prevent clogging by the free discharge of the dust and flour, to prevent the displacement of the wire cloth; to provide for the adjustability of the polishers, and for the rotary movement of screen and polishers.

Claim.—The employment of the rings *m*, in combination with the screen *H* and the bar *i*, in the manner and for the purpose herein shown and described.

Also, in combination with the inclined adjustable rotating polisher *I*, giving an independent rotary motion to the inclined screen *H*, as and for the purpose herein shown and described.

No. 40,918.—DOMINIQUE DUPRAT, of New York, N. Y.—*Improved Hair Dye.*—Patent dated December 15, 1863.—Composed as follows: pomade, 500 parts by weight; nitrate of silver, 30 parts; gallic acid, 10 parts; perfumed as required.

Claim.—A hair dye composed of the ingredients herein specified, and mixed together, substantially in the manner and about in the proportion set forth.

No. 40,919.—JOHN ERICSSON, of New York, N. Y.—*Improvement in Operating Gun-Carriages.*—Patent dated December 15, 1863.—The recoil of the carriage is taken up by its connexion by means of a rack and shaft with gearing detached from the carriage but geared therewith, the said gearing being under the control of a lever which may release the friction when the gun is to be run in or out.

Claim.—First, the employment for controlling and checking the recoil of a gun-carriage and for holding the same stationary while loading, and, at other times, of a self-acting friction brake or clutch detached from the carriage but geared therewith, substantially as herein described.

Second, the employment for the purpose of running the gun-carriage out or in of the same system of gearing by which the gun-carriage is geared with the aforesaid friction brake or clutch, substantially as herein specified.

Third, so applying and arranging the two portions *Q R* of the friction brake or clutch in connexion with the gearing by which the gun is worked, and so arranging a movable stop to act on teeth provided on one portion of the brake or clutch that by a mere shifting of the stop the brake or clutch is brought either to a condition to check the recoil or prevent the movement of the carriage, or to a condition to permit it to run freely, substantially as herein specified.

No. 40,920.—THOMAS M. FELL, (a subject of Great Britain,) of Brooklyn, N. Y.—*Improved Artificial Fuel.*—Patent dated December 15, 1863.—The fine dust of the coal-yard is mixed with from five to ten per cent. of its weight of asphaltum, the compound is made plastic and moulded to any required form, and baked.

Claim.—The within-described artificial fuel manufactured from anthracite and asphaltums in the manner described.

No. 40,921.—MARTIN FEURSTEIN, of Williamsburg, Kings county, N. Y.—*Improvement in Skates.*—Patent dated December 15, 1863.—Hinged dogs are inserted into slots in the skate-runner so as to project downwards on the track and prevent the lateral or backward motion of the skate.

Claim.—A skate iron *A* provided with two or more hinged dogs *a b c*, as and for the purpose described.

Also, inserting the dog or dogs in slots *d*, as and for the purpose specified.

No. 40,922.—MATTHEW FLETCHER, of Louisville, Ky.—*Improved Forage Ration.*—Patent dated December 15, 1863.—Explained by the claim.

Claim.—The forage ration composed of proper relative proportions of grain and rough food when the former is secured and preserved within the latter, both constituting one bale or package, made substantially in the manner and for the purpose described.

No. 40,923.—GEORGE B. FOWLER, of New York, N. Y.—*Improvement in Clothes and Hat Hooks.*—Patent dated December 15, 1863.—The bracket is attached to a cleat or bar by means of its upper hook, which is imbedded in the wood and the nail which secures it to the face of the said cleat.

Claim.—The claw *a* and brad or brads *b*, in combination with the bracket *B* of a hook *A*, constructed and operating in the manner and for the purpose substantially as herein shown and described.

No. 40,924.—R. A. GILMAN, of Woodland, Dodge county, Wis.—*Improved Compound Oil for Burning and Lubricating.*—Patent issued December 15, 1863; antedated November 21, 1863.—The hydro-carbon oil and the animal fat are mixed in the proportion of from two to four parts of the former and one part of the latter, and heated, to combine them intimately. Lime or salt may be added to correct rancidity of the fat.

Claim.—Combining animal fats, such as tallow and lard, &c., with mineral hydro-carbon oils, such as petroleum, coal oil, &c., by mixing them together in about the proportion herein specified, and heating them to a temperature of 195° Fah., (more or less,) with or without the addition of lime and sulphate of zinc, for the purpose described.

No. 40,925.—W. H. GWYNNE, of New York, N. Y.—*Improvement in the Manufacture of Coal Gas*.—Patent dated December 15, 1863.—The gas rising from the mass of coal into the dome is drawn down through a mass of incandescent material in the annular chamber surrounding the cupola; this is effected by a revolving fan-blower in the pipe conducting off the volatile results of combustion.

Claim.—The employment or use of the cupola A, surrounded by the annular space a, in combination with the exhauster H, applied and operating substantially in the manner and for the purpose herein shown and described.

Also, the within-described process of producing illuminating gas by exhausting the products of combustion from a cupola, or its equivalent, through a quantity of incandescent material, substantially as specified.

No. 40,926.—JAMES HANNAN, of Lyon, Oakland county, Mich.—*Improvement in Fruit Ladders*.—Patent dated December 15, 1863.—This is an A-shaped ladder with side braces to preserve it from lateral deflection. An auxiliary ladder starts from the apex of the lower arc, and the ladder is provided with a crane, pulley, and basket supported on a central standard; also, on extension platform and basket-supporting table with a windlass supported on the upper ladder.

Claim.—First, connecting two ladders together in such a manner by means of a pin or otherwise, that the two shall form a double self-sustaining ladder, capable of being adjusted at various heights by separating more or less the two sections in combination with the side braces B, when arranged as and for the purpose described.

Second, the side braces B, constructed in such a manner that they can be adjusted in any direction.

Third, the frame G G, the stationary table C, and adjustable platform D when constructed as described and used in combination as and for the purpose set forth.

Fourth, the table attached to the lower portions of the frame G G, and the manner of securing the same to the ladder.

Fifth, the adjustable platform upon the top of the table constructed and operating as and for the purpose specified.

Sixth, the standard H, crane I, and pulley J, in combination with the basket L, operating as specified.

Seventh, the elevated ladder F E for the purposes set forth.

Eighth, the windlass M in combination with the elevated ladder, rope K' and basket L, when arranged and operating substantially as and for the purpose specified.

Ninth, the platform N when arranged as and for the purpose set forth.

No. 40,927.—THOMAS HANSBROW, of Sacramento, Cal.—*Improvement in Pumps*.—Patent dated December 15, 1863.—This is a method of securing the air-chamber to the valve chest, and consists of slotted lugs on the former into which the hinged bolts are passed and on the top of which they are secured by nuts.

Claim.—The combination of the swinging screw bolts C and slotted plates a with the valve chest A and air chamber B in the manner herein shown and described.

No. 40,928.—ROBERT HARPER, of Chelsea, Suffolk county, Mass.—*Improvement in Car Replacers for Railroads*.—Patent dated December 15, 1863.—This consists of an arched plate or shoe having a downwardly projecting edge and inclined plane with an upper flange to keep the wheel on the shoe and a lower flange to keep the shoe on the rail.

Claim.—The car restorer or combination of the arched plate A, the descending plane or part b', and the two flanges a b projecting from opposite sides of the said plate A substantially as specified.

No. 40,929.—R. S. HARRIS, of Dubuque, Iowa.—*Improvement in Steam Boilers*.—Patent dated December 15, 1863.—This consists of a central cylindrical boiler filled with longitudinal tubes and surrounded by an annular flue, outside of which is a water jacket, communicating as well as the boiler with an upper cylinder, the upper part of which is occupied by steam.

Claim.—The boiler composed of the shell A filled to the top with tubes a a, the water jacket B, the annular flue D, extending uninterruptedly round the shell, and the drum F, containing both steam and water, and communicating with the shell and the jacket, which are both filled with water, the whole combined substantially as herein set forth.

No. 40,930.—GEORGE W. HART, of Aurora, Dearborn county, Ind.—*Improvement in Hay and Cotton Presses*.—Patent dated December 15, 1863.—The press is supported on a nut and pedestal, and the follower therein is worked up and down by the revolution of the nut, while the press itself rests on a shoulder of the nut.

Claim.—The mode of supporting the frame of a vertical hay press clear of the ground by means of the pedestal B and nut c, or their equivalents, substantially as and for the purposes set forth.

No. 40,931.—SAMUEL HELLER, of New York, N. Y.—*Improvement in Pantaloon Straps*.—Patent dated December 15, 1863.—Explained by the claim.

Claim.—A pantaloons strap consisting of a center piece A of leather, two strips B of elastic india-rubber fabric, and two end pieces c of leather, all arranged in relation to each other, as and for the purpose herein shown and described.

No. 40,932.—JAMES HEPBURN, of Mokelumne Hill, Calaveras county, Cal.—*Improved Apparatus for Concentrating Ores*.—Patent dated December 15, 1863.—This device is intended to separate in the sluice the gangues or earthy matter from the valuable metal by exposing the pulverized matter to an upward current of water from a lower box which passes through an aperture in the bottom of the sluice, and is regulated by a slide.

Claim.—First, exposing the ore as the same passes through the sluice A to an upward current of water from the receiving box B, substantially as and for the purpose specified.

Second, the employment or use of one or more receiving boxes B, arranged in relation to the aperture or apertures a in the bottom of the sluice A, and operating in the manner and for the purpose substantially as herein set forth.

No. 40,933.—JAMES HERRESHOFF, of Bristol, R. I.—*Improved Mode of Fish-water for use in Dyeing, &c.*—Patent dated December 15, 1863.—The aqueous liquor expressed from menhaden fish in the process of extracting the oil is exposed to a temperature of 300° under a pressure of sixty pounds to the square inch, to convert its protein compounds into bodies which form insoluble compounds with the tannic acid and render the liquor more effective.

Claim.—The employment or use of menhaden fish-water in the dye tub, or as an agent for dyeing, substantially in the manner specified.

Also, the within-described process of treating or preparing menhaden fish-water previous to its application in the dye tub by exposing it to a temperature of about 300° Fahrenheit, under a pressure of about sixty pounds to the inch, as herein set forth.

No. 40,934.—JAMES HIGH, Walnut Fork, Jones county, Iowa.—*Improvement in Sugar Evaporators*.—Patent dated December 15, 1863.—The finishing or rear pan is supported on wheels on tracks transversely to the course of the flue, and a guard plate covers the intervening space so as to prevent dripping into the fire when ladling from one into the other.

Claim.—The combination with the finishing pan D D', mounted on wheels attached to their sides, as herein shown and described, of the guard C, supported on either the stationary or moving pans, and projecting over the space between the two, in the manner and for the purposes specified.

No. 40,935.—HENRY T. HOOKER, of Skaneateles, Onondaga county, N. Y.—*Improvement in Cultivators*.—Patent dated December 15, 1863.—The standard has a reversible share, a detachable mouldboard on each side, and a pulverizer trailing behind.

Claim.—The standard A, provided with the reversible share C, detachable mouldboards B B, and pulverizer D, the whole constructed, arranged, and operating in the manner and for the purpose herein set forth.

No. 40,936.—LORENZO HORN, of Wolfboro', Carroll county, N. H.—*Improved Clothes Drier*.—Patent dated December 15, 1863.—The drying rods radiate from a central boss or hub which slips up and down on a tube or sleeve around an axial rod. The tube is maintained at the required height by a spring which is attached to the rod and engages in the slots of the tube, and the said boss is retained at its elevation in the same manner by a spring attached to the tube.

Claim.—The spring F upon tube E, arranged and operating in combination with spring D and groove c of rod B, substantially as and for the purpose herein specified.

No. 40,937.—HENRY KELLY and WILLIAM FRANKLIN, of Decorah, Winneshiek county, Iowa.—*Improvement in Fanning Mill*.—Patent dated December 15, 1863.—The shoe is supported by and vibrates upon central points or pivots above and below, so as to make the riddles vibrate horizontally around a centre. A strap connects the shoe to the hopper and is struck by the wings of the fan so as to keep the shoe agitated.

Claim.—First, the shoe vibrating on a single central vertical pivot B, or its equivalent, as and for the purposes described.

Second, the strap H, or its equivalent, as and for the purposes described.

No. 40,938.—G. H. LAUR, of Macomb, McDonough county, Ill.—*Improvement in Mills for Crushing Sugar Cane*.—Patent dated December 15, 1863.—Attached to the sweep is a pendant piece having an orifice which forms a throat for feeding in the cane between the stationary roller and the planetary roller between which it is crushed, the juice running into an annular trough. A feeder's seat and rack for holding cane are carried by the sweep.

Claim.—The pendant J attached to the sweep G, and provided with the vertical slot e, when used in connexion with the stationary cylinder C and roller H, as and for the purpose set forth.

No. 40,939.—JOHN LEITCH, of Buffalo, N. Y.—*Improvement in Faucets*.—Patent dated December 15, 1863.—The abutment across the path of the fluid forms a seat on which the valve is pressed by the screw above the elastic diaphragm, which divides the plunger from the liquid.

Claim.—The combination and arrangement of the abutment D, valve E, diaphragm H, and operating screw G, substantially as described.

No. 40,940.—HIRAM LEMM, of Leonidas, St. Joseph county, Mich.—*Improvement in Stump Extractors*.—Patent dated December 15, 1863.—The drum on which the lifting chain is wound is rotated by the engagement of the pawls with the ratchet on the drum shaft. The pawls are pivoted to a horizontal vibrating lever, and the machine is stayed against lateral displacement by the chains and tongue, the latter being staked to the ground.

Claim.—The lever F with the pawls G G attached, in combination with the ratchet K and drum I, with chain J attached, all arranged on a mounted frame A, to operate as and for the purpose herein set forth.

Also, the pole L, provided with the spike M, in combination with the chain N, all arranged as and for the purpose specified.

No. 40,941.—H. OGBORN, of Green's Fork, Wayne county, Ind.—*Improvement in Weather Strips*.—Patent issued December 15, 1863; antedated December 6, 1863.—The strip consists of two jointed plates, of which the lower is thrown down upon the door sill by impingement on plates on the side pieces of the door frame, and is lifted by springs when the door is opened.

Claim.—The bolts G G, in combination with the curved piece c, piece D, and springs H H, the whole being arranged, constructed, and operated in the manner and for the purposes set forth.

No. 40,942.—J. W. PATTERSON, of Monticello, Wright county, Minn.—*Improvement in Grain Cleaner and Separator*.—Patent issued December 15, 1863; antedated December 12, 1863.—The special object of the machine is to separate oats from wheat and to cleanse the grain from smut, &c. The beater is enclosed in a perforated cylinder, and is attached to the shaft above the fan, the rotating arms scattering the grain within the cylinder.

Claim.—First, the revolving spiral arms I I, attached to the shaft B, where said arms are used in connexion with the beater G, perforated cylinder H, as and for the purpose specified.

Second, the bar S, attached to the upper part of the shoe N, to prevent the choking or clogging of the hopper, as specified.

No. 40,943.—TYREE POGUE, of Madison, Jefferson county, Ind.—*Improvement in Side Saddle-trees*.—Patent dated December 15, 1863.—In this saddle-tree the building up process is approximately dispensed with by constructing the tree to suit the requirement of the person and the animal. It consists of the forward fork, provided with two horns and united by side-plates to the cantle.

Claim.—A side or ladies' saddle-tree formed and constructed in the manner hereinbefore specified and represented.

No. 40,944.—CHARLES J. PRESTON, of Harlem, Stephenson county, Ill.—*Improvement in Wheel Vehicles*.—Patent dated December 15, 1863.—This vehicle has a double truck frame, in which the rear cross-bar of the forward truck forms the slider, and the transom is framed into the bounds; the transom of the rear truck is supported by longitudinal timbers; the transoms are fitted to the centre-piece and bolster, respectively, by means of recesses, which allow the transoms to spring down and obtain the required spring for the truck.

Claim.—The arrangement of the transoms a g with recesses c r, fitting, respectively, over the bolster d and center bar A, and connected with the truck frames B C, in the manner and for the purpose substantially as herein shown and described.

No. 40,945.—GEORGE H. REYNOLDS and GEORGE H. BADCOCK, of Mystic Bridge, Stonington, New London county, Conn.—*Improvement in Pumps*.—Patent dated December 15, 1863.—The four valves are arranged, two on each side of a partition, in a casing which is fitted into the chamber and capable of being withdrawn therefrom. It is secured in position by a cover or bonnet which is fastened by a screw passing through a hinged bridge-piece or bail.

Claim.—First, the two induction valves and the two educting valves of a double-acting pump, arranged as shown, in the single chamber A, in combination with the partition O between the induction valves m m' and extending to the eduction valves n n', substantially as and for the purpose herein described.

Second, the construction and arrangement of the valve seats M N, the valves m m' n n', and the partition O, whereby the said valves and their seats may be removed from the chamber A in one mass, substantially as herein specified.

Third, the employment of the cam I, in combination with the hinged bail F and the bonnet E, substantially as and for the purpose herein set forth.

No. 40,946.—JOHN W. ROCKWELL, of Ridgefield, Fairfield county, Conn.—*Improvement in Currycombs*.—Patent dated December 15, 1863.—The bent plates with their two serrated edges are attached by lips to the flexible back.

Claim.—A currycomb having a series of metal bars A applied to a flexible back B, substantially as and for the purpose set forth.

No. 40,947.—ISAIAH ROGERS, of Washington, D. C.—*Improvement in Safes*.—Patent dated December 15, 1863.—Balls of hard material are interposed between the plates forming the walls of a safe, so as to move and present a barrier to a drill, router, or other burglar tool. The face side of the safe wall is lined with steel as a stay to the outer plates.

Claim.—First, a burglar-proof safe having the space between its walls provided with balls, arranged in such a manner that they may turn and still be retained in proper position, for the purpose herein set forth.

Second, the employment or use of balls of different diameters, substantially as and for the purpose specified.

Third, the steel plate D secured to the outer face or side of the wall B, when said plate is used in combination with the balls, as and for the purpose set forth.

No. 40,948.—CHRISTOPHER E. RYMES, of Charlestown, Middlesex county, Mass.—*Improvement in Fastenings for Tobacco Presses or Cases*.—Patent dated December 15, 1863.—This is a circular band with fastening consisting of a bolt socketed into the lugs of the clamp, and fastened by nut and washer. The band encircles segmental blocks, which enclose a box of tobacco under the pressure of packing.

Claim.—My improved segment band fastening as composed of the screw-bolt b, the nut c, the adjustable washers e e, their concave seats d d, and the cam or eccentric g, they being made, arranged together, and applied to the band, substantially in manner and so as to operate as described.

No. 40,949.—HENRY V. SCATTERGOOD, of Albany, N. Y.—*Improvement in Pessaries*.—Patent dated December 15, 1863.—This consists of a frame of a general oblong shape, with extensible side pieces, having legs on one part which slip into tubes in the other, the springs in which latter give it an adjustable pressure against the parts around the head of the uterus, which rests upon it.

Claim.—The construction of a pessary in the form of a light, self-adjustable frame, constructed substantially as described, to be applied externally to the uterus to raise and support the same in the manner set forth in this specification.

No. 40,950.—PHILIP SCHEUERMAN, of Hancock, Houghton county, Mich.—*Improved Apparatus for Washing Ores*.—Patent dated December 15, 1863.—In this washer the water is forced up through screens on which the ore or pulp is discharged from the stamp mill. The improvement consists in the method of operating the plunger by the cam on the shaft, and in the arrangement of the duplicate compartments, each provided with a screen, the metallic substances on which are discharged by horizontal tubes, whose openings are near the screen.

Claim.—First, the combination of the shaft F, cam E, and yoke D, with the plunger C, of an ore washer, substantially as described.

Second, the two separate reservoirs A A, provided with screens, J J, in connexion with a single plunger, C, arranged, substantially as shown, to admit of the plunger forcing the water simultaneously through both screens, for the purpose specified.

Third, the combination of the strip H and plates I I with the plunger C and reservoirs A A, operating as a guide to the said plunger, and a partition between the reservoirs, all as herein shown and described.

Fourth, the tubes K, provided with openings, h, in their under sides, in close proximity to the screens, and communicating with chambers, L, at the end of the screens, opposite to the ends on which the ore or pulp is admitted, substantially as and for the purpose set forth.

No. 40,951.—SILAS A. SCOFIELD and ERASTUS CHURCHILL, of Morenci, Lenawee county, Mich.—*Improvement in Machines for making Sheet-metal Eave Troughs*.—Patent dated December 15, 1863.—This machine is for making sheet-metal semi-cylindrical eave troughs by the rotation of a head bending the metal around a cylindrical former after the sheets have been soldered together. The former is of a wedge shape, so as to bend the sheet metal by a succession of motions of the head while the piece is moved along intermittently.

Claim.—First, a stationary supporting bed, A, with a stationary circular "former" constructed on one of its edges so as to stand entirely above the base of the bed, in combination with a recess, a, of the form and located substantially as described.

Second, the combination of the stationary bed A, circular former B, and the recess a, with the vibrating head C D, substantially as and for the purpose described.

Third, the wedge-shaped clamping piece D between the circular former B and the shoulder of the head C, when constructed and arranged substantially in the manner and for the purpose described.

Fourth, so supplying a wedge-shaped clamping piece, D, to a head, C, that by manipulating a lever the pressure of the wedge may be maintained, and also the vibration of the head produced, substantially as described.

Fifth, the bent arms *d d*, in combination with a swinging head clamp, D, and recessed bed and former, A B a, substantially as and for the purpose described.

No. 40,952.—CHARLES A. SHAW, of Biddeford, York county, Me.—*Improvement in Bobbins*.—Patent dated December 15, 1863.—The groove between the boss and the conical end is for the purpose of fastening the end of the thread in starting up the frame. The conical ends admit of the building up of the thread or yarn on to the bobbin to make it hold more. The boss acts as a gauge for the fingers in holding the bobbin to fasten the thread, and forms one side or angle of the groove in which the end of the thread is fastened.

Claim.—A bobbin substantially such as described, combining in one and the same article the grooves *o o*, bosses *f f*, and conical or cone-shaped ends *m m g g*; and this I claim whether the said ends are cut out or sunk on their outside faces in the manner described or not.

No. 40,953.—J. F. SHEDDEN, of Viola, Mercer county, Cal.—*Improved Process for Refining Sorghum Sirup*.—Patent dated December 15, 1863.—To twenty gallons of the cold sirup add one pound of saleratus. The effect is to sweeten and clarify the soured sirup.

Claim.—The process herein described of treating cold sirups with saleratus, in the manner described and for the purposes set forth.

No. 40,954.—J. F. SHEDDEN, of Viola, Mercer county, Cal.—*Improved Process of Manufacturing Sugar from Sorghum*.—Patent dated December 15, 1863.—The cold sirup is treated with saleratus or other alkali, which causes it to granulate. The proportion is one pound of the latter to twenty gallons of the former.

Claim.—The process herein described of treating sorghum sirup, when cold, with saleratus or its equivalent, in the manner and proportions herein set forth and described.

No. 40,955.—Cancelled.

No. 40,956.—ISAAC D. SMALL, of North Fairfield, Huron county, Ohio.—*Improvement in Artificial Legs*.—Patent dated December 15, 1863.—The lower limb is hinged at the knee and ankle to the thigh and foot, and the two latter are connected by a cord which passes over rollers, and is made elastic by the interposition of a spring. The spring S gives flexure to the knee joint when the leg is lifted.

Claim.—First, the combination with the knee and ankle joints, constructed as described of the cords C and E, spiral spring D, and pulleys L and M, arranged, attached, and operating as and for the purpose specified.

Second, the spring S, when constructed, applied, and operating as set forth.

No. 40,957.—ALBA F. SMITH, of Norwich, New London county, Conn.—*Improvement in Railroad Car Trucks*.—Patent dated December 15, 1863.—The novelty is in the parts which take the place of the ordinary long suspension links. The link is rigidly secured to the fixed bearing beams of the truck, and short suspension links are jointed to the lower end thereof by pins *m*, so that while the height of the swing beam is the same as with the ordinary long suspension links, and the space for the springs and the elevation of the swinging bolster the same as usual, the radius of suspension is contracted.

Claim.—First, suspending the car to the truck by freely-swinging links of so short radius that the gravity of the parts alone will effectively sustain the lateral motion at high velocities, substantially as herein set forth.

Second, the employment of the within-described fixed straps M, swinging suspending link N, joint *m*, and bars *a b*, or their respective equivalents, arranged substantially as shown, whereby the vertical strain is borne by the top of the bearing beam A and base of the swing beam B as usual, and a shorter radius of lateral motion secured with the advantage specified.

No. 40,958.—DANIEL E. SOMES, of Washington, D. C.—*Improvement in Projectiles for Ordnance*.—Patent dated December 15, 1863.—The rifling in the piece is deeper towards the rear; the projectile has slots occupied by wing-shaped blocks, which fit tightly against the bottom of the rifling under the pressure of springs in the grooves, which are compressed more and more as the projectile approaches the muzzle.

Claim.—First, restraining a ball or projectile in a gun on its outward passage by means of friction till the powder shall have time to burn and the maximum or any desired amount of its power developed, substantially in the manner described.

Second, a projectile with mortices, *d d d d*, and pieces, *f f f f*, springs, *n n*, and cap, *n*, made and used substantially as described.

No. 40,959.—A. J. SPARKS, of Wyanet, Bureau county, Ill.—*Improvement in Cultivators*.—Patent dated December 15, 1863.—The levers by which the ploughs receive their vertical and lateral deflection are jointed together by a segment rod and slot; the plough beams are sus-

pended at two points, one from each section of the lever, the beams being supported clear of the soil, when desired, by staple and hook, the latter depending from the axle.

Claim.—First, the two levers G G' connected together by a joint formed of the slotted plate *g* and segment rod *i*, and attached to the plough beams H H, substantially as shown, to admit of a ready lateral movement of the same as well as the ready elevating of the ploughs above the surface of the earth, as set forth.

Second, the suspending of the plough beams H H from the frame A by means of the upright bars J J and incline bars *p p*, provided with rollers, *s o*, at their upper ends, which work on suitable ways or guides, substantially as set forth.

Third, the hooks M on the plough beams H, in connexion with the pendant hook projections N on the frame A, when said parts are used in combination with laterally moving plough beams, for the purpose specified.

No. 40,960.—J. W. STILES, of New York, N. Y.—*Improved Hoop Skirt Wire*.—Patent dated December 15, 1863.—The steel wire is covered with a less corrodable metal by plating, electrotyping, or other means; the object is to avoid rusting when wet or while cleansing and drying the cotton covering.

Claim.—A steel hoop for ladies' hoop skirts, covered with one or more metals by plating, electrotyping, or in the moist way or other equivalent means, the hoops may then or may not be covered with cotton or other textile fabric, whereby I produce a more elegant, cleanly, and cleansable hoop for ladies' hoop skirts.

No. 40,961.—U. S. SUNDERLAND, of Highgate, Franklin county, Vt.—*Improvement in Field Rollers*.—Patent dated December 15, 1863.—The improvement consists in the method of supporting the gudgeons of the inner ends of the rollers upon gudgeon pins, attached to a bar which extends between the rollers, and is attached to the front and rear frame of the machine. The gudgeons are attached to the ends of the rollers by projecting pins on the arms, and the pins on the gudgeon bar sets into their central orifice and comes against the shoulder.

Claim.—The gudgeon cross-bar P, when provided with the single attaching flanches *p p*, projecting in opposite directions in combination with the shouldered gudgeons M M, and box enlargement L L, extending over them in the manner and for the purpose herein set forth.

No. 40,962.—CHARLES M. SWANEY, of Philadelphia, Penn.—*Improvement in Machine for Measuring Cloth*.—Patent dated December 15, 1863.—The revolutions of the measuring wheel are registered by the motion of an index attached to a nut which traverses on the screw shaft of the wheel; the graduated plates are attached to the bearings of the wheel and the motion of the latter is arrested by the toothed pawl, which engages with the surface of the wheel when it is lifted thereto.

Claim.—The drum B, provided with the screw shaft C, and nut D, in combination with the graduated plates *b b*, one or both, pressure roller E, and the lever or pawl J, and ratchet or milled wheel I, or their equivalents, all arranged to operate substantially as and for the purpose herein set forth.

No. 40,963.—C. F. and J. W. TILLMAN, of La Crosse, Wisconsin.—*Improved Spring for Furniture*.—Patent dated December 15, 1863.—The spring is secured uprightly, being coiled around an axial piston, which is fastened to the head which rests on the spring, and works at its lower end in a tubular socket; the upward vibration of said spring being limited by a pin which is adjustable in the said piston, according to the weights intended to be sustained with a given deflection.

Claim.—The stem D, provided with an adjustable pin *h*, in combination with the cap C, buttons *d*, spring A, and slot B, all constructed and operating in the manner and for the purpose herein shown and described.

No. 40,964.—HIRAM TUCKER, of Newton, Middlesex county, Mass.—*Improved Process of Bronzing or Coloring Iron*.—Patent dated December 15, 1863.—The iron is cleaned, polished, coated with linseed oil, and heated until the required tint is developed.

Claim.—The process of bronzing iron substantially as described.

No. 40,965.—ROSCOE G. TURNER and H. STONE, of Dedham, Norfolk county, Mass.—*Improved mode of Changing Motion*.—Patent dated December 15, 1863.—The rack which has the reciprocating rectilinear movement gears into two pinions on two shafts, on which latter are two wheels whose teeth engage with each other, each pinion is furnished with a catch, operating in connexion with a cam so as, by the forward motion of the rack, to move the larger rearmost gear from the revolution of its own pinion, and by the backward of the rack, to move it in the same direction through the interposition of the foremost pinion and gear.

Claim.—The above described combination for obtaining a continuous rotary from a reciprocating rectilinear movement, the same consisting of the rack K, the two engaging gears D E, and the rack gears H I, and the cams F G, and spring catches L M, or their mechanical equivalents, arranged and applied to two shafts A B, substantially in manner and so as to co-operate as hereinbefore specified.

No. 40,966.—JOHN VAN DYNE, of Crum Elbow, Dutchess county, N. Y.—*Improvement in Car Coupling*.—Patent dated December 15, 1863.—The shackle head comes against the inclined faces of the jaws and spreads them apart until it slips behind the projections, where it is retained. The jaws are actuated towards each other by springs and move vertically in guides, being pivoted at their rear ends, and opened when required by the revolution of a cam, which spreads them.

Claim.—The arrangement of the cam F, jaws B, and springs C, with the guides DD, head A, and shackle E, in the manner herein shown and described.

No. 40,967.—AARON VAN GUYSLING, of North Greenbush, Rensselaer county, N. Y.—*Improvement in Tools for Fastening Boiler Tubes*.—Patent dated December 15, 1863.—This is an improvement on Prosser's patent of April 17, 1849, in respect to the slotted sleeve, which forms the guide for the segmental expanders, and which is provided with a handle, so that after the conical mandrel has been inserted the tool can be turned in the inside of the tube, so as to operate on all parts of its inner periphery and keep it free of wrinkles.

Claim.—First, the application of the handle F, to the sleeve A, to operate in combination with the segmental expanders D, and conical mandrel C, in the manner and for the purpose substantially as described.

Second, so arranging the segmental expanders D, in relation to each other and to the sleeve A, that the same, when not expanded, leave no gaps between their adjoining edges, and when expanded they embrace the largest possible part of the inner surface of the tube as set forth.

No. 40,968.—RICHARD VOSE, of New York, N. Y.—*Improvement in Confining the ends of Elliptic Springs*.—Patent dated December 15, 1863.—These elliptic springs are combined with supplementary plates which act by lateral tension, and the improvement consists in the method of combining and securing the several bearing and tension plates which form the entire spring. The main feature consists in the use of hollow caps to retain the ends of the spring plates.

Claim.—The combination of curved tension-spring plates with elastic bearing plates in the construction of a tension-elliptic spring, when said tension plates are self-retained in their proper positions, and left free to expand, independently of each other, substantially as is herein set forth and described.

Also, the use of hollow-end caps to retain and secure the ends of the elastic plates, in an elliptical or semi-elliptical tension plate spring, substantially in the manner and for the purpose herein set forth.

No. 40,969.—MARTIN WEAVER, of Millersburg, Dauphin county, Pa.—*Improved Shingle Machine*.—Patent issued December 15, 1863; antedated December 1, 1863.—The bolts are secured in gauge blocks on an endless chain which traverses around a central elliptical guide, on each side of which they are presented to the saw from which the shingles are removed by the lifting plate and roller and laid upon the table.

Claim.—First, the combination of the horizontal circular saw C, adapted to cut on both sides of the horizontal endless chain E, and gauge blocks K, all arranged and operating as herein set forth.

Second, the combination of the tables N N' with the rollers M M', endless chain F, gauge blocks K K', and double-acting saw C, all constructed and operating as described.

No. 40,970.—SAMUEL WEAVER, of Gettysburgh, Adams county, Pa.—*Portable Photographic Gallery*.—Patent dated December 15, 1863.—The sides are made with horizontal elongated bars attached to the bottom and near the ends, sliding between friction rollers in boxes secured to joists under the floor; extension bars are also provided underneath the ceiling joists, and the gallery is extended by pulling out the sides to the length of the box.

Claim.—The enlargement of a portable daguerrean gallery or house, by means of the elongated sliding bars C, friction roller boxes D, movable slides G, and friction rollers E, as arranged, and operating substantially in the manner herein specified.

No. 40,971.—AMOS H. WELLINGTON, of Woodstock, Windsor county, Vt.—*Improvement in Vegetable Cutters*.—Patent dated December 15, 1863.—The hopper is an inverted frustum of a cone, and its cross-bar supporting the shaft is provided with knives, which cut the root or fruit brought against them by the rotation of the cutter, which consists of conical frustums with orifices provided with projecting cutting edges, so as to discharge the cut piece into the interior of the hollow cone.

Claim.—An improved machine, or combination and arrangement of the vertical conical hopper B, the two detainers or cutting-board L L, and a vertical hollow cone or frustum C provided with knives having throats opening into the interior space or chamber of the said cone or frustum, the whole being substantially as and for the purpose and to operate as hereinbefore specified.

No. 40,972.—GILBERT D. WHITMORE, of Boston, Mass.—*Improvement in Shutter Fastenings*.—Patent dated December 15, 1863.—The tubular bolt case is joined to a flat plate

tached to the inner surface of the lower bar of the blind. A spring in the case presses the bolt downward; inclined slots are in the bolt case, and the rods of the handle, which are attached to the said bolt, slide therein. Such motion raises the bolt from its engagement with the catch on the window sill.

Claim.—The above-explained improved blind fastener, having a handle E and two or any other suitable number of inclined cam slots *e e* made and applied together, and arranged with respect to a spring bolt A and its case B substantially in manner and so as to operate therewith, and with catches F H disposed as specified.

No. 40,973.—ERASTUS WILCOX, of Delhi, Delaware county, Iowa.—*Improvement in Cultivators*.—Patent dated December 15, 1863.—The forward part of the cultivator is supported on wheels, being adjustable as to height in the vertical posts. The shovels are on the ends of two sets of inclined stocks, and are controlled by the handles.

Claim.—The combination and arrangement of the frame A A B B, bars D D, and adjustable standards F F, wheels H H, inclined bars I I and J J, stands N N and T T, bars L and M, handles J' J', shovel stocks Q and V, with cultivating shovels S and X, the whole constructed as described.

No. 40,974.—WILLIAM WINTER, of Plainfield, Union county, N. J.—*Improvement in Fan Blowers*.—Patent dated December 15, 1863.—The shaft, with its triangular wings, rotates in a double conical chamber, receiving the air at the central portion and discharging it into an annular space, which collects and conducts it to the exit pipe.

Claim.—The annular air-chamber *d* and double conical cavity *a*, with central apertures *f*, in combination with triangular rotary wings B, constructed and operating substantially as and for the purpose shown and described.

No. 40,975.—ROBERT WOOD, of Philadelphia, Pa.—*Improvement in Cast-Iron Building Pieces*.—Patent dated December 15, 1863.—The cast-iron shells have projections and holes, by which the adjacent pieces are locked together.

Claim.—Building pieces, consisting of hollow cast-iron shells, having projections and holes arranged substantially as and for the purpose herein set forth.

No. 40,976.—W. M. BAKER, of Walpole, Hancock county, Ind., assignor to Himself and W. R. HEATH.—*Improved Refrigerator*.—Patent dated December 15, 1863.—The object of this improvement is to supply the interior of the refrigerator with cold, dry air and to carry off from within all smells, vapor, and impurities. This is accomplished by a pipe leading from the outer air to the ice-chamber, &c., from whence, after penetrating the interior generally, it escapes by the ventilator on the top of the refrigerator.

Claim.—The air-tubes I J and air-chamber H, in combination with the ice-chamber D and ventilator K, all being arranged in relation with the inner case B to operate in the manner substantially as and for the purpose herein set forth.

No. 40,977.—FELIX BRUNON, of Philadelphia, Pa., assignor to Himself and JOSEPH M. NAGLE, of same place.—*Improvement in Cooling and Discharging Fermented Liquors*.—Patent dated December 15, 1863.—The invention consists of an outer chamber for containing ice and water, and an inner chamber containing the liquor to be operated on, in which is sunk a submerged weighted vessel, open downwards, communicating by a syphon tube with any vessel prepared to receive the contents.

Claim.—A vessel A, of any suitable form, for containing ice and water, and the weighted inverted vessel D, in combination with the cocks and tubes herein described, or any equivalent to the same, the whole operating substantially as described, for the purpose specified.

No. 40,978.—SILAS CRISPIN, of New York, N. Y., assignor to THOMAS POULTNEY, of Baltimore, Md.—*Improvement in Primed Metallic Cartridges*.—Patent dated December 15, 1863.—The object is to make a cartridge case which shall act as a perfect gas check, and at the same time be sufficiently expansible not to rupture in the explosion and become jammed in the breech of the gun; and this is accomplished by making the covering of thin sheet metal, or of metal and paper combined, which are wrapped around the "former" and lapped over the primer, or fulminate in any suitable way, being also crimped into the annular recess of the ball by ligature or otherwise.

Claim.—First, the combination of a thin-wrapped metal and paper cartridge case, with a primer, so securely fastened together as to form a primed expanding-wrapped metal and paper cartridge, substantially as above explained.

Second, the combination of a thin-wrapped metal cartridge case and a primer so securely fastened together as to constitute a primed expanding-wrapped metal cartridge, substantially as described.

No. 40,979.—EDWARD J. ENO, of Jacksonville, Morgan county, Ill., assignor to STEPHEN H. ENO, of same place.—*Improvement in Harvesters*.—Patent dated December 15, 1863.—The machine is attached to the side of a wagon and collects the stalks by the projecting arms and strips the ears from the stalks, depositing them in the wagon-box. The stalks are contacted against plates which slide up and down and detach the ears.

Claim.—First, the rising and falling plates I I', operated by the part pinion J J', in combination with the guide arms e and the endless apron Q, all being placed within or attached to a box C, applied to the body of a cart or wagon, to operate substantially as and for the purpose herein set forth.

Second, the particular manner of attaching the box C to the wagon-body, to wit, by means of the posts D and keys E, as herein set forth.

No. 40,980.—RICHARD FETHNEY, of Manchester, Lancashire, kingdom of Great Britain, assignor to LEWIS LEIGH, of Seymour, Conn.—*Improvement in Spindle Bolsters of Spinning Machines.*—Patent dated December 15, 1863; patented in England November 5, 1861.—This is a swivel bolster, part of it being globular, fitting in a recess of similar form in the coping or spindle rail, a pin or projection preventing it from revolving with the spindle; this enables the bolster to accommodate itself to any deviation of the rail so that it shall not bind the spindle.

Claim.—First, the tubular bolster for spindles, herein described, provided with a spherical bearing fitting a recess in the spindle rail, for the purposes and substantially as specified.

Second, the means, substantially as described, for preventing the rotation of said bolster and retaining it in its recess in the spindle rail, as set forth.

No. 40,981.—THOMAS M. KANE, of Goshen, Orange county, N. Y., assignor to Himself and OGDEN HOWELL, of same place.—*Improvement in Lever Jacks.*—Patent dated December 15, 1863.—To the base are attached two standards, one of them has steps which permit the clevis and block to be adjusted as to height to form a fulcrum for the lever, while the end of the lever, working in a slot in the other standard, is retained at the required depression by a pin.

Claim.—The construction of the upright, in combination with the lever block and clevis, when constructed, arranged, and combined, as herein described, and for the purposes set forth.

No. 40,982.—MILTON V. NOBLES, of St. Anthony, Ramsey county, Minn., assignor to Himself, JOHN C. NOBLES, and ELIZA C. SUYDAM, of same place.—*Improvement in Fan Blowers.*—Patent dated December 15, 1863.—Two fans, in a divided case, acting, the one to draw foul air from an apartment and drive it outside, and the other to collect pure air from the outside and drive it into the apartment.

Claim.—In combination with a fan-case having closed eyes, and a divided fan, the double sets of inlet and exit air-ducts or passages C C' and D D, constructed, arranged, and operating together for the purpose of drawing in and forcing through it counter currents of pure and impure air, substantially as and for the purpose described.

No. 40,983.—THOMAS W. REILLY, of New Orleans, La., assignor to HECTOR H. MCLEAN, of same place.—*Improved Mode of Fastening Bales of Merchandise.*—Patent dated December 15, 1863.—The buckle has a central bar and projecting tongue, and the strap has holes which catch over the tongues as the strap is passed over the bar of the frame and under the central bar.

Claim.—The buckle A with tongues d d and centre piece C, as fully represented in the drawings.

No. 40,984.—FREDERICK M. RUSENHAUPT, of New York, N. Y., assignor to JOHN G. KERSHAW, of Philadelphia, Pa.—*Improvement in the Manufacture of Artificial Stone.*—Patent dated December 15, 1863.—The artificial stone is composed of unslacked lime, three and a half parts; burnt clay, seven and a half parts; and gelatinous silicic acid, one part; mixed and moulded.

Claim.—The manufacture of artificial stone from lime, clay, and gelatinous silicic acid, mixed and pressed substantially as set forth, for the purpose specified.

No. 40,985.—SAMUEL S. SHERWOOD, of Acquackamack, Passaic county, N. J.—*Improvement in Hoop Skirts.*—Patent dated December 15, 1863.—The hoops pass through loops in the tapes, and the cords or braids are secured to the hoops alongside of the loop in tape.

Claim.—The combination with the tapes A A, woven with loops, or their equivalents, and the hoops E E of the cords or braids F F when the latter are secured outside of the tapes and not through them, substantially as and for the purposes set forth.

No. 40,986.—SETH WHALEN, of Balston Spa, Saratoga county, N. Y., assignor to Self and HANNAH WHALEN, of Burnt Hills, N. Y.—*Improvement in Turbine Water Wheels.*—Patent dated December 15, 1863.—The water is supplied to the central discharge wheel through openings in a wheel surrounding it; these openings cause the water to impinge upon the turbine in the direction of its motion and near the periphery of the wheel; above the latter is a conical chamber formed by a cap secured around the shaft by blocks and wedges.

Claim.—The guide wheel g with the chutes l l and central discharge wheel k with the buckets 2 2, substantially as specified, in combination with the stop-water or cap l extending from the guide-wheel g to the shaft h, as and for the purposes specified.

Also, the follower blocks n and keys or wedges 5, in combination with the stop-water or cap l, for the purposes and as specified.

No. 40,987.—WM. N. WHITELEY, JEROME FASLER, and OLIVER S. KELLY, of Springfield, Clark county, Ohio.—*Improvement in Mills for Grinding Fruit, Grain, &c.*—Patent dated December 15, 1863.—The grinding rollers are covered in by segmental plates which form a cap corresponding to their shape, the spiral crushing and feeding roller being arranged over the two ribbed grinding rollers and operating against a ribbed segment or throat. The gearing is arranged on the outside of the frame, and the fruit, after passing the throat of the machine, where it receives its first crushing, is passed to the grinders, which move at different velocities, so as to shave it fine before dropping into the hopper beneath.

Claim.—First, the three grinding rollers in combination with the metal segments k k, constructed substantially as described, for the purposes set forth.

Second, in combination with the frame and grinding rollers arranged substantially as described, arranging the gearing which communicates motion to or between the rollers on the ends of the shafts outside of the journal boxes and frame, substantially as described.

Third, in combination with the ribbed segment N, the spiral crushing and feeding roller, arranged over the grinding rollers H and H', substantially as described and shown, to crush and feed the apples uniformly to the grinding rollers.

Fourth, two spiral ribbed grinding rollers running together at different velocities, with the ribs of one roller crossing the ribs on the other at an angle where the grinding is effected, in combination with the crushing and feeding roller arranged above them.

Fifth, the combination of the hopper Q, ribbed segment N, segments R R', and sides L L, with the roller M, forming the crushing box, constructed so as to be readily removed, as described, for washing and cleaning the mill.

No. 40,988.—THOMAS J. RODMAN, of Watertown, Middlesex county, Mass., and SILAS CRISPIN, of New York, N. Y., assignors to THOMAS POULTNEY, of Baltimore, Md.—*Improvement in Metallic Cartridge.*—Patent dated December 15, 1863.—The cartridge case is made of a sheet of thin flexible metal, rolled into the form of a cylinder and with the edge overlapping but not united; this permits the case to expand under the force of the explosion. A disk or cup occupies the rear of the chamber case.

Claim.—First, the thin metal-wrapped cartridge case, made substantially in the manner described, and for the purpose set forth.

Second, the forming of a wrapped thin metal cartridge case combined with an internal or external strengthening disk or cup, whether this disk or cup is made of paper, metal, or an elastic material, substantially as above described.

No. 40,989.—A. C. BACON and J. G. JENNINGS, of Cleveland, Cuyahoga county, Ohio.—*Improvement in Fireplaces.*—Patent dated December 22, 1863.—The object of this invention is so to construct a fireplace that by a combination of chambers it may have a greatly augmented radiating power and furnish the hot air draught of a register furnace.

Claim.—First, the combination of the several air-chambers A B E, forming an open grate of increased radiating power for chimney or stove, that will also furnish the heated air draught of a register, viz., the chamber A, extending around the back to the sides of the grate, and into which air is admitted from below, the arched chamber B, projecting from the summit of the chamber A with which it is connected over the fire with more or less inclination as the nature of the draught may require, and the chamber E meeting the chambers A and B on the side of the grate, and extending over the arch of the smoke flue, all combined in the manner and for the purpose substantially as described.

Second, the apertures c in their application to the herein described grate, in combination with the movable perforated front or blower D, when constructed as described and operating as specified.

No. 40,990.—DAVID S. BLAIR, of Albany, N. Y.—*Improvement in Apparatus for Heating Brewer's Boulders.*—Patent dated December 22, 1863.—This improvement consists in a method of arranging two congeries of steam tubes so that they shall, like flaps or leaves of a book, vibrate around a central steam tube axis.

Claim.—The peculiar arrangement by which separate and independent congeries of pipes or flues for the circulation of steam or hot air through a vessel containing liquids can be so fitted upon central axis pipes as to permit any of the said congeries to be turned upon its axis to any degree without interrupting the regular flow of steam or air, or its escape excepting by its regular exit passage; the apparatus consisting of the pipes C1 C2 secured to the side of the vat A as ingress and egress passages for steam or hot air. The sleeves E1 E2, with pack joints connecting pipes B', with C1 C2. The pipes D1 D2 entering into the ends of pipes C1 C2 and connecting them with pipes B2; the pipes C1 C2 and D1 D2 being axes on which the separate congeries of pipes B1 B2 revolve, substantially as described.

No. 40,991.—EDWARD and JOHN BOURNE, of Pittsburg, Pa.—*Improvement in Making Steam-tight Joints.*—Patent dated December 22, 1863.—The joint is made by inclosing a thin strip of wood in the seam formed by turning the edges of the sheets one over the other.

Claim.—As a new article of manufacture, a steam radiator formed of two flat sheets of metal having their edges united together by a lap joint, when said joints are made steam-tight by the interposition of a strip of wood between the sheets before closing down the same, substantially in the manner as herein set forth.

No. 40,992.—JOHN W. COCHRAN, of New York, N. Y.—*Improvement in Breech-loading Fire-arms*.—Patent dated, December 22, 1863.—Attached to the breech piece is a projection which lies in a chamber underneath the barrel when the breech is closed and which when retracted works in a slotted bar beneath an apron and cartridge drawer, and operates them by means of a latch lever, drawing them both out to a certain distance and then releasing its hold, allowing the cartridge to be automatically retracted by the spring, while the apron is further withdrawn and retained in a position to form a support for the cartridge before its entrance into the barrel.

To adapt the gun to firing loose ammunition, a gas check or a cylinder with a projecting flange at its base is inserted in the place of the ordinary cartridge; the projecting flange extends back into the counter bore of the breech piece so as to come in contact with the piston; the piece is then loaded from the muzzle, and the priming escapes through an orifice in the base of the gas check and fills the nipple tube to which the piston is attached, and from whence it may be exploded in the ordinary manner by a percussion cap.

Claim.—First, the apron G applied and operating in combination with the movable breech piece, substantially as and for the purpose herein specified.

Second, so combining the slide H of the cartridge drawer with the apron G by means of a latch lever I, or its equivalent, and so applying spring j and screw or other fixed point k, in combination with said slide and apron, that the slide may be attached to and moved back with the apron and automatically detached therefrom and drawn back independently thereof, substantially as and for the purpose herein described.

Third, the gas check J, provided with a projection S on its bottom, arranged to operate in combination with the piston n and movable nipple p, substantially as and for the purpose herein specified.

No. 40,993.—W. W. CLAY, of Nottingham, England.—*Improvement in Knitting Machines*.—Patent dated December 22, 1863.—In this machine the thread is caught within the loop of a raised needle, which in descending impinges on a spring, which, being depressed towards the needle, deflects the beard of the hooked needle towards its stem, and enables it to enter and pass through the previous loop, which is permitted to escape.

Every needle, in succession, has the above movement as the cylinder revolves, and a complete revolution shows a new row of loops added to the fabric.

Claim.—The system of reciprocating hooked needles F and the system of springs G, or their equivalents, applied to a revolving cylinder, in combination with the presser wheel K, or its equivalent, the whole being arranged for joint action, substantially as and for the purpose herein set forth.

No. 40,994.—REUBEN J. COLE, Poultney, Rutland county, Vt.—*Improvement in Turning Lathes*.—Patent dated December 22, 1863.—The centre of the lathe-head is a hollow spindle, with spurs upon its ends to catch the wood; the spindle of the foot-stock is also hollow, so as to carry an axial bit, which is protruded by a mandril, which traverses the hollow spindle; the lower part of said spindle is slotted, so as to form, in connexion with the head, in which it traverses, a channel for the discharge of chips.

Claim.—The tubular centre i in the live or moving spindle H, the same projecting beyond and in combination with the spurs j j, in a lathe designed to bore through the article to be turned.

Also, the slotted spindle I in the foot-stock of a lathe, (for turning currycomb handles or other articles of wood requiring to be bored in the centre,) through which power is introduced to operate a bit-stock and bit working in the centre of the spindle, in combination with the bit-stock and bit, substantially as described.

Also, the employment of an opening or slot a in the under side of the spindle of the foot-stock, and in its tubular centre, if necessary for the discharge of chips, in combination with a bit-stock and bit working within the hollow spindle, substantially as described.

No. 40,995.—JOHN F. and HENRY D. CUMMINGS, of Frémont, Steuben county, N. Y.—*Improvements in Grain Separators*.—Patent dated December 22, 1863.—The improvements consist in the method of making a grain screen by lapping the joints of the frame; so placing the second screen relatively to the blast that the latter impinges on its upper surface; the sliding bottom and attached hinged valve by which the draught is regulated; and the arrangement of the three screens one above the other, as represented, each of which is designed for a specific effective action.

Claim.—First, the frame of the sieve of a framing mill constructed without mortises and tenons or scarfing, but by lapping the joints, substantially as set forth and described.

Second, the return screen, (next below the upper one,) so placed that the blast is forced through it from the top, constructed and arranged substantially as described.

Third, the wind-forcer, composed of the flap C, the cut-off C' to which the flap C is hinged, and the sliding piece C2 to which C1 is rigidly attached, substantially as described and for the purpose set forth.

Fourth, the combination of the first, second, and third screens B B' B'', when arranged substantially as described, either in the shoe A or in the shoe as originally constructed.

Fifth, the combination of the first, second, and third screens B B' B'' with the wind-forcer C C1 C2, when arranged substantially as described, in the economy shoe A, or in the original shoe, during construction.

Sixth, the combination of the first, second and third screens B B' B'', the wind-forcer, C C1 C2, and the gate D, when arranged substantially as described, either in a secondary shoe A, or in the original shoe, during construction.

No. 40,996.—TIMOTHY EARLE, of Smithfield, Providence county, R. I.—*Improvement in Covers for Fruit Cans*.—Patent dated December 22, 1863.—The vent in the cover is closed by a patch, which is held over the aperture by a spring.

Claim.—The combination of a spring b and patch a with the air vent in the cover of a preserve can, substantially as described for the purposes specified.

No. 40,997.—S. F. EMERSON, of Seville, Medina county, Ohio.—*Improvement in Churns*.—Patent dated December 22, 1863.—The swinging box is suspended on a frame, the upper part of which consists of a segment which meshes into a pinion on the dasher shaft.

Claim.—Arranging the vibrating dasher shaft at the top of the swinging box A, said shaft being provided with the pinion E in combination with the segment gear D, the whole being constructed and operating as and for the purposes set forth.

No. 40,998.—A. C. EMMICK, of Columbus, Franklin county, Ohio.—*Improvement in Casting the Andrews & Kalbach Water-wheel*.—Patent dated December 22, 1863.—The cores which represent the spaces between the buckets are set up in a mould, and the rim, buckets, and hub cast in one solid piece.

Claim.—Casting the Andrews & Kalbach water-wheel in one homogeneous piece and at one operation, in the manner and by means of a mould or moulds constructed and arranged substantially as described.

No. 40,999.—JOHN GILL, of New York, N. Y.—*Improvement in Cribbage Boards*.—Patent dated December 22, 1863.—The sliding pins have flattened ends, and are introduced from below the board so that they can be drawn up, but not out.

Claim.—The sliding press or pins with flattened ends, in combination with the perforated board or table, constructed as and for the purposes specified.

No. 41,000.—JOHN GRAY, of Milwaukee, Wis.—*Improvement in Grain Separators*.—Patent dated December 22, 1863.—This is an improvement on "Booth's Compound Shaker," and consists in the application of screens which are placed in the wheat discharge and are adjustable to the desired angle, so as to screen the tailings from the wheat in the back-fall, which directs the grain to the upper part of the screen, so as to cause it to pass over a larger portion of the latter; the sieves of the machine are adjustable as to inclination by means of a slide leg, which is extended or shortened in its straps for that purpose, the crank power consisting of a crank wheel and pinion and eccentric rod attached to the machine.

Claim.—The combination with "Booth's Compound Shaker" for separating wheat from oats, &c., the movable screens d, together with the back-fall e, for the purpose of more fully separating the smaller seeds, &c., from the wheat.

Also, the application of the slide legs D to "Booth's Compound Shaker," for the purpose of elevating and depressing the zinc sieves C to any desired angle.

Also, the application of the crank power E and the eccentric rod L to "Booth's Compound Shaker," said crank power and eccentric rod being arranged and attached in manner substantially as above set forth, for the purpose of producing upon the machine known as "Booth's Compound Shaker" a quick vibratory motion.

No. 41,001.—PETER J. HARDY, of New York, N. Y.—*Improved Folding Chair*.—Patent dated December 22, 1863.—The seat is pivoted to the legs at their intersection, being hooked to the front legs and suspended from the back by a flexible material.

Claim.—Attaching the flexible material forming the back of a folding chair to the rear edge of the seat, so that the act of unfolding the chair shall stretch the flexible material of said back, as specified.

Also, a seat attached to the legs at the joint on which said legs fold, in combination with a movable hook or hooks that connect the seat to the folding legs and retain it in position, as specified.

No. 41,002.—WILLIAM D. HARRAH, of Davenport, Scott county, Iowa, assignor to Himself and IRA M. GIFFORD, of same place.—*Improvement in Grain Binders*.—Patent dated December 22, 1863.—The gavel of grain is passed endwise into a compressing tube on which are a number of endless bands, one of which is slipped over the sheaf as it passes out of the tube.

Claim.—First, effecting the bundling and binding of grain by compressing the grain, slipping an endless band over the sheaf and allowing the latter to expand within the band, substantially as described.

Second, the combination of a grain compressor and a prepared or endless band, substantially as described.

Third, passing the sheaf of grain within the circle or compass of prepared bands a proper distance and then slipping the band upon the sheaf, substantially as and for the purposes described.

Fourth, a grain-carrying compressing chamber D, constructed and operating substantially as described.

Fifth, the combination of a grain-compressing chamber and a band holding tube, operating substantially as described.

Sixth, passing grain in a compressed state through a square or round or other shaped tube, adapted for holding the bands and for allowing the same to be readily slipped off over the sheaf, substantially as described.

Seventh, a prepared band-holder G, or its equivalent, substantially as described.

No. 41,003.—THOMAS HARVEY and NICHOLAS J. BECKER, of Amsterdam, Montgomery county, N. Y.—*Improved Thrashery*.—Patent dated December 22, 1863.—The invention consists in applying an oscillating motion as a propelling power to the fan shoe by means of a double cam formed on the end of the cam-shaft on the inside of the drive wheel or pulley.

Claim.—The double cam *b'*, in combination with arm *k*, rod *g*, and spring *c'*, when constructed and operating in the manner and for the purpose herein set forth.

No. 41,004.—G. W. HATCH, of Parkman, Geauga county, Ohio.—*Improvement in Machine for making Carriage Wheels*.—Patent dated December 22, 1863.—The hub is slipped upon an upright mandril in the frame and the spokes are arranged, graduated, and fitted so that each may occupy its relative radial position and its position in one plane; this is accomplished by the revolution of the hub without removing it from the mandril.

Claim.—First, the frame A, bed B, rod C, swivel E, and attachments G and H, arranged as and for the purpose specified.

Second, the arms J, and cross-head K, for receiving and operating the head blocks as set forth.

Third, the graduated scale L, in combination with head-blocks, Nos. 1, 2, and 3, and cross-head K, constructed and operated substantially as and for the purpose specified.

Fourth, the table figure 3, when constructed substantially as described, for the purpose of holding the felly while being bored as set forth.

No. 41,005.—HORACE L. HERVEY, of Windsor, New Hartford county, Conn.—*Improvement in Plotting Instrument*.—Patent dated December 22, 1863.—The sliding vernier slips upon the rule and carries a pricking point which is held up by a spring, and also has a point for the insertion of a leg of a divider, while the other one is inserted at the zero mark.

Claim.—The straight-edge scale A, in combination with the sliding vernier B, when constructed and operating substantially as herein set forth, and for plotting and enlarging or reducing plots.

No. 41,006.—ALONZO HITCHCOCK, of New York, N. Y.—*Improvement in Mode of Hanging Doors*.—Patent issued December 22, 1863; antedated December 13, 1863.—The door is suspended by a tube running upon a rod, the tube being extended beyond the width of the door to make it move without tilting when moved.

Claim.—Hanging a sliding door on an extended support, substantially in the manner described.

Also, suspending a door on a tube, whether the same is extended or not.

No. 41,007.—HENRY HOLCOMB, of Painesville, Lake county, Ohio.—*Improvement in Hot Air Furnaces*.—Patent dated December 22, 1863.—This furnace has a double valve arrangement, operated by a single expansion rod, for controlling the current of air received through the two channels leading to the fire chamber, which are influenced by each other; also a perforated deflector to deflect the gases and smoke and supply the air in jets; also a series of air tubes within a heating drum connected with the fire box by a collar; and a cut-off tube within the deflector which, in connexion with the closing of the inlets of the fire draught, constitutes the furnace "air tight."

Claim.—First, the double or turn-valve arrangement, actuated by a single expansion rod, the said arrangement consisting of the expansion rod *i*, levers *h* and *V*, twin valves *g* and *g'*, and thumb nut *X'*, in combination with the tubes *a b c d*, perforated slide tube or cut-off *e*, and perforated deflector and fire draught, as described and for the purposes set forth.

Second, the perforated concave deflector, constructed and operating substantially as described and for the purposes stated.

Third, the perforated slide tube *e*, or its equivalent, operating in combination with the valve *g*, and register of tube *a*, as and for the purpose stated.

Fourth, the application and use of a compensating device for regulating the action of the expansion rod on the twin valves, the said device consisting of the short rod *Y*, slot *Z'*, and thumb nut *Z*, connected with and operating said expansion rod in the manner and for the purpose stated.

No. 41,008.—GUSTAVUS A. JASPER, of Charlestown, Mass.—*Improved Apparatus for Detecting Sugar, &c., in Waste Liquids*.—Patent dated December 22, 1863.—This machine is arranged in connexion with a filter, so as to be operated upon by the sweet water which runs from it as its contents are cleansed; when the water passes off with a sufficient amount of sugar in solution to warrant its detention for evaporation, an overflow of the liquor into the overflow cistern of the apparatus takes place, and indicates to an attendant the presence of the sugar in the liquor.

Claim.—The "sweet water detector," or combination of the overflow pan or vessel B, the induction chamber C, and its float D, valve *g*, and valve seat *e*, arranged and combined together substantially in the manner and so as to co-operate as described.

Also, the combination of the said "sweet water detector," or filter A, and a pipe *a*, or equivalent means of conducting a fluid from the filter into the said "sweet water detector."

Also, the "sweet water detector" as not only made of the overflow pan or vessel B, the induction chamber C, and float D, valve *g*, and valve seat *e*, but as having an efflux chamber E, or an auxiliary thermometer chamber, or both, as circumstances may require.

No. 41,009.—SAMUEL JOHNSTON, of Buffalo, N. Y.—*Improvement in Rakes for Harvesters*.—Patent dated December 22, 1863.—The rake has a circular motion by the rotation of the hub, to which it is pivoted around an upright axle, while the vertical motion of the rake-head and the position of the teeth are secured by the traversing arm, which impinges on the cam track and the parallel motion on the rake.

Claim.—First, the constructor *e'* of the rotating hub or cylinder, with the arms extending therefrom for the attachment of the rake, and a lever and a pitman, so that the rake may be operated by either, as and for the purpose described.

Second, the combination of the upright axle with the revolving hub and cylinder, and the cam tracks for the operation of the rake, substantially as described.

Third, the combination of the adjustable rod *i*, with the rake-head *k*, and the arm *h*, to which it is attached, substantially as and for the purposes described.

No. 41,010.—JAMES J. JOHNSTON, of Alleghany City, Pa.—*Improvement in Apparatus for Rendering Lard*.—Patent dated December 22, 1863.—This consists in the arrangement of a steam and rendering boiler, furnished with a pipe which passes from the steam boiler through the fire to the rendering boiler, air and steam being passed through said pipe for the purpose of being heated before reaching the said rendering boiler.

Claim.—First, the arrangement of the boilers *e* and *f*, furnished with openings *r* and *s*, caps *g* and *m*, and pipes *d* and *h*, the whole being constructed, arranged, and operating substantially as herein described and for the purpose set forth.

Second, the use of a heated air, or heated air and steam combined, or heated air surcharged with the vapors of heated charcoal, when used in connexion with the apparatus herein described, or with the equivalent of said apparatus, and for the purpose set forth.

No. 41,011.—BENJAMIN H. LIGHTFOOT, of Philadelphia, Pa.—*Improvement in Coloring Tanned Leather*.—Patent dated December 22, 1863.—Explained by the claim.

Claim.—The application of petroleum or any other oily hydro-carbon in combination with lamp-black, or its equivalent, to the coloring of tanned leather, substantially as described.

No. 41,012.—JOHN LIMING, of Philadelphia, Pa.—*Improvement in Animal Trap*.—Patent dated December 22, 1863.—This consists of a treadle in connexion with a trigger and a striking lever operated by a spring, so that the lever and treadle, which are both armed with points, are made mutually to approach when the trap is sprung.

Claim.—The described arrangement and combination of the treadle *f*, the trigger *c*, and the striking lever *b*, when the inner end of the said treadle *f* is loosely connected with the front end of the trigger *c*, and the said trigger *c* provided with an upright post *c'*, against which the lever *b* strikes when released from the hook *h*, so as to cause the spear or knife-end of the treadle *f* to be suddenly forced upward as described, for the purpose specified.

No. 41,013.—WILLIAM S. MARTIN, of Waukegan, Lake county, Ill.—*Improvement in Car Brakes for Railroads*.—Patent issued December 22, 1863; antedated September 20, 1863.—The momentum of the cars or train operates as the power to wind up and apply the brakes to the train, which power ceases to operate when the maximum pressure is obtained, as is sufficiently evident from the claim and illustration.

Claim.—First, the combination of the shaft A, the friction wheels B B', the clutches C C', springs S S', and slide D D', with the chain *b*, arranged and operating as and for the purposes herein delineated and described.

Second, the peculiarly constructed lever for moving the shaft A, marked H, whereby said shaft is moved forward in the desired direction, whether the lever H is moved forward or backward, arranged and operating substantially as shown and set forth.

Third, communicating motion to the friction wheels B B', by the impact thereof upon the wheels of the cars, when said friction wheels are used in combination with the shaft A, the clutches C C', the springs S S', the slides D D', the lever H, and the chain *b*, operating as and for the purposes specified and shown.

No. 41,014.—ADAM MOLTZ, of New York, N. Y.—*Improved Metal Pointing Machine*.—Patent dated December 22, 1863.—The grinding wheel is caused to revolve, and the end of the wire to be sharpened is introduced into the groove in the strap which is above the wheel.

Claim.—The grinding wheel *h* and strap *p*, with the grooves *i*, arranged substantially as described and for the purpose set forth.

No. 41,015.—CHARLES H. O'DELL, of Poughkeepsie, Dutchess county, N. Y.—*Improved Peg Float*.—Patent dated December 22, 1863.—The float is vibrated on its pivot at the head of the standard by means of a rod, and retained in position by the clamping of the latter by a set screw.

Claim.—The adjustment and controlment of the float *C* in any position by means of the rod *B*, the clamp *D*, and thumb-screw *E*, or their equivalent, for the purposes described and heretofore set forth.

No. 41,016.—ISAAC H. PALMER, of Lodi, Columbia county, Wis.—*Improvement in Harvesters*.—Patent dated December 22, 1863.—This is an improvement in the method of operating the rake, throwing it in and out of gear, and facilitating its removal to adapt the machine as a mower; also in the method of raising the cutter bar and platform to avoid obstacles. The mechanism vibrating the rake is contained within the hollow hub formed on the driving wheel of the machine, which hub projects over so as to counterbalance the weight of the cutter bar and platform.

Claim.—First, the rake *C* mounted upon a swivel post secured to bar *E*, and operated by a lever *C'* and crank *E* arranged within the wheel *A*, in the manner described.

Second, the clutch pinion *E* and detaining pin *b'* arranged within the hub *A* of the wheel *A'*, and employed in combination with a rake substantially as herein described, to retain it in its elevated position when out of gear.

Third, in combination with a rake constructed and operating substantially as herein described, the large hollow hub *A'* projecting on one side of the driving wheel to counterbalance the cutting apparatus and rake, and exclude straw and other matters from the gearing, as explained.

Fourth, the vertically adjustable wheel *H* and balancing platform *G*, when used in the described combination with the wheel *A A'* of a self-raking harvester, in the manner and for the purpose set forth.

No. 41,017.—WILLIAM PALMER, of New York, N. Y.—*Improvement in Breech-loading Fire-arms*.—Patent dated December 22, 1863.—The retracting hook is attached by a spring to a collar on the breech pin, and by the receding of the latter for reloading, the spent capsule is withdrawn by the hook which catches over the flange.

Claim.—The collar *g* and spring *h* applied to the breech pin *d*, as specified, for the purposes set forth; and in combination therewith, the ejector *i*, for the purposes and as specified.

No. 41,018.—ISAAC N. PILSBURY and N. E. WARREN, of Cleveland, Ohio.—*Improvement in Railroad Turn-outs*.—Patent dated December 22, 1863.—This is sufficiently explained by the claim and illustration.

Claim.—The herein described mode of adjusting the tracks and turn-outs of street and other railroads, so that the cars from either end of the track can enter upon the turn-out in straight lines from either end, and pass the two points of intersection at either end before making or entering upon the curve, in the manner and form as herein set forth.

No. 41,019.—THEODORE F. RANDOLPH, of Cincinnati, Ohio.—*Improvement in Hot-air Grates*.—Patent dated December 22, 1863.—Behind the corrugated fire-back is a metallic chamber which communicates with the outer air, and discharges its heated contents into the apartment.

Claim.—Making the hot-air chamber *C* in the rear of the corrugated fire-back *B* of sheet or cast metal, securely joined to the fire-back, and forming therewith a tight chamber secure from smoke, as herein specified.

No. 41,020.—DAVID M. REYNOLDS, of Rising Sun, Cecil county, Md.—*Improvement in Safety Brakes for Horse Powers*.—Patent dated December 22, 1863.—Explained by the claim.

Claim.—The lever *D* with its rubber *e*, constructed and arranged in respect to the driving or other pulley of a horse power substantially as described, in combination with the trigger or lever *F*, or other equivalent device by which the lever *D* will be released, and its rubber *e* brought in contact with the driving wheel when the belt slips from the pulley, or when the belt is broken.

No. 41,021.—LORENZO RICE, of West Winstead, Conn.—*Improvement in the Manufacture of Table Cutlery*.—Patent dated December 22, 1863.—Explained by the claim.

Claim.—The mode or method of attaching the bolster to the knife or fork, for the purposes herein set forth, with a pin, nipple, or spur, on one or both half parts of the bolster, and as herein set forth, holding them firmly during the process of heating and welding the bolster to the blade or fork, as herein set forth, or any other mode substantially the same, or by which the same result can be produced.

No. 41,022.—L. D. ROBERTS, of Cleveland, Ohio.—*Improvement in Machines for Making Horse-shoes*.—Patent dated December 22, 1863.—The heated bar is introduced into the machine where a piece is removed by the stationary cutter, and the piece moulded to the required shape by a complete revolution of the shaft, the shoe falling to the ground upon the separation of the arms.

Claim.—First, operating the arms *L L'* by means of the peculiarly shaped cam *N N'*, in combination with the arm *M* and shaft *C*, as specified.

Second, operating the arms *L L'* by means of the cam *N N'*, arm *M*, the inclined planes *f g*, the finger *h*, and stops *i i'*, and springs *d*, substantially as described.

Third, the inclined planes *f* and *g*, spring *d*, stops *i i'*, and finger *h*, for opening and closing the arms *L L'*, when constructed, combined, and arranged as specified.

Fourth, the guides *U U*, constructed and operated substantially as and for the purpose set forth.

No. 41,023.—JASPER SCOVIL, of Hamburg, Erie county, N. Y.—*Improvement in Grain Drills*.—Patent dated December 22, 1863.—The beam carrying the ploughs is suspended between the wheels obliquely to the line of draught, and is elevated or lowered by means of chains and levers. A percussion vibratory motion is imparted to the seed-box by means of cams placed on the inside of one of the wheels, and a friction wheel on one end of the box and a spring at the other end.

Claim.—First, attaching the covering ploughs *E* to the diagonal beam *c* of an independent frame, when the latter is supported and adjusted by means of the chains *H*, levers *G*, and rack *K*, substantially as above described.

Second, in combination with the pendant plough frame, as above described, the distributing seed-box *Q*, operated by the cams *u* and spring *V*, arranged and operating substantially in the manner and for the purpose herein set forth.

No. 41,024.—ADDISON SMITH, of New York, N. Y.—*Improved Apparatus for Cooling Liquids*.—Patent dated December 22, 1863.—The hollow stirring arms which revolve in a horizontal plane near the bottom of the mash tub are sharp in front, and have a blast of air conducted through them from the hollow shaft, the air being emitted behind them from valved openings.

Claim.—First, the combination of blast or air-conducting arms *F* with a supply tube *D* and a tank for containing the material to be cooled, when the arms *F* are caused to rotate as and for the purpose described, and are supplied in any way with a current of air.

Second, providing the opening through which the air passes into the mass of material with valves or gates, substantially as and for the purpose set forth.

Third, making the arms *F* thinner at their forward than at their rear edges, substantially as described.

No. 41,025.—ADDISON SMITH, of New York, N. Y.—*Improved Mode of Cooling Mash of Beer, &c.*—Patent dated December 22, 1863.—In this apparatus the air is conducted down nearly to the bottom of the vessel in which the mash is made, while the latter is stirred by the series of arms on the vertical posts of the agitator, the blasts of air being conducted through the numerous hollow arms.

Claim.—First, the process of cooling the mash of beer substantially as hereinbefore described, that is, by discharging the blasts of air into the mass of material beneath its surface while the mass is agitated.

Second, a cooling apparatus consisting of a hollow stirring apparatus, provided with a blast of air in connexion with a suitable reservoir for the material, all operating substantially as set forth.

No. 41,026.—ISAAC SOLOMON, of Baltimore, Md.—*Improvement in Steaming and Shucking Oysters*.—Patent dated December 22, 1863.—This consists of a chamber with a grated bottom in which the oysters are exposed to the steam from a perforated pipe; when this part of the operation is complete the lid is folded back and the oysters shucked immediately from the trough.

Claim.—The combined steam chamber and shucking box *B*, constructed, arranged, and operating substantially in the manner hereinbefore described.

No. 41,027.—T. A. SUMMERS, of Rochester, Monroe county, N. Y.—*Improvement in Socket for Hanger Bars*.—Patent dated December 22, 1863.—The upper edge of the bar catches under a lip, while the notch on the lower side sets upon an edge projecting upwards from the hanger, and preventing the withdrawal endwise of the bar.

Claim.—A socket for a removable hanger bar, constructed substantially as described, as a new article of manufacture.

No. 41,028.—R. T. SUTTON, of Rochester, N. Y.—*Improvement in Grain Dryers*.—Patent dated December 22, 1863.—The grain passes two circular troughs with perforated sides, in which it is stirred by revolving rakes, it then passes along a zig-zag channel, whose walls are perforated and enclosed in a fine, in which is a current of hot air, and the draught being sustained by a revolving fan.

Claim.—First, the combination of the perforated zig-zag channel D, tower A, hot-air furnace B, and fan blower C, all arranged in relation to each other, and operating in the manner and for the purpose substantially as shown and described.

Second, the perforated disks E E' with inclined bottoms, and provided with stirrers F, in combination with the towers A A', zig-zag channel D, and hot-air furnace B, constructed and operating substantially as and for the purposes set forth.

No. 41,029.—J. F. TAPLEY, of Springfield, Hampden county, Mass.—*Bronzing Machine*.—Patent dated December 22, 1863.—This machine is intended for bronzing sheets of paper, which are passed under the receptacle of bronze and exposed on an endless apron to the action of the vibrating reciprocating pads, the superfluous bronze being removed from each side of the paper by rotary brushes.

Claim.—First, in combination with suitable feeding mechanism, the use of one or more reciprocating or vibrating pads or brushes F G, for the purposes and in the manner substantially as herein set forth.

Second, the bronze receptacle S, provided with the gate i j, or its mechanical equivalent, when used in combination with the box A and feeding mechanism of a machine for bronzing printed sheets of paper, or other similar substances.

Third, the bed piece D, in combination with the endless apron C, and one or more vibrating pads F G.

Fourth, the cleaning brushes P P', arranged as herein described, whereby both sides of the sheet are cleaned at the same time, in combination with the rolls O O' and R R', or their equivalent, when used for the purpose substantially as described.

Fifth, the adjustable feed roll E, in combination with the roll B and endless apron c, or its equivalent, whereby the rolls a a may be so adjusted as to run in the margin of a printed sheet for the purpose herein described.

No. 41,030.—AMOS A. TAYLOR, of New York, N. Y.—*Improvement in Rolls for Spinning Yarn, &c.*—Patent dated December 22, 1863.—The roll is made by winding around the shaft strips of gutta-percha, or analogous material, with sulphur, to be subsequently vulcanized, leaving the outer portion impervious to oil, and preserving the elasticity of the central portions.

Claim.—Preparing rolls for spinning and preparing yarn for the manufacture of cloth, and other purposes, of gutta-percha, or other fibrous or globular gums, (other than India-rubber,) compounded and prepared as aforesaid.

Also, obtaining by the aforesaid means a surface impervious to oils and other substances in, or added to, the materials to be spun or manufactured, combined with the inner elasticity as and for the purpose described.

No. 41,031.—GARDNER E. THROOP, of Chicago, Ill.—*Improvement in Grain Scourer*.—Patent dated December 22, 1863.—The grain falls on to the circular plate on the top of the revolving fan, which rotates in a perforated case, and is scoured by impingement upon the rough edges of the perforations as it is blown against them by the blast of air from the fan.

Claim.—In combination with a grain scourer, constructed substantially as described, the combination of the revolving fan-blades B B, or their equivalent, with the cutting surfaces or edges in the metallic cylinder A, made by the numerous small perforations in said cylinder, substantially as described.

No. 41,032.—JOSEPH VAN HOUTEN, of Mount Morris, Livingston county, N. Y.—*Improvement in Grain Separators*.—Patent dated December 22, 1863.—The adjustable board on the upper riddle is designed to run the grain more or less nearly to the end of the riddle before it is dropped on the wire, and the adjustment is required for heavy or light grain.

Claim.—Providing the upper end of the wheat sieve C with an adjustable plate or covering D, substantially in the manner and for the purpose set forth.

No. 41,033.—RICHARD M. VAUGHAN, of Glasgow, Howard county, Mo.—*Improvement in Artificial Legs*.—Patent dated December 22, 1863.—The improvements relate to the peculiar construction of the knee and ankle joints by which their motions are made to assimilate to the natural limb; the devices will be understood by reference to claim and illustration.

Claim.—First, the combination of the angle irons A and A2 and tubular iron B with the foot and leg of an artificial limb, substantially as and for the purpose described.

Second, the arrangement of the spiral springs c c, in combination with the angle iron A A2, in the manner shown and described.

Third, the arrangement of the hinge rods D D, in combination with the tubular iron B, plate or bar E, and springs F, substantially as described.

Fourth, the combination of the vertical bar D' with the angle iron A2, and the supporting rods E' E', in the manner shown and described.

Fifth, the arrangement of the springs A'', in combination with the tubular pivot B2, lever D'', and bar H', substantially as described.

No. 41,034.—HENRY S. VROOMAN, of Paterson, N. J.—*Improvement in Machines for Sawing Irregular Forms*.—Patent dated December 22, 1863.—Explained by the claim.

Claim.—First, in the mechanism for turning the saw to guide it in the direction of the intended kerf or cut, giving a compensating play to the mechanism between the pattern and the saw, substantially as described, so that the turning of the saw on its longitudinal axis by the pattern shall not be affected by the change of position of the saw gate in bevel sawing, as set forth.

Second, the reciprocating saw and saw-sash, the turning or beveling frame to give the required inclination for bevel sawing, and the horizontally-sliding frame for curvilinear sawing, in combination with the application of the power for driving the saw, constructed substantially as described, so that it shall at all times operate in line with the saw, whatever may be its change of position in curvilinear and bevel sawing, as described.

Third, the flexible template or pattern for turning the saw on its longitudinal axis, in combination with the friction rollers or surfaces which embrace it, and which communicate the turning motion to the saw when the rollers or surfaces which bear against the outer surface of the template or pattern are connected with the friction rollers or surfaces that bear against the inner surface thereof, and connected by joint links or arms free to turn, substantially as described, whereby the action resulting from the motion of the template or pattern on the said outer rollers will cause them automatically to take their proper position relatively to the pattern and the inner rollers, and take up any play which may arise from imperfect construction or wear of the parts, as set forth.

Fourth, in combination with the saw gate, the turning frame for bevel sawing, and the sliding frame for curvilinear sawing, connecting the feeding mechanism with the saw gate by a sliding mechanism, substantially as described, so that the feeding operation will continue to be derived from the reciprocating motion of the saw gate irrespective of its change of position, as set forth.

Fifth, the segment rack attached to the beveling frame, and the worm, or screw, mounted in the horizontally-sliding frame, substantially as described, in combination with the index band attached to the beveling frame, and the index on the horizontally-sliding frame, constructed and operated substantially as and for the purpose described.

No. 41,035.—THOMAS C. BALL, of Bellows Falls, Windham county, Vt., assignor to Himself and M. L. BAXTER—*Improvement in Piston Valves for Steam Engines*.—Patent dated December 22, 1863.—This invention consists in the arrangement of the induction and eduction ports, separate at each end of the steam chest and uniting at a point between the steam chest and the cylinder, with corresponding annular grooves around the interior of the cylindrical steam chest, in combination with balancing piston valves, with an extra piston at each end of the valve rod for the purpose of equalizing the effect of the exhaust upon the piston valves.

Claim.—First, the induction and eduction ports a b, formed in the steam chest near each end thereof, in combination with the balanced piston valves C C, when arranged to operate in the manner described.

Second, in combination with the piston valves C C, and steam chest A, closed at its ends, the pistons or heads E E, arranged to operate in the manner and for the purpose specified.

Third, in combination with the balanced piston valves C C, the annular cavities c, formed around the interior of the steam chest in the manner and for the purpose specified.

No. 41,036.—JON W. BLACKHAM, of Brooklyn, N. Y., assignor to JAMES H. PRENTICE, of same place.—*Improvement in Apparatus for Stretching Hats*.—Patent dated December 22, 1863.—In this apparatus the surfaces on each side of the line of division of the core, or form, are alternately extended and contracted simultaneously, with a uniform parallel motion, having the effect to stretch the hat more fully and evenly than the usual manipulation, the work on different styles of hats being performed in a similar manner by the substitution of its appropriate form or block.

Claim.—First, a hat-stretching machine, in which the surfaces 1J and 2J are alternately extended and contracted to adjustable extents, substantially in the manner and for the purposes herein set forth.

Second, in connexion with the above, giving a uniform and parallel motion to the entire surfaces of 1J and 2J, so that the quantity of stretch in the base and top may be always uniform, substantially as set forth.

Third, no combination with the foregoing substituting forms in hat-stretching machines, each separately adapted to uniformly stretch a given style or character of hat, substantially in the manner and for the purpose herein set forth.

No. 41,037.—GEORGE W. ELLIS, of Lynn, Essex county, Mass., assignor to Himself and LUTHER HILL.—*Machine for Punching the Lifts of Boot Heels*.—Patent dated December 22, 1863.—The "lifts" or sections of leather, which are fastened together to form the heel, are temporarily secured together in this machine and the nail-holes punched in them. The lifts are previously cut out by dies, and are then placed upon a bed and are forced

Claim.—First, the combination of the perforated zig-zag channel D, tower A, hot-air furnace B, and fan blower C, all arranged in relation to each other, and operating in the manner and for the purpose substantially as shown and described.

Second, the perforated disks E E' with inclined bottoms, and provided with stirrers F, in combination with the towers A A', zig-zag channel D, and hot-air furnace B, constructed and operating substantially as and for the purposes set forth.

No. 41,029.—J. F. TAPLEY, of Springfield, Hampden county, Mass.—*Bronzing Machine.*—Patent dated December 22, 1863.—This machine is intended for bronzing sheets of paper, which are passed under the receptacle of bronze and exposed on an endless apron to the action of the vibrating reciprocating pads, the superfluous bronze being removed from each side of the paper by rotary brushes.

Claim.—First, in combination with suitable feeding mechanism, the use of one or more reciprocating or vibrating pads or brushes F G, for the purposes and in the manner substantially as herein set forth.

Second, the bronze receptacle S, provided with the gate i j, or its mechanical equivalent, when used in combination with the box A and feeding mechanism of a machine for bronzing printed sheets of paper, or other similar substances.

Third, the bed piece D, in combination with the endless apron C, and one or more vibrating pads F G.

Fourth, the cleaning brushes P P', arranged as herein described, whereby both sides of the sheet are cleaned at the same time, in combination with the rolls O O' and R R', or their equivalent, when used for the purpose substantially as described.

Fifth, the adjustable feed roll E, in combination with the roll B and endless apron c, or its equivalent, whereby the rolls a a may be so adjusted as to run in the margin of a printed sheet for the purpose herein described.

No. 41,030.—AMOS A. TAYLOR, of New York, N. Y.—*Improvement in Rolls for Spinning Yarn, &c.*—Patent dated December 22, 1863.—The roll is made by winding around the shaft strips of gutta-percha, or analogous material, with sulphur, to be subsequently vulcanized, leaving the outer portion impervious to oil, and preserving the elasticity of the central portions.

Claim.—Preparing rolls for spinning and preparing yarn for the manufacture of cloth, and other purposes, of gutta-percha, or other fibrous or globular gums, (other than India-rubber,) compounded and prepared as aforesaid.

Also, obtaining by the aforesaid means a surface impervious to oils and other substances in, or added to, the materials to be spun or manufactured, combined with the inner elasticity as and for the purpose described.

No. 41,031.—GARDNER E. THROOP, of Chicago, Ill.—*Improvement in Grain Scourer.*—Patent dated December 22, 1863.—The grain falls on to the circular plate on the top of the revolving fan, which rotates in a perforated case, and is scoured by impingement upon the rough edges of the perforations as it is blown against them by the blast of air from the fan.

Claim.—In combination with a grain scourer, constructed substantially as described, the combination of the revolving fan-blades B B, or their equivalent, with the cutting surfaces or edges in the metallic cylinder A, made by the numerous small perforations in said cylinder, substantially as described.

No. 41,032.—JOSEPH VAN HOUTEN, of Mount Morris, Livingston county, N. Y.—*Improvement in Grain Separators.*—Patent dated December 22, 1863.—The adjustable board on the upper riddle is designed to run the grain more or less nearly to the end of the riddle before it is dropped on the wire, and the adjustment is required for heavy or light grain.

Claim.—Providing the upper end of the wheat sieve C with an adjustable plate or covering D, substantially in the manner and for the purpose set forth.

No. 41,033.—RICHARD M. VAUGHAN, of Glasgow, Howard county, Mo.—*Improvement in Artificial Legs.*—Patent dated December 22, 1863.—The improvements relate to the peculiar construction of the knee and ankle joints by which their motions are made to assimilate to the natural limb; the devices will be understood by reference to claim and illustration.

Claim.—First, the combination of the angle irons A and A2 and tubular iron B with the foot and leg of an artificial limb, substantially as and for the purpose described.

Second, the arrangement of the spiral springs c c, in combination with the angle iron A A2, in the manner shown and described.

Third, the arrangement of the hinge rods D D, in combination with the tubular iron B, plate or bar E, and springs F, substantially as described.

Fourth, the combination of the vertical bar D' with the angle iron A2, and the supporting rods E' E', in the manner shown and described.

Fifth, the arrangement of the springs A'', in combination with the tubular pivot B2, lever D'', and bar H', substantially as described.

No. 41,034.—HENRY S. VROOMAN, of Paterson, N. J.—*Improvement in Machines for Sawing Irregular Forms.*—Patent dated December 22, 1863.—Explained by the claim.

Claim.—First, in the mechanism for turning the saw to guide it in the direction of the intended kerf or cut, giving a compensating play to the mechanism between the pattern and the saw, substantially as described, so that the turning of the saw on its longitudinal axis by the pattern shall not be affected by the change of position of the saw gate in bevel sawing, as set forth.

Second, the reciprocating saw and saw-sash, the turning or beveling frame to give the required inclination for bevel sawing, and the horizontally-sliding frame for curvilinear sawing, in combination with the application of the power for driving the saw, constructed substantially as described, so that it shall at all times operate in line with the saw, whatever may be its change of position in curvilinear, and bevel sawing, as described.

Third, the flexible template or pattern for turning the saw on its longitudinal axis, in combination with the friction rollers or surfaces which embrace it, and which communicate the turning motion to the saw when the rollers or surfaces which bear against the outer surface of the template or pattern are connected with the friction rollers or surfaces that bear against the inner surface thereof, and connected by joint links or arms free to turn, substantially as described, whereby the action resulting from the motion of the template or pattern on the said outer rollers will cause them automatically to take their proper position relatively to the pattern and the inner rollers, and take up any play which may arise from imperfect construction or wear of the parts, as set forth.

Fourth, in combination with the saw gate, the turning frame for bevel sawing, and the sliding frame for curvilinear sawing, connecting the feeding mechanism with the saw gate by a sliding mechanism, substantially as described, so that the feeding operation will continue to be derived from the reciprocating motion of the saw gate irrespective of its change of position, as set forth.

Fifth, the segment rack attached to the beveling frame, and the worm, or screw, mounted in the horizontally-sliding frame, substantially as described, in combination with the index hand attached to the beveling frame, and the index on the horizontally-sliding frame, constructed and operated substantially as and for the purpose described.

No. 41,035.—THOMAS C. BALL, of Bellows Falls, Windham county, Vt., assignor to Himself and M. L. BAXTER.—*Improvement in Piston Valves for Steam Engines.*—Patent dated December 22, 1863.—This invention consists in the arrangement of the induction and eduction ports, separate at each end of the steam chest and uniting at a point between the steam chest and the cylinder, with corresponding annular grooves around the interior of the cylindrical steam chest, in combination with balancing piston valves, with an extra piston at each end of the valve rod for the purpose of equalizing the effect of the exhaust upon the piston valves.

Claim.—First, the induction and eduction ports a b, formed in the steam chest near each end thereof, in combination with the balanced piston valves C C, when arranged to operate in the manner described.

Second, in combination with the piston valves C C, and steam chest A, closed at its ends, the pistons or heads E E, arranged to operate in the manner and for the purpose specified.

Third, in combination with the balanced piston valves C C, the annular cavities c, formed around the interior of the steam chest in the manner and for the purpose specified.

No. 41,036.—JON W. BLACKHAM, of Brooklyn, N. Y., assignor to JAMES H. PRENTICE, of same place.—*Improvement in Apparatus for Stretching Hats.*—Patent dated December 22, 1863.—In this apparatus the surfaces on each side of the line of division of the core, or form, are alternately extended and contracted simultaneously, with a uniform parallel motion, having the effect to stretch the hat more fully and evenly than the usual manipulation, the work on different styles of hats being performed in a similar manner by the substitution of its appropriate form or block.

Claim.—First, a hat-stretching machine, in which the surfaces 1J and 2J are alternately extended and contracted to adjustable extents, substantially in the manner and for the purposes herein set forth.

Second, in connexion with the above, giving a uniform and parallel motion to the entire surfaces of 1J and 2J, so that the quantity of stretch in the base and top may be always uniform, substantially as set forth.

Third, no combination with the foregoing substituting forms in hat-stretching machines, each separately adapted to uniformly stretch a given style or character of hat, substantially in the manner and for the purpose herein set forth.

No. 41,037.—GEORGE W. ELLIS, of Lynn, Essex county, Mass., assignor to Himself and LUTHER HILL.—*Machine for Punching the Lifts of Boot Heels.*—Patent dated December 22, 1863.—The "lifts" or sections of leather, which are fastened together to form the heel, are temporarily secured together in this machine and the nail-holes punched in them. The lifts are previously cut out by dies, and are then placed upon a bed and are forced

down by a follower upon the awls and thereby punched, while at the same time a few tacks or nails are driven into them to hold them together temporarily.

Claim.—The projecting nails *c* operating as guides for placing the work in the subsequent machine, as set forth.

Also, the awls *f* and the drivers *a* in combination with the bed *D* and plunger *I*, operating as set forth for the purpose specified.

Also, in combination with the above the stationary knife *G*, operating as set forth.

Also, the rim *E* upon the bed *D*, for the purpose of arranging the lifts as set forth.

Also, the arm *P* attached to the rod *K*, in combination with the spring *g*, whereby the awls are withdrawn and the plunger elevated and held up as set forth.

No. 41,038.—GEORGE W. ELLIS, of Lynn, Essex county, Mass., assignor to Himself and LUTHER HILL.—*Improvement in Machines for Nailing Heels to Boots and Shoes.*—Patent dated December 22, 1863.—The heels before they are applied to the boots by this machine are built up of lifts cut into a form approximating that which they are to have in the heel by dies, and temporarily secured together. While the boot is yet upon the last the heel is secured to it, and is shaved by this machine, the devices in which are explained by the claim.

Claim.—First, in combination with the follower *R*, placed inside of the shoe, the nailing blocks *A B* so arranged with regard thereto and to the shoe as that the nails shall be driven from the exterior of the heel toward the interior of the shoe, in the manner and for the purpose set forth, thus making one set of nails hold the lifts tightly together, and the whole to the shoe as described.

Also, in combination with a knife-carriage or block *I*, that traverses through, or is guided in, or by a curved slot, and moved by a slotted lever, the hanging of the knife therein by pins or trunnions working in slots *l*, and guided by the tail piece *m* and fender *z*, substantially in the manner and for the purpose set forth.

No. 41,039.—SMITH HEAD, of Millersburg, Dauphin county, Pa., assignor to B. G. STEEVER, of Millersburg, Pa.—*Improved Shingle Machine.*—Patent dated December 22, 1863.—The circular saws are rotated by a belt which passes around pulleys on saw shafts. The bolts are placed one at a time on plates, and adjusted in position so that the dog on the belt will carry it to the saw to have a shingle removed from the under side, which is carried by the belt to the end of the machine and dropped upon the floor. The bolt is shifted to the other side of the machine and the shingle sawed off, butt and point, at the alternate ends of the bolt.

Claim.—First, the combination of two circular saws *F F* with the horizontally revolving endless belt *B*, grooved bed-piece *G G*, head blocks *K K*, and guard *J J*, when constructed and arranged to operate in the manner and for the purpose specified.

Second, the metal plates *I I* in combination with the bed-piece *G G*, endless belt *B*, and circular saws *F F*, when arranged in the manner and for the purpose specified.

No. 41,040.—STEPHEN HULL, of Poughkeepsie, N. Y., assignor to Himself and WILLIAM VAN ANDEN, of same place.—*Improvement in Harvesters.*—Patent dated December 22, 1863.—The improvements consist of an elastic curved strip in connexion with the divider, which assists the latter in performing its functions, and also operates to throw a portion of the grain towards the centre of the platform; also in curved arms of such a shape as to gather the standing grain and deliver it in a compact heap on the platform; a sectional jointed fender is applied to the platform so as to deliver the grain at will behind or at the side of the machine.

Claim.—First, the spring device *H*, constructed and applied substantially as shown and described, in combination with the divider *J* and the platform *G*, substantially in the manner and for the purpose described.

Second, in combination with the platform *G*, the adjustable sectional-jointed fender *G'*, so constructed and applied that by a simple manipulation the machine can be made to deliver the grain either at the side or at the rear end of the platform, substantially as described.

Third, a reel constructed with obliquely curved compressing rods *S S S'* applied to its wings, and operating substantially as herein described.

Fourth, combining with the spring fender *H* the obliquely curved compressing rods *S S S'* on the reel, substantially as described.

Fifth, the spring fender *H* in combination with the adjustable sectional-jointed fender *G'* and platform *G*, substantially as and for the purposes described.

Sixth, the hinged fender *G'* in combination with obliquely curved rods or gatherers *S S* on the reel, substantially as and for the purposes described.

No. 41,041.—BENJAMIN S. HYERS, of Pekin, Tazewell county, Ill., assignor to Himself, STEPHEN RONEY, and THEODORE DEYO, of same place.—*Improvement in Grain Separators.*—Patent dated December 22, 1863.—The improvement consists in the method of securing the screens by their edges by the pin and strip, and securing them in the shaking shoe by latch pieces, whose slots are traversed by pins. The shoe is supported by two suspension rods and a rear pivoted hook, and the screen is moved by means of its attachments with a vertical motion in addition to the ordinary motion of the shoe.

Claim.—First, the pivoted strips *S* applied to the edges of a riddle, screen, or chute-board, when used in the described combination with pins *R* or any other suitable device to support one end of the said riddle, screen, or board at any desired height.

Second, the latch *V V*, constructed substantially as described and employed to retain the riddles within the shoe or permit their ready removal as desired.

Third, the combination of the rock-shaft *L*, arms *K M*, and rod *N*, operating in the manner explained to impart longitudinal and vertical motion to the screen *I* within the shoe by the lateral motion of the latter.

Fourth, the adjustable and removable deflecting board *H* attached to the shoe *B* by bolts *A A*, in the manner and for the purposes explained.

No. 41,042.—W. T. MORROW, of Chicago, Ill., assignor to WARRICK MARTIN, ROSALINE N. AMBLER, and ELIZABETH JOHNSON.—*Improvement in Car-Brakes.*—Patent issued December 22, 1863; antedated June 22, 1863.—This consists of a device for operating the brakes of the car by means of the drums and chains attached to the continuous tumbling-rod, which is rotated by power from the engine, and thereby winds up the chain attached to the larger drum rotating the smaller drum, winding the chain thereon, which communicates with the brake bar.

Claim.—First, the arrangement of the two drums *A A'* and *B*, with the chains *a c* and *c'* in combination with the tumbling-rod *R*, constructed and operating substantially as and for the purposes herein delineated and set forth.

Second, the arrangement of the drum *A A'*, constructed in two parts, with the vertical shaft and the chains *c* and *c'*, when constructed, arranged, and operating substantially as and for the purposes herein shown and described.

No. 41,043.—SEPTIMUS WINNER, of Philadelphia, Pa., assignor to WINNER & CO., of same place.—*Instructing Scale for Pianos.*—Patent dated December 22, 1863.—This consists of a series of strips of wood or other material laid upon the keys of the piano and marked with the note corresponding to the key.

Claim.—The within described scale made in sections and formed for resting on the keys, as set forth for the purpose specified.

No. 41,044.—GEORGE L. WITSILL, Philadelphia, Pa., assignor to himself and PHILIP A. BOYLE, of same place.—*Improved Washing Machine.*—Patent issued December 22, 1863; antedated December 4, 1863.—The curved vibrating rubber as it is passed back and forth in the segmental arched box dips up a portion of water at the end of its stroke, which is carried up by the ledge and discharged at the central opening upon the clothes.

Claim.—The vibrating rubbing-board *f* with its ribs or flanges *m* and opening or openings *z* in combination with the arched trough, the whole being arranged and operating substantially as and for the purpose herein set forth.

No. 41,045.—JOHN B. WOOD, of Providence, R. I., assignor to DARIUS GOFF, WM. F. SAYLES, FREDERICK C. SAYLES, and DARIUS L. GOFF, of Pawtucket, R. I.—*Improvement in Braiding Machines.*—Patent dated December 22, 1863.—This machine is designed for making flat braid of the maximum width, and its scope is explained in the claims.

Claim.—So constructing the carrier and arranging its yarn-winder that the tension weight may have a sufficient traverse above the base of the carriers or racer to allow wide flat braid to be formed at any required distance from the centre in the single plate braiding machine, substantially as herein specified.

Also, combining with a single plate braiding machine, substantially as described, the former *C*, or its equivalent, adapted to braiding at a distance from the centre, substantially as described for the purpose specified.

No. 41,046.—ENOCH OSGOOD, New York, N. Y.—*Improvement in Cotton Gins.*—Patent dated December 22, 1863.—The cotton from the hopper is carried between the endless apron and the elastic roller, which run in close proximity, while the seeds are doffed off by the reciprocating comb. The endless apron is carried over the concave plate, which fits against the face of the elastic roller, also over the friction and tightening rollers.

Claim.—First, the combination of the elastic roller *A* and the concave plate or bar *B*, substantially as described.

Second, in combination with the above the endless apron *C*, as described.

Third, forming the teeth of the clearer or doffer, as and for the purpose described.

Fourth, the belt or apron *C*, constructed as described, in combination with its guides *D*.

Fifth, the combination of the elastic roller *A*, friction roller *8*, and apron *C*, as and for the purpose described.

Sixth, the combination of rollers *A* and *8*, apron *C*, and tightening roller *5*, as and for the purpose herein described.

REISSUES.

No. 1,369.—The AMERICAN WATER-PROOF FABRIC COMPANY, of New York city, assignees through mesne assignments of J. B. WAUDS, of Memphis, Tenn.—*Improved Fabric for Roofing, Belting, &c.*—Patent dated July 31, 1860; reissued January 6, 1863.

Claim.—As a new article of manufacture, the within described flexible fabric, composed of canvas, or other fibrous goods, saturated with the residuary gum of stearic acid, as herein set forth.

No. 1,370.—W. B. BEMENT, of Philadelphia, Pa.—*Improved Stand for Machines.*—Patent dated June 3, 1862; reissued January 6, 1863.

Claim.—Constructing the stands, frames, or main supporting structures of machines, so that closets or tool receptacles shall be formed therein by casting the said stands, frames, or supporting structures hollow and in one piece, essentially in the manner described.

No. 1,371.—A. B. DAVIS, of Philadelphia, Pa.—*Improvement in Railroad Car Springs.*—Patent dated February 15, 1859; reissued January 6, 1863.

Claim.—A box A of any suitable form, and the plate C, or its equivalent, adapted to the open end of the said box, and connected to the latter by a bolt or bolts D, or other suitable fastening, in combination with one or more plates H, separating from each other two or more nests of springs, the whole being constructed substantially as and for the purpose herein set forth.

No. 1,372.—A. B. DAVIS, of Philadelphia Pa.—*Improved Railroad Car Spring.*—Patent dated February 15, 1859; reissued January 6, 1863.

Claim.—A box A of any suitable form, and a plate C, or its equivalent, adapted to the open end of said box, and connected to the latter by a bolt or bolts D, or other suitable fastenings, substantially as set forth, in combination with a series or nest of springs, arranged side by side, and free from contact with each other, each spring forming an integral part of the entire elastic medium composed of the whole of the springs, and the latter serving, with the said box and plate, to constitute an entire single self-contained car spring, as described.

No. 1,373.—W. O. B. MERRILL, of Philadelphia, Pa.—*Improved Coal-oil Lamp.*—Patent dated June 10, 1862; reissued January 6, 1863.

Claim.—Two inclined or curved plates, *d* and *d'*, of a length greater than the width of the wick tube, the said plates being disconnected from each other at the opposite ends, and being otherwise arranged in respect to the wick tube and wick, essentially as and for the purpose herein set forth.

No. 1,374.—W. H. RACEY, of New York, N. Y., assignee through mesne assignments of MAX MILLER.—*Improved Lantern for Coal-oil.*—Patent dated August 17, 1858; reissued January 6, 1863.

Claim.—The combination with the cylinder or protector C of the inverted cup H, or its equivalent device, substantially as and for the purpose herein shown and described.

Also, the combination with the protector or cylinder C of the tube G, substantially in the manner and for the purpose herein shown and described.

No. 1,375.—GEORGE STEVENSON, of New York, N. Y., assignee of J. E. BOYLE.—*Improvement in Valve for Water-closets.*—Patent dated January 3, 1860; reissued January 6, 1863.

Claim.—The valve and its appendages, or the equivalent of them, whose mode of operation is to close the water-ways by the pressure of the supply water only, substantially as described, in combination with the means herein described, or the equivalent thereof, for governing the closing of the valve, so that the water shall flow through to wash the pan before the water-ways are closed, substantially as described.

No. 1,376.—M. C. COGSWELL and A. G. WILLIAMS, of Buffalo, N. Y.—*Improved Grain-dryer.*—Patent dated February 18, 1862; reissued January 6, 1863.

Claim.—An external stationary case or shell A for the purpose of drying grain, having an opening *a'* at the top for the reception of the grain and the escape of moisture, dust, and chaff, and openings, doors, or valves *a2* at the bottom for the discharge of the grain when sufficiently dry, substantially as described.

No. 1,377.—M. C. COGSWELL and A. G. WILLIAMS, of Buffalo, N. Y.—*Improved Grain-dryer.*—Patent dated February 18, 1862; reissued January 6, 1863.

Claim.—The double head *c*, having an air chamber *c'* and hollow journal D, for the purposes and substantially as herein described.

No. 1,378.—M. C. COGSWELL and A. G. WILLIAMS, of Buffalo, N. Y.—*Improved Grain-dryer.*—Patent dated February 18, 1862; reissued January 6, 1863.

Claim.—A series of buckets, so placed and used as to revolve in close proximity to the inner circumference of an external shell, into which a blast of air is admitted for drying grain, so that the said buckets will dip up and lift the grain from the bottom of the case and drop it down again in showers, thereby constantly intermingling it with the blast of air, for the purposes and substantially as described.

No. 1,379.—M. C. COGSWELL and A. G. WILLIAMS, of Buffalo, N. Y.—*Improved Grain-dryer.*—Patent dated February 18, 1862; reissued January 6, 1863.

Claim.—Distributing air-pipes, one or more, so arranged and used as to revolve within an external case and in the midst of the moving and showering grain, for the purposes set forth.

No. 1,380.—JOSEPH KINGSLAND, jr., of Franklin, N. J.—*Improvement in Machinery for Grinding Paper Pulp.*—Patent dated December 16, 1856; reissued June 28, 1859; again reissued January 6, 1863.

Claim.—The combination of a rotating nut, armed with blades suitable for reducing fibrous substance to pulp, a reservoir for containing fibres and water, and surrounding and enclosing the nut with its blades, a feeding aperture through which the fibrous substance and water is to be introduced into the reservoir, a discharge aperture to permit the escape of the water from the reservoir with the fibres when properly reduced, and to check the discharge, that the fibres may be retained under the beating action until properly reduced, and the means for inducing a current through the reservoir, the whole having a mode of operation substantially as herein described and for the purpose specified.

No. 1,381.—JOSEPH KINGSLAND, jr., of Franklin, N. J.—*Improvement in Process of Grinding Paper Pulp.*—Patent dated December 23, 1856; reissued June 28, 1859; again reissued January 6, 1863.

Claim.—The process, substantially as herein described, of reducing fibres to pulp for the manufacture of paper, which process consists in causing the water in which the fibres to be reduced are suspended to pass in a current into, through, and out of a reservoir enclosing the beaters, and provided with a feeding in and a discharge aperture, so that the fibres shall be retained within the said reservoir and under the action of the blades or beaters until they are sufficiently reduced, and then follow the current of water to the discharge aperture, substantially as and for the purpose specified.

No. 1,382.—G. B. MARTIN, of Danvers, Mass.; WILLIAM WELLS, of Boston, Mass.; and ROBERT MILLARD, of Poughkeepsie, N. Y., assignees of JAMES PURINTON, jr., of Lynn, Mass.—*Improved Machine for Lasting Boots and Shoes.*—Patent dated October 4, 1859; reissued January 6, 1863.

Claim.—First, compressing the upper around the last by means of clamps provided with projecting plates or flanges to turn the projecting edges of the upper over upon the insole or last in any manner substantially as described.

Second, in combination with any suitable device for holding and supporting the last, is claimed the use of a series of clamps, moved inward simultaneously by levers, or their mechanical equivalents, to compress the upper upon the last equally on all sides, substantially as hereinbefore explained.

Third, the hinged or folding plate C employed in connexion with the clamps A, substantially in the manner described.

Fourth, the cutting or roughening plate E, constructed and operating substantially as and for the purposes set forth.

No. 1,383.—JAMES WILSON, CHARLES GREEN, and WILLIAM WILSON, jr., of Wilmington, Del.—*Improvement in Construction of Powder Kegs.*—Patent dated July 12, 1859; reissued January 6, 1863.

Claim.—Making one or both heads of the kegs with the shoulder *n* and flange *m*, and using a mandrel upon said shoulder *n* in order to seam one or both heads to the keg.

No. 1,384.—JOHN YOUNG, of West Galway, N. Y.—*Improved Washing and Wringing Machine.*—Patent dated September 19, 1848; reissued July 30, 1861, and extended; again reissued January 6, 1863.

Claim.—The pressure rollers in combination with the hinged platform, operating as described for the purpose set forth.

Second, the conical rollers for producing a rubbing as well as a squeezing action upon the clothes, as described.

No. 1,385.—JOHN YOUNG, of West Galway, N. Y.—*Improved Washing and Wringing Machine*.—Patent dated September 19, 1848; reissued July 30, 1861 and extended; again reissued January 6, 1863.

Claim.—The application of India-rubber or other elastic gum impervious to water, substantially in the manner and for the purposes described, to the rolls of machines for washing and squeezing clothes.

No. 1,386.—M. W. HOUSE, of Cleveland, Ohio.—*Improved Electric Bath*.—Patent dated February 18, 1860; reissued January 13, 1863.

Claim.—First, the combination of the tray *b b* with the longitudinal insulator *J*, for the purpose described.

Second, the combination of the tray *b b*, or its equivalent, with the head-plate *c*, whereby the quantity of electricity may be regulated, substantially as and for the purpose described.

Third, the traveling movable poles or electrodes *e e'*, working on arms *f f*, or their equivalents, when those arms are movable, substantially as described.

Fourth, the movable poles *e e'*, with the sponges *d d*, when arranged in such a manner that they can be freely changed or rotated on all sides of the patient, except as limited by the support *J*, causing the electric current to pass in any given direction through any part of the patient's body, in the way substantially as above set forth.

No. 1,387.—ALEXANDER FREY, of New York, N. Y.—*Improved Loom*.—Patent dated May 7, 1861; reissued January 20, 1863.

Claim.—First, the arrangement of the plate *a* carrying the spools or cobs in combination with thread-guides and with the let-off rollers of a loom, constructed and operating substantially as and for the purpose herein shown and described.

Second, the combination of the plate *a* with the guide plate *b* applied to the loom, substantially in the manner and for the purpose specified.

Third, the arrangement of the rollers *d d* and *g g*, two or more at the front and two or more at the rear of a loom, connected together by an endless chain, or its equivalent, or without such, and causing the warp threads and the fabric to progress regularly through the loom as the weaving is performed, substantially in the manner herein set forth.

Fourth, the arrangement of the drivers *t* and levers *u*, acted upon by the cams *10*, substantially in the manner and for the purposes specified.

No. 1,388.—J. G. WILSON, of New York city, assignee of W. H. AKINS and J. D. FELT-HOUSEN, of Ithaca, N. Y.—*Improved Sewing Machine*.—Patent dated August 5, 1851; reissued January 20, 1863.

Claim.—First, the employment, in combination with a reciprocating needle and a flat surface which supports the material to be sewed, of a rotating toothed-feeding wheel, or other equivalent feeding device, to which the cloth is not attached, and a holder which holds the material against the said feeding device, with a yielding pressure, substantially as and for the purposes herein specified.

Second, the combination of a toothed feed wheel, or its equivalent, with a driving apparatus which provides for its operation to feed the material to be sewed either from right to left, or *vice versa*, and to reverse the direction of the feed without stopping the machine, substantially as and for the purpose herein described.

Third, the above-described devices for effecting and controlling the relative movements of the needle and shuttle, whereby the shuttle enters between the needle and its thread while the needle is arrested after a short retrograde movement, substantially as and for the purpose herein specified.

Fourth, the employment, in a sewing machine, of a table which presents a surface for the support of the material to be sewed on every side of or all around the needle in combination with a feeding device, substantially as herein described.

Fifth, the circular rest *u*, applied in front of the machine, substantially as described, for the purpose of supporting and affording convenience for sewing the articles of circular or tubular form, as herein set forth.

Sixth, bringing up the needle, after the stitch is formed, by a spring *t*, or its equivalent, operating substantially as herein described, for the purpose of rightening up the stitch after the manner of hand-sewing.

Seventh, producing friction upon or gripping the needle thread between the seam and the bobbin or spool from which the said thread is supplied, by means of the spring and catch, or its equivalent, substantially as and for the purposes herein specified.

Eighth, in a sewing machine, feeling the cloth or other substance to determine the space between the stitches by the friction of the surface of the periphery of the feed-wheel or any equivalent feeding device, substantially as specified, in combination with a spring-pressure plate or pad which grips the cloth or other substance against such feeding surface, substantially as specified and for the purpose set forth.

Ninth, projecting the operative part of the surface of the feeding apparatus, through the surface of the table, substantially as described, so that such feeding surface may act on a portion of the under surface of the material to give the required feeding motion, to space the

stitches, while the other portions of said material slide on the table, which answers the purpose of freeing the said material from the feeding surface, and to cover and protect the parts of the feeding device which are below the table.

Tenth, also the combination of the mechanism, substantially such as is herein described, so that the cloth or other material to be sewed being placed upon the machine under the pressure-pad will be automatically carried forward to receive the stitches, substantially as herein described, and so that seams of any desired length may be conveniently sewed into curves or figures at the will of the operator.

No. 1,389.—N. O. HAWTHURST, of Manat Hill, N. Y., assignor to WILLIAM COMBE, of New York city.—*Improved Wooden Sieve for Gas Purifiers*.—Patent dated October 21, 1862; reissued January 27, 1863.

Claim.—A wooden grating made with apertures between the bars thereof, expanding downward, in lime purifiers of gas works, constructed substantially as and for the purposes set forth.

No. 1,390.—CHARLES A. MILLER, of Philadelphia, Pa., assignee of W. S. KIRKHAM, of Branford, Conn.—*Improved Lock and Latch*.—Patent dated June 11, 1861; reissued January 27, 1863.

Claim.—First, so dividing the hub or follower and so combining the same with a reversible latch, that the arms, or their equivalents, of the divided hub or follower may be released for the purpose of allowing the latch to be reversed or turned.

Second, so constructing and arranging the individual parts of a divided hub or follower, that the reversal or turning of the latch is prevented only by the presence of the spindle within the lock.

No. 1,391.—NOAH E. HALE, of Nashua, N. H.—*Improvement in Applying Pressure to Top Rollers of Drawing Machines*.—Patent dated November 8, 1859; reissued February 4, 1863.

Claim.—Improved combination, or mechanism, for applying pressure to and relieving from it the top rollers of one or more sets of drawing rollers, the said mechanism consisting of one or more bars *G*, the lever *J*, the weight *K*, the lifting lever *L*, the notched bar *N*, and hanger *O*, or their mechanical equivalent or equivalents, the whole being applied to the said top rollers substantially in manner and so as to operate therewith as described.

No. 1,392.—CASPER KROGH and M. G. HOGNESS, of Kroghville, Wis.—*Improved Mode of Raising Sunken Vessels*.—Patent dated October 21, 1862; reissued February 4, 1863.

Claim.—First, the employment of inflexible lifters applied outside of the vessel, when arranged, constructed and operating substantially as and for the purposes set forth.

Second, the employment of the flexible chambers inside the vessel for preventing damaged vessels from sinking, when constructed and operated substantially as herein delineated and described.

Third, the arrangement of the connexions of the air pipes for the admission of air into the lifters at or near the bottoms thereof, substantially as and for the purposes herein delineated and set forth.

Fourth, the weighted flexible pipes *f f*, applied to the lifters, and operating substantially as and for the purposes herein shown and described.

No. 1,393. (Div. A.)—LEWIS MOORE, of Ypsilanti, Mich., formerly of Bart, Pa.—*Improved Grain Drill*.—Patent dated April 18, 1848, and extended; reissued February 4, 1863.

Claim.—First, the box plates *F'*, employed to adjust a seeding cylinder or seeding cylinders in respect to the hopper bottom or other suitable part of the machine, to regulate the supply of grain, substantially as set forth.

Second, the combination and arrangement of the levers *C*, bars *C' P*, and journals *p*, with the hopper *B*, frame *A*, and supports *g*, for moving the hopper and sowing cylinders in the arc of a circle, substantially as and for the purpose set forth.

Third, the combination of the chains *O* with the tubes *L* and bar *C'* of the hopper-frame, by which the tubes are raised or lowered simultaneously with the turning of the hopper on its axis, as described.

No. 1,394. (Div. B.)—LEWIS MOORE, of Ypsilanti, Mich., formerly of Bart, Pa.—*Improved Grain Drill*.—Patent dated April 18, 1848, and extended; reissued February 4, 1863.

Claim.—First, a drill tooth provided with one or more flanges near its upper end, by means of which it is both pivoted and braced to the drag bar in such a manner as to dispense with the use of a separate brace bar or its equivalent.

Second, bracing a pivoted drill tooth to its drag bar by means of a wooden pin held within against a flange or projection upon the tooth and adapted to break in the event of the said tooth striking an immovable obstacle.

Third, attaching the curved plate or nosing *L'* to the front of the drill tooth by means of a dovetail overlapping the top of the said nosing and a screw or rivet lower down.

No. 1,395. (Div. C.)—LEWIS MOORE, of Ypsilanti, Mich., formerly of Bart, Pa.—*Improved Grain Drill*.—Patent dated April 18, 1848, and extended; reissued February 4, 1863.

Claim.—The combination of the adjustable perforated gauge plate C, with two or more holes or series of holes of different capacity when the said gauge plate is so arranged as to cut off the flow of seed from one capacity of opening and transfer it to another, substantially as herein set forth.

No. 1,396.—JOHN F. TOWNSEND, of Westfield, N. Y., and P. P. PRATT, of Buffalo, N. Y., assignees of said J. F. TOWNSEND.—*Improved Butt Hinge*.—Patent dated November 4, 1862; reissued February 4, 1863.

Claim.—The base, or sustaining portion A, of the hinge, consisting of the leaf *a*, projecting radially or centrally from the knuckle *e* and pin *f*, and having screw holes *i* countersunk on each side thereof, the whole arranged and operating substantially as described, and for the purpose herein set forth.

Also, in combination with the base piece A, thus formed, the movable piece B, with its leaf projecting tangentially from the socket, in such a manner that, by inverting it, it is adapted to right and left use, as herein specified.

No. 1,397.—JOHN G. TREADWELL and WILLIAM HAILES, assignors to WILLIAM HAILES and ELLEN T. TREADWELL, of Albany, N. Y.—*Improved Stove*.—Patent dated May 7, 1861; reissued February 4, 1863.

Claim.—First, a base-burning-coal-supply-reservoir stove, or furnace, so constructed that the products of combustion do not pass up around and above the supply reservoirs nor up through the grate, but down outside of the fire-pot, toward the base of the stove and out through a main draught flue which leads directly from a space or chamber about the lower part of the stove, all for the purpose set forth, and substantially as described.

Second, the contracting of the discharge end of the coal-supply reservoir, the expanding of the fire-pot and the extending of the flame passage downward, for united operation in a base-burning-coal-supply-reservoir stove or furnace, essentially as set forth.

Third, a fire-pot resting on a base, and imperforated on its inner or outer circumference, or from its inner to its outer circumference, and so constructed and applied with respect to a coal-supply reservoir that an enclosed horizontal chamber for the free expansion and circulation of the flame and gases is formed all around and outside of the contracted discharge, and above the upper edge of the fire-pot, substantially as and for the purpose set forth.

Fourth, the descending passage or passages in combination with the continuous flame expansion and circulation passage, and a main draught flue leading out of the base or lower part of the stove or furnace, substantially as set forth and for the purpose described.

Fifth, constructing the fire-pot of a base-burning-coal-supply-reservoir stove or furnace, with an imperforated circumference, and in form of a trumpet-mouth at its upper portion, in combination with descending flame passages, substantially as described, and for the purpose set forth.

Sixth, constructing the metal of the fire-pot, with a gradually decreasing thickness from the centre of its depth, both up and downward, substantially as described.

Seventh, a detachable ring in combination with a fixed ring flanch of a coal-supply reservoir, for the purpose of confining the fire-brick or other fire-proof substance, on the lower part of the reservoir.

Eighth, the combination of a perforated jacket or casing, a coal-supply reservoir with a contracted discharge, a fire-pot with a flame-expansion chamber around and above its upper edge, and a descending flue or flues and a main draught flue, substantially as and for the purpose described.

Ninth, the combination, in a base-burning-coal-supply-reservoir stove, of a descending flue or flues and a perforated casing, substantially as and for the purpose set forth.

Tenth, in a base-burning-coal-supply-reservoir stove or furnace, a branch flue opened and closed by a damper above the base of the fire-pot, in combination with a descending passage or passages leading to the lower part of the stove, and with the main draught flue leading out of the lower part of the stove, substantially as and for the purposes set forth.

Eleventh, the weight constructed and applied in connexion with the damper-valve in the manner and for the purpose set forth.

Twelfth, the combination of the perforated jacket or case, the reservoir for coal, the fire-pot, the descending flue or flues, the hollow space about the base of the stove and the chimney flue, whereby the base of the stove is heated by direct heat of the flame or gases, and the upper part of the stove by radiated heat acting upon the circulating air, substantially as described.

No. 1,398.—GAIL BORDEN, jr., of Amenia, N. Y.—*Improvement in Concentrating and Preserving Milk*.—Patent dated August 19, 1856; reissued May 13, 1862; again reissued February 10, 1863.

Claim.—First, the within-described process, or method of operation, for concentrating and preserving milk, by means of coagulating and rearranging the albuminous particles, in combination with the evaporation of the fluid, *in vacuo*, substantially as set forth.

Second, the preparatory coagulating and rearranging of the albumen, when this is done as a part of the operation of making concentrated or condensed milk.

No. 1,399.—W. N. CLARK, of Chester, Conn.—*Improved Elastic Door Guard*.—Patent dated November 17, 1857; reissued February 10, 1863.

Claim.—The above-described India-rubber or elastic gum guard, when held in place by the escutcheon, or its equivalent, as herein described, for the purpose of protecting wall, doors, and furniture, substantially as set forth.

No. 1,400.—WARREN HALE, ALLEN GOODMAN, LORENZO HALE, and J. W. GOODMAN, of North Dana, Mass., assignees of said WARREN HALE and ALLEN GOODMAN.—*Improvement in Machine for Shaping Irregular Surfaces in Wood*.—Patent dated July 22, 1845, and extended; reissued February 10, 1863.

Claim.—The combination of the carriage, the pattern or patterns, the tracing roller or rollers, the rotating cutting or planing cylinder, and the means for turning or holding the block of wood to be fashioned, as described, or the equivalents of them, or either of them: the said combination being so organized, substantially as described, that by its mode of operation the block of wood to be fashioned can be turned to present in succession each of its faces to the action of the cutter or planing cylinder, whose axis is at right angles, or nearly so, with the axis of the block of wood, so as to cut the wood longitudinally, while by a longitudinal movement the block of wood is gradually cut or planed from one end to the other on each face in succession, and by another movement at right angles thereto, or nearly so, the cutting action is caused to follow the irregular lines of the pattern, thereby producing a polygon of any desired number of sides of any desired configuration longitudinally and with all its sides of similar form.

No. 1,401.—CHRISTIAN SHUNK, of Canton, Ohio.—*Improvement in Refining Iron by means of Blasts of Air*.—Patent dated May 17, 1859; reissued February 10, 1863.

Claim.—First, blowing atmospheric air into and through a mass of molten crude iron from the ore, or from the remelted pig iron, to commingle the gases of the air with the particles of the fluid iron and its carbon, for the purpose of decarbonizing and converting the same into refined iron or steel, and malleable semi-steel, without the use of fuel to keep up combustion, such conversion being effected by the gaseous matter of the atmosphere.

Second, imparting a rotary or spiral motion to the molten iron, by or during the introduction of the air-blast, substantially as set forth.

Third, the application of the flux or solvent in the manner and for the purpose herein described during the atmospheric refining process.

No. 1,402.—CHRISTIAN SHUNK, of Canton, Ohio.—*Improvement in Refining Iron*.—Patent dated July 12, 1859; reissued February 10, 1863.

Claim.—A separate or auxiliary refining pot or crucible, employed to receive molten iron from a smelting or remelting furnace, and decarbonize the same by the application of an air blast in any manner, substantially as herein described, for the production of steel or refined iron.

No. 1,403.—ADDISON SMITH and J. M. SAYRE, of New York city, assignees of P. W. MACKENZIE, of said New York city.—*Improvement in Cupola and other Furnaces*.—Patent dated August 25, 1857; reissued February 10, 1863.

Claim.—First, a cupola of elongated form, in combination with curved sides, substantially as described and for the purposes set forth.

Second, the arrangement of a continuous air chamber, in combination with a cupola and opening for the introduction of a continuous sheet of air to the fuel, substantially as described and for the purposes set forth.

Third, in combination with a cupola provided with a continuous air chamber, substantially as described, enlarging that part below the twer, whereby the capacity of the cupola is increased, and perfect circulation of air to the fuel obtained, substantially as described and specified.

No. 1,404.—A. J. and K. E. STORMS, of Nyack, N. Y., assignees of E. P. TORREY and W. B. TILTON, of New York city.—*Improved Door Spring*.—Patent dated September 8, 1857; reissued February 10, 1863.

Claim.—First, placing the notched wheel D between the jaws C of the bracket A, substantially as and for the purpose shown and described.

Second, extending the square end of the torsional rod F clear through the jaws of the bracket A, as and for the purpose specified.

Third, the arrangement of the pivoted stop-plate E, in combination with the notches *a* in the jaws of the bracket, and with the notched wheel D, all constructed and operating substantially in the manner and for the purpose set forth.

No. 1,405.—JOHN TEMPLE, W. M. MILLS, and A. L. STOUT, (assignees of said JOHN TEMPLE,) of Middletown, Ohio.—*Improved Water Wheel*.—Patent dated February 8, 1859; reissued February 10, 1863.

Claim.—The construction and use of the scroll sluice-gate B C applied to operate with a water wheel, in the manner substantially as described.

Also, in combination with the hinged sluice-gate B C, the guard A, as and for the purpose described.

Also, the levers K and ring J, centrally arranged above the sluice-chest, for simultaneously operating a series of gates in combination with the gates, and actuated by mechanism substantially as described.

No. 1,406.—THURLOW WEED, of Albany, N. Y., and P. S. SHELTON, of Boston, Mass., assignees of A. F. JALOUREAU, of Paris, France.—*Improved Process of Manufacturing Water-proof Cement Pipes*.—Patent dated May 24, 1859; antedated December 30, 1857; reissued February 10, 1863.

Claim.—The process of forming pipes or tubes of rolls of paper, or other tissue, and bituminous mastic, by drawing or passing the paper, or other tissue, through the liquid mastic, and rolling it up to the required thickness on a mandrel to cause the several windings and the interposed mastic to unite, substantially as described.

Also, the forming of such pipes or tubes on a paper sleeve, or cylindrical tube fitted to the outer surface of the mandrel, substantially as described, by means of which the pipes or tubes when made can be readily slipped off from the mandrel, as set forth.

No. 1,407.—THURLOW WEED, of Albany, N. Y., and P. S. SHELTON, of Boston, Mass., assignees of A. F. JALOUREAU, of Paris, France.—*Improved Water and Air-proof Pipes from Bituminous Cement*.—Patent dated May 24, 1859; antedated December 30, 1857; reissued February 10, 1863.

Claim.—The new manufacture of pipes or tubes composed of several thicknesses of paper, or other tissue, rolled up and the several thicknesses or windings united by interposed bituminous mastic, substantially as described.

No. 1,408.—THURLOW WEED, of Albany, N. Y., and P. S. SHELTON, of Boston, Mass., assignees of A. F. JALOUREAU, of Paris, France.—*Improved Process of Manufacturing Water-proof Cement Pipes*.—Patent dated May 24, 1859; antedated December 30, 1857; reissued February 10, 1863.

Claim.—First, the mandrel on which the pipe is formed by winding, in combination with the kettle or other vessel containing the liquid mastic or cement, and the cylinder on which the mandrel rolls, and which carries the paper, or other tissue, through the liquid mastic or cement and up to the mandrel, substantially as and for the purpose specified.

Second, the rotating mandrel and cylinder on which it rolls, in combination with the movable sleeve put on the mandrel, substantially as and for the purpose of preventing the pipes, when formed, from adhering to the mandrel.

Third, the combination of the rotating mandrel, the cylinder on which the mandrel rotates, the kettle or other vessel for containing the liquid mastic or cement, and the guide or equivalent means for guiding the sheet of paper, or other tissue, substantially as described.

No. 1,409.—G. J. KINGSBURY, of Rochester, N. Y.—*Improved Coal Stove*.—Patent dated April 12, 1859; reissued February 17, 1863.

Claim.—First, the introduction of a second supply of air into the flame space or spaces, at or near the junction of the fire-pot B and cap G, and at or near the point where the gas escapes from the combustion of the coal, for the purpose of igniting the same, in combination with an interior feeding chamber, substantially as herein set forth.

Second, the annular groove *f* at the base of the feeding chamber, connected with an outer passage or passages for the admission of air to that point, arranged and operating substantially as herein described and set forth.

Third, providing, in connexion with the annular groove *f*, the radial grooves *e e* between the top of the fire-pot and the cap resting thereon, and communicating with the outside air by passages *d d*, the said grooves being provided with the lateral notches *i i*, opening into the flame space or spaces E E, for the introduction of air for admixture with the gases, substantially as herein specified.

Fourth, the cap G, or its equivalent, forming a connexion between the fire-pot and feeding cylinder, when it conforms to the upper portion of the fire-pot, and external air is admitted underneath for the combustion of the gases, as herein set forth.

Fifth, the arrangement of the pivoted door N with the lower portion extended to form a plane, in combination with the flange F, for safely supplying coal to the cylinder H when open, and leaving a space for the passage of the products of combustion when closed, substantially as set forth.

Sixth, in combination with the supply cylinder H and fire-pot, the flue pipe I, connected at the bottom with the ash chamber, in such a manner that when the passage of the pipe is open it allows the escape of the heat through the same, thereby giving a counter direction to the fire, preventing it from extending into the supply chamber, substantially as set forth.

No. 1,410.—EDWARD LINDNER, of New York city.—*Improvement in Banding Projectiles for Rifled Ordnance*. (Div. 1, A.)—Patent dated July 30, 1861; reissued February 17, 1863.

Claim.—First, the method, substantially as herein described, of applying the malleable envelope or packing, first by casting it around and against the annular cavity in the body of

the projectile, and then expanding it by atmospheric or other pressure against the sides or interior surface of a finishing or forming mould or box.

Second, the method of securing the knit sleeve in or around the body of the projectile, substantially as described.

No. 1,411.—EDWARD LINDNER, of New York city.—*Improved Cartridge for Small-arms*. (Div. 2, B.)—Patent dated July 30, 1861; reissued February 17, 1863.

Claim.—The stopper *d* introduced into the back end of the cartridge case, substantially as and for the purposes specified.

No. 1,412.—E. A. TUTTLE, of Brooklyn, N. Y.—*Improvement in Hot-air Registers*.—Patent dated January 3, 1854; reissued February 17, 1863.

Claim.—So combining the connecting rod or arrangement which transmits motion to the fans with the thumb-piece or attachment by which it is actuated, and with the fans themselves, that it shall rest and ride upon anti-friction bearings *o o* formed on the fans, substantially as above described.

No. 1,413.—ALLEN WALTON, of Philadelphia, Pa.—*Improvement in Apparatus for Mixing Gases*.—Patent dated April 15, 1862; reissued February 17, 1863.

Claim.—A chamber or mixing reservoir C, so arranged as to intercept, for the purpose herein described, the continuity or uniform diameter of a distributing pipe, into which air and gas are introduced in definite quantities, and through which they are directed from a meter or meters to the burner.

No. 1,414.—TURNER WILLIAMS and DAVID HEATON, 2d, (assignees of said TURNER WILLIAMS,) of Providence, R. I.—*Improved Mode of converting Reciprocating into Rotary Motion*.—Patent dated September 5, 1862; reissued February 17, 1863.

Claim.—First, the combination of two rocking disk plates, or their equivalent, with two fixed circular flanges upon a shaft, to be rotated substantially as herein specified.

Second, the use of two friction pawls, or their equivalent, for binding the said disk plates with the circular flanges at the proper time, by the rocking movement of the disk plates, and otherwise operating substantially as herein specified; and in combination with such friction pawls, a projection *n* and set screw *l* upon the disk plate, or their equivalent, for controlling the action of such friction pawls, substantially as herein specified.

Third, the combination of the pair of curved connecting rods I J and the two disk plates E S, or their equivalent, substantially as described, for the purpose specified.

Fourth, the use of a spring buffer or its equivalent, for arresting and limiting the movement of the two friction pawls, substantially as and to effect the purpose herein specified.

No. 1,415.—SAMUEL L. CROCKER, of Taunton, Mass.—*Improved Yellow Metal Nail or Spike*.—Patent dated April 17, 1849; reissued August 1, 1854; reissued February 17, 1863.

Claim.—The new article of manufacture herein above described, viz: a yellow metal nail or spike, made by the combined processes of heating the metal to redness, and in such state cutting and heading it in a nail machine, and subsequently treating it substantially as described; meaning by the term yellow metal, a metal composed of copper and zinc, in the proportions in which they are usually combined in the manufacture of the well-known "Muntz sheathing metal."

No. 1,416.—LEVI L. HILL, of New York city.—*Improved Burning Fluid*.—Patent dated June 16, 1858; reissued February 24, 1863.

Claim.—First, the use of caoutchoucine for imparting greater volatility as well as greater stability to my compounds. It is to be distinctly understood that the use of caoutchoucine only in combination with the liquids herein described is claimed.

Second, the liquids herein described as Nubian oils, A B C D, having the composition and properties set forth, to be used singly or in such relative proportions and admixture as may appear necessary to accomplish the purposes set forth.

Third, passing a current of atmospheric air over or through the described mixtures or their equivalents of hydro-carbons, fluid and more or less volatile, or rendered so by the mixture or by the application of heat, and using the mixture of air and the vapors of the hydro-carbon for producing light or heat, or both.

No. 1,417.—LEVI L. HILL, of New York city.—*Improvement in Carburetting Air*.—Patent dated December 20, 1859; reissued February 24, 1863.

Claim.—First, charging air with hydro-carbon vapor by means of an apparatus composed of a vaporizing vessel, bellows or blower, air receiver, induction and eduction pipe, in combination with an independent air pipe, substantially as shown and described.

Second, combining a current of atmospheric air direct from a bellows or blower, and capable of being regulated as to pressure and quantity, with another current of air that has been passed over or through a more or less volatile hydro-carbon fluid, and utilizing by combustion the mixture of air and hydro-carbon vapors thus formed for generating light or heat or both.

No. 1,418.—CORNELIUS JACCS, of Columbus, Ohio.—*Improvement in Pans for Evaporating and Purifying Saccharine Juice*.—Patent dated August 6, 1861; reissued February 24, 1863.

Claim.—First, an evaporating pan with transverse partitions, operating substantially as described.

Second, making the partitions adjustable, substantially as and for the purpose described.

Third, the specified construction of the lower edge of the partitions for the purpose set forth.

Fourth, the adjustable sirup-discharger in combination with an evaporating pan, substantially as set forth.

No. 1,419.—ORLANDO K. JADWIN, of Carbondale, Pa.—*Improved Inkstand*.—Patent dated November 23, 1858; reissued February 24, 1863.

Claim.—First, supplying ink to the pen-cup of an inkstand solely by means of the pressure of the bottom of a plunger upon the ink to be supplied in said cup.

Second, a closely fitting plunger *c*, in combination with a well or chamber *b*, substantially as and for the purpose set forth.

Third, in an inkstand the pen-cup of which is charged by the pressure of the bottom of a plunger upon the ink to be supplied to said cup, forming the bottom of such plunger with a cavity, substantially as and for the purpose set forth.

Fourth, so applying an ink or pen-cup to the plunger of a fountain inkstand that when the pen-cup is charged with ink the ink will remain therein, though the plunger be elevated out of the bowl of the inkstand.

No. 1,420 (A).—RICHARD VOSE, of New York city.—*Improved Car Spring*.—Patent dated March 11, 1862; reissued February 24, 1863.

Claim.—The combination or interposition of a packing of elastic gum, or its equivalent, between the coils of a spiral or helical metallic spring, substantially in the manner and for the purpose herein set forth.

No. 1,421 (B).—RICHARD VOSE, of New York city.—*Improved Car Spring*.—Patent dated March 11, 1862; reissued February 24, 1863.

Claim.—The use of longitudinally indented, grooved, or channelled metallic rods or bars, when formed into spiral or helical springs, of substantially the shape herein represented and described.

No. 1,422.—MARY JANE BROWN, of Brooklyn, N. Y., administratrix of the estate of HIRAN W. BROWN, deceased, late of Melville, N. J., and assignor to herself, JEREMIAH JOHNSON, jr., and FRANKLIN H. LUMMUS, of Brooklyn, N. Y., and THEODORE BOURNE, of New York city, the assignees of said decedent.—*Improved Cotton Gin*.—Patent dated March 23, 1858; reissued February 24, 1863.

Claim.—First, the arrangement of the pressure plate and of the stripping plate in their relation to the grating of the feed-board, substantially in the manner and for the purposes set forth.

Second, the employment, in combination with the roller B, stripping plate L, and the pressure plate R, of the yielding or vibrating feed-board, having its grating formed of alternate sets of rods *o* and *n*, in the manner and for the purpose substantially as described.

No. 1,423.—NELSON PALMER, of Greenville, N. Y.—*Improved Hay-elevating Fork*.—Patent dated September 30, 1862; reissued March 3, 1863.

Claim.—First, the hay-elevator formed by the handle *a*, head *b*, and tines *c*, when said tines pass below the head and extend forward for receiving the hay, substantially as specified, whereby said fork will not tip sidewise, when raised by power applied to the head of the fork, and the handle is sufficiently above the bottom of the hay on the tines to allow said handle to swing clear of the hay on the mow or on the cart, as set forth.

Second, the brace or toggle-joint bar *e* in combination with the bail or sustaining bar and the handle of the fork, as specified, whereby the fork is rendered rigid in lifting the hay, but allowed to swing and deliver the hay when said brace bar is acted upon, as set forth.

Third, the discharging rope *f* and sheave *i*, arranged as shown, in combination with the toggle-joint brace *e*, fork *a b c*, and bail or sustaining bar *d*, for the purposes specified.

No. 1,424.—C. H. PERKINS, of Providence, R. I.—*Improved Machine for Making Horseshoes*.—Patent dated June 1, 1858; reissued March 3, 1863.

Claim.—First, the method, substantially as described, of making a shoe for animals by the combination of a pair of dies, whose office shall be to act upon the whole exterior surface of the blank, and fashion it into a shoe, as specified, one of said dies being an anvil die, and the other a movable hammer die, the two being so constructed and arranged relatively to each other as to fashion the shoe, as set forth, by striking a blow or a succession of blows upon the shoe plank, in distinction from the action of dies heretofore used for pressing the metal of the blank into the form of a shoe.

Second, the combination and arrangement of the hammer K and the creaser L with one rotary tripping shaft I, so as to be operated thereby, substantially in the manner and for the purpose specified.

Third, the mode of operation, substantially as specified, by means of which the "former" B is made to take two separate positions with respect to the benders and hammer, for the purposes set forth.

Fourth, combining the straight toe-die *b* with the benders *c c* and the "former" B, substantially as described.

Fifth, the combination of a set of notches, or their equivalents, with the rear end or toe of the "former," substantially as described, for the purpose of maintaining the shoe blank in its proper place, with respect to the "former," during the process of bending the shoe.

Sixth, in combination with the mechanism described for giving to the hammer shaft a tilting motion, the mechanism described for rotating the shaft at the proper times, in order to bring the hammer and the creaser to operate on the shoe alternately, substantially as described.

Seventh, in combination with the mechanism for tilting and turning the hammer and creaser shaft, the mechanism described for arresting the operations of the tilting mechanism, and for preventing the fall of the hammer shaft long enough to allow of a semi-rotation of the hammer shaft, and the withdrawal of the finished shoe from its place about the "former," and the substitution of a shoe blank therefor.

No. 1,425.—DENNIS G. LITTLEFIELD, of Albany, N. Y.—*Improved Stove*.—Patent dated March 4, 1856; reissued March 3, 1863.

Claim.—The combination of two or more distinct combustion compartments and separate heating-chambers, with a single supplying cylinder, or reservoir, substantially as and for the purposes herein specified.

Also, a grate B, solid in the central portion, and open only in the periphery, substantially as and for the purpose herein set forth.

Also, a single receiving chamber or flue M, in combination with separate heating chambers and a supplying cylinder, arranged so as to receive and conduct away to the smoke pipe the products of combustion from said heating chambers, and the gases escaping from the supplying cylinder, as well as any air that may enter through the replenishing aperture P, substantially as herein specified.

No. 1,426.—DENNIS G. LITTLEFIELD, of Albany, N. Y.—*Improved Stove*.—Patent dated January 24, 1854; reissued November 9, 1861; again reissued August 26, 1862; again reissued March 3, 1863.

Claim.—A stove or furnace having a supplying cylinder, or reservoir, over the fire-pot, and a chamber for receiving the products of combustion, arranged so as to enclose the cover-opening of the supplying cylinder, when the fire-pot is constructed with openings or outlet space to said chamber sufficient in area to enable anthracite coal and other concentrated fuels to be burned, and to transmit all the products of combustion and generated gases freely to said chamber.

Also, the combination of a chamber for receiving the products of combustion, so arranged as to enclose the cover-opening of the coal-supplying cylinder with a fire-pot which has an aggregate area of openings or outlet space to said chamber exceeding that of the air-supply apertures through the fire-grate below.

No. 1,427.—DENNIS G. LITTLEFIELD, of Albany, N. Y.—*Improved Stove*.—Patent dated January 24, 1854; reissued November 9, 1861; again reissued August 26, 1862; again reissued March 3, 1863.

Claim.—An illuminating exterior case, having its windows or illuminating apertures either in its fixed portion, or in any door or movable part thereof, in combination with a supplying cylinder for reserve coal, and a chamber which receives the products of combustion from the fire-pot.

Also, a fire-pot having its combustion apertures extending down to the bottom of the casting, and the intermediate bars tapering from top to bottom, substantially as and for the purposes herein specified.

No. 1,428.—THE BURNSIDE RIFLE COMPANY, of Providence, R. I., assignees of AMBROSE E. BURNSIDE.—*Improved Metallic Cartridge for Breech-loading Fire-arms* (Div. A).—Patent dated March 5, 1856; reissued March 10, 1863.

Claim.—A metallic cartridge case, so constructed as to pack the joint between the movable cartridge block and the barrel, as set forth.

Also, a conical cartridge case, operating as described, for the purpose of facilitating its withdrawal from the cartridge chamber after the discharge of the gun.

Also, the enlargement upon the forward end of the cartridge case, operating as described.

No. 1,429.—THE BURNSIDE RIFLE COMPANY, of Providence, R. I., assignees of AMBROSE E. BURNSIDE.—*Improved Breech-loading Fire-arm*. (Div. B).—Patent dated March 5, 1856; reissued March 10, 1863.

Claim.—The movable cartridge box, so arranged that it may be brought up to abut against the end of the gun barrel, with the orifice of its chamber coincident with that in the rear of the barrel, and carried away from the barrel for the purpose of loading, substantially as set forth.

Also, in combination with the movable cartridge block abutting against the end of the barrel, enlarging the ends of the barrel and the cartridge chamber, as described, for the purpose set forth.

Also, the conical cartridge chamber, operating as set forth, for the purpose described.

Also, the sliding-breech pin, operating as set forth, for the purpose described.

Also, the projection in the rear of the breech pin, for the purpose of starting the pin forward as the cartridge block is withdrawn.

No. 1,430.—G. E. VANDERBURGH, of New York city.—*Improved Silicated Soap.*—Patent dated March 5, 1861; reissued March 10, 1863.

Claim.—The use of a dissolved alkaline silicate, as an ingredient in and component of soap, but only when the dissolved alkaline silicate thus employed contains, by chemical analysis, less than one-third as much soda, or less than one-half as much potash or silica.

No. 1,431.—AUGUSTUS B. DAVIS, of Philadelphia, Pa.—*Improved Car Spring.*—Patent dated February 15, 1859; reissued January 6, 1863.

Claim.—First, a box of any suitable form, and a plate C, or its equivalent, adapted to the open end of the said box, and connected to the latter by a bolt or bolts D, or other suitable fastenings, substantially as set forth, in combination with a series or nest of springs, arranged side by side, and free from contact with each other, each spring forming an integral part of the entire elastic medium composed of the whole of the springs, and the latter serving with the said box and plate to constitute an entire single self-contained car spring, as described.

Second, the use, within a box substantially as described, of a series or nest of spiral or coiled springs, when made of iron wire, and treated by compression or impact prior to being deposited in the box as set forth, for the purpose specified.

Third, the series or nest of springs combined with a box and plate so constructed that the compression of the said springs shall be limited, and their constant availability thereby preserved.

No. 1,432.—THOMAS R. HARTELL and JOHN LETCHWORTH, of Philadelphia, Pa., assignees by mesne assignments of RHODA DAVIS, late of Brookhaven, N. Y.—*Improved Elastic Cap for Seating Cans and Bottles.*—Patent dated February 24, 1857; reissued March 17, 1863.

Claim.—A rigid plate B, of metal or other suitable material, having a web or band of gum-elastic so formed and arranged that when applied to a jar or other tubular object the web or band will be stretched, and tending to return to its original form and dimensions will, with the said plate, hermetically seal the jar, as set forth.

No. 1,433.—M. A. RICHARDSON, of Sherman, N. Y.—*Improved Cream Pump.*—Patent dated September 23, 1862; reissued March 17, 1863.

Claim.—The use of a screen or screens K, within or closing the discharge outlet of a force pump, for the purpose of breaking the tenacious and hardened portions of cream, arranged and operating substantially as herein set forth.

No. 1,434.—SAMUEL SCHUYLER, of Brooklyn, N. Y.—*Improved Grain-dryer.*—Patent dated January 22, 1861; reissued March 17, 1863.

Claim.—First, so combining the several screens or platforms B B, by means of chains and pulleys, or other equivalent devices for adjusting their elevation, that all may be simultaneously raised or lowered at one end, for the purpose of adjusting or varying their inclinations substantially as and for the purpose herein specified.

Second, the combination of the series of platforms B B with the elevator M, or its equivalent, substantially as and for the purpose herein set forth.

No. 1,435.—W. R. THOMAS and M. EMANUEL, jr., of Catasauqua, Pa.—*Improved Composition for Blasting-powder.*—Patent dated April 9, 1861; reissued March 17, 1863.

Claim.—First, a powder intended principally for blasting purposes, in which nitrate of soda is substituted for the nitrate of potash, and the tendency of that salt to attract moisture is prevented by the use of ground bark, or its equivalent, instead of charcoal, substantially as above described.

Second, a powder intended principally for blasting purposes, composed of sulphur, nitrate of soda, and ground bark, or its equivalent, prepared substantially as above described.

No. 1,436.—W. R. THOMAS and MORGAN EMANUEL, jr., of Catasauqua, Pa.—*Improved Blasting-powder.*—Patent dated March 11, 1862; reissued March 17, 1863.

Claim.—First, the use of chlorate of potash with nitrate of soda and ground bark, or its equivalent, in the formation of an explosive powder, substantially as above set forth.

Second, an explosive powder compounded of nitrate of soda, sulphur, chlorate of potash, and ground bark, or its equivalent, substantially in the manner and for the purpose above set forth.

No. 1,437.—W. R. THOMAS and MORGAN EMANUEL, jr., of Catasauqua, Pa.—*Improved Blasting-powder.*—Patent dated December 9, 1862; reissued March 17, 1863.

Claim.—First, in a blasting compound, in which nitrate of soda and ground bark, or its equivalent, are used as two of the ingredients, the use of starch as another ingredient, when combined and compounded with the other substances, substantially as described.

Second, in a blasting compound in which nitrate of soda, chlorate of potash, and ground bark, or its equivalent, are used as ingredients, the use of starch, as an additional ingredient, in the manner and for the purpose described.

Third, the use of nitrate of soda, flowers of sulphur, chlorate of potash, starch, and ground bark, or its equivalent, when combined and compounded substantially in the manner and for the purpose above described.

No. 1,438.—C. M. WILKINS, of West Andover, Ohio.—*Improved Cheese Vat.*—Patent dated November 22, 1859; reissued December 24, 1861; again reissued March 17, 1863.

First, the combination of the pipe *ic* with the heater F, substantially as and for the purpose specified.

Second, the combination of the valve *o* with the pipe *ic*, for the purpose set forth.

Third, the combination of the valve N with the pipe B, over the fire-box C of the heater, substantially as and for the purpose specified.

Fourth, arranging the valves N and O to operate substantially as described, and for the purpose specified.

Fifth, arranging the heater F, as relating to the water vat A and reservoir L, substantially as shown, and for the reasons specified.

Sixth, the use of the truss braces J J J in the manner and for the purpose described and shown.

No. 1,439.—THEODORE T. WOODRUFF, of Philadelphia, Pa.—*Improved Railroad Car Seats and Couches.*—Patent dated December 2, 1856; reissued March 17, 1863.

Claim.—Connecting and combining the two opposite sets of cross seats of a railroad car with additional frames to form the required length of cushioned surfaces to form couches in each compartment, substantially as described.

Also, combining and connecting the backs of opposite cross seats of a railroad car, when elevated to a horizontal position, to constitute an elevated couch or couches, substantially as described.

Also, combining with the backs additional frames, substantially as described, to form the required length of couch, and thereby avoid the necessity of making the backs of an inconvenient height when used as backs to the seats.

Also, the connecting the backs of opposite cross seats, when elevated to a horizontal position, to form an elevated couch or couches, substantially as described, in combination with the opposite cross seats arranged so as to be convertible into couches, substantially as described.

Also, forming an elevated couch, above the couch formed by the backs of seats, by a series of hinged frames, substantially as described.

No. 1,440.—JAMES C. BUTTERWORTH, Providence, R. I.—*Improved Sash-fastener.*—Patent dated April 16, 1861; reissued March 24, 1863.

Claim.—First, the combination of the friction pad with cam B, substantially as described and for the purpose set forth.

Second, the combination of the cam recessed and furnished with the friction pad, substantially as described, with the plate and spring, for the purpose herein set forth.

No. 1,441.—THOMAS SAULT, of Seymour, Conn.—*Improved Trap for Steam Apparatuses.*—Patent dated February 28, 1860; reissued March 24, 1863.

Claim.—The employment in a trap for steam apparatuses of a valve of vulcanite applied to operate substantially as described between two opposite seats in a box of metal or other material whose expansibility by heat is less than that of the valve.

No. 1,442.—AARON DOUGLASS, of Paterson, N. J.—*Improved Method of Making Lap Joints of Railway Rails.*—Patent dated August 21, 1860; reissued March 24, 1863.

Claim.—The process, substantially as herein described, of making and shaping, by means of sawing and swaging combined, the ends of railway bars, which form a lock joint with each other by the end of one rail lapping upon and into the end of the other, substantially as set forth.

Also, swelling the necks of the ends of rail bars, when lapped upon each other, substantially as described, for the purpose of giving increased strength to the ends of such bars, for the purposes set forth.

No. 1,443.—L. S. REYNOLDS, of Indianapolis, Ind.—*Improved Friction Bolt for Flour Mills.*—Patent dated March 29, 1859; reissued March 24, 1863.

Claim.—First, the use of the revolving bolting reel frame instead of the central shaft, as the support for the knockers, substantially as set forth.

Second, causing sliding knockers or weights, when arranged within the reel, to strike upon or near the circumference of the reel in such a manner that the concussion of each knocker separately is felt at the points of striking, substantially as herein described.

Third, the sliding knockers D, in combination with the shaft K, ribs H, and rods E, when constructed and operated substantially as and for the purposes set forth.

Fourth, the springs G, in combination with the knockers D, when operated substantially as and for the purposes set forth.

Fifth, the elastic bridge-tree L', when used substantially as and for the purposes set forth.

Sixth, holding the knockers, one or more, in a fixed position on their rods, substantially as and for the purposes described.

No. 1,444.—E. A. L. ROBERTS, assignee of E. A. L. ROBERTS and W. J. DEMOREST, of New York city.—*Improved Apparatus for Vulcanizing Rubber, &c.*—Patent dated May 10, 1859; reissued March 24, 1863.

Claim.—First, the general arrangement of the stove A and steam-generating and vulcanizing chamber B C, substantially as set forth.

Second, constructing the steam-generating and vulcanizing chamber or chambers in one or in a continuous chamber, substantially as described.

Third, the combination and arrangement of the diaphragms *a b c*, in connexion with the steam-generating and vulcanizing chamber, substantially as and for the purpose set forth.

No. 1,445.—G. W. WILLIAMSON, of Gouldsboro', (formerly of Scranton,) Pa.—*Improved Heating Apparatus.*—Patent dated January 25, 1859; reissued March 24, 1863.

Claim.—The application to stoves, flues of steam boilers, smoke stacks or chimneys, or wherever it is required to arrest heat or sparks, a series of plates with openings for draught passages alternating as herein described and for the purposes set forth.

No. 1,446.—THE CITY MANUFACTURING COMPANY, assignees by mesne assignment of JAMES C. COOKE, of Waterbury, Conn.—*Improved Machine for Forming Button Backs and Connecting the Eyes thereto.*—Patent dated July 27, 1852; reissued April 7, 1863.

Claim.—First, the jointed clamps *i i*, (Fig. 2,) and the tongue *n*, (Figs. 1, 3,) to form the eye, when combined with the slide L, with its stationary and movable jaw *a b*, the movable jaw and slide being worked by a jointed lever *c c'*, to feed the wire, the whole constructed and operated substantially as described.

Second, the die for punching and forming the button back, composed of the punch S and bed Q, when combined with the slide *p p* and feeding cylinder P, when constructed and operating substantially as described.

Third, the jointed fingers *u u* for receiving the button back, when formed and punched, and conveying it to and placing it on the eye, when combined with the setting and riveting punch U, when constructed, arranged, combined, and operated substantially as described.

Fourth, holding the eye of the button in the mechanism that forms the eye until and while the back is placed upon and fastened to it.

No. 1,447.—JOSEPH P. EVANS, of Hazleton, Pa.—*Improved Furnace of Steam Boilers.*—Patent dated April 1, 1862; reissued April 7, 1863.

Claim.—First, the employment or use of a series of elliptical tubes B fitted in the fire-box A, when said tubes are made to communicate with the water space at the ends of the fire-box, substantially as herein set forth.

Second, having the fire-grate made with an alternate arrangement of large elliptical tubes and small cylindrical tubes or bars in the manner and for the purpose herein shown and described.

Third, the arrangement of the elliptical pipes D and connecting pipes E with each other and with the water space as herein shown and described.

No. 1,448.—WILLIAM F. LADD, of New York city, and MORRIS L. KEEN, of Philadelphia, Pa., assignees of CHARLES WATT and HUGH BURGESS, of London, England.—*Improved Pulp from Wood, &c., for the Manufacture of Paper.*—Patent dated July 18, 1854; antedated August 19, 1853; reissued October 5, 1858; again reissued April 7, 1863.

Claim.—A pulp suitable for the manufacture of paper, made from wood or other vegetable substances by boiling the wood or other vegetable substance in an alkali under pressure, substantially as described.

No. 1,449.—WILLIAM F. LADD, of New York city, and MORRIS L. KEEN, of Philadelphia, Pa., assignees of CHARLES WATT and HUGH BURGESS, of London, England.—*Improved Process of Treating Wood or other Vegetable Substances in the Manufacture of Paper Pulp.*—Patent dated July 18, 1854; antedated August 19, 1853; reissued October 5, 1858; again reissued April 7, 1863.

Claim.—First, the process of treating wood or other vegetable substance by boiling in an alkali under pressure, as a process or preparatory process for making pulp for the manufacture of paper from such woods or other vegetable substances, substantially as described.

Second, the process of treating resinous woods by boiling in an alkali under pressure, and treating the product with chlorine and its compounds with oxygen for making white pulp for the manufacture of paper from such woods, substantially as described.

No. 1,450.—AMOS D. LUFKIN, of Cleveland, Ohio.—*Improved process of Preparing Hides for Tanning.*—Patent dated July 31, 1860; reissued April 7, 1863.

Claim.—The process of treating hides by the use of sulphur for the purpose of removing the hair and preparing them to be tanned, substantially as herein described.

No. 1,451.—AUGUSTUS A. BENNETT, of Cincinnati, Ohio.—*Improved Cartridge Box.*—Patent dated January 27, 1863; reissued April 14, 1863.

Claim.—As a new and useful article of manufacture, the cartridge box A B, whose cover is made self-closing by means of one or more metallic springs, constructed, adapted, and operating substantially as described.

No. 1,452.—WILLIAM H. LIVINGSTON, of New York city.—*Improved Wood-saw Frames.*—Patent dated September 18, 1860; reissued April 14, 1863.

Claim.—First, the brace E, applied to the frame of a handsaw, between the cross-piece and the end piece of said frame, in the manner and for the purposes substantially as specified.

Second, the combination of the brace rod E, and metal plate D, arranged or applied to the saw frame, substantially as and for the purpose set forth.

No. 1,453.—ALFRED MONNIER, of Philadelphia, Pa.—*Improvement in the manufacture of Metallic Zinc.*—Patent dated May 18, 1858; reissued April 14, 1863.

Claim.—The process of obtaining metallic zinc by the combination of the two metallurgic operations, substantially as herein specified.

No. 1,454.—WILLIS L. GREGORY and G. LANDON, jr., of Amsterdam, N. Y., assignees of said WILLIS L. GREGORY.—*Improved Skate.*—Patent dated March 4, 1862; reissued April 14, 1863.

Claim.—First, a detached washer or socketed plate which has a vertical and a longitudinal channel formed in it, the two channels intersecting one another, the said washer plate answering as an auxiliary to a skate-runner fastening, *i. e.* a detached screw, substantially as and for the purpose set forth.

Second, interposing between the wooden stock and the metal runner a detachable longitudinally-grooved and vertically-perforated washer or socketed plate, in such manner that it braces the wooden stock, gives side bearings to the runner, and also enables the runner to have end bearings, substantially in the manner set forth.

Third, the combination of the longitudinally-slotted and vertically-perforated washer or socketed plate D, with a detachable "wood" screw, which extends up through the washer and the stock of the skate, in the manner and for the purpose substantially as described.

Fourth, the combination of shoulders or standards of a skate runner, and a detachable longitudinally-slotted and vertically-perforated washer or socketed plate, substantially as and for the purpose set forth.

Fifth, a detachable screw as a part of a skate runner fastening, with two sides of its head made parallel and flush with the sides of the runner below the washer or socketed plate, in the manner herein described for the purpose set forth.

Sixth, the combination of the dovetail notch in the upper edge of the skate, the loose screw fastening and a longitudinally-grooved and vertically-perforated washer, substantially as and for the purpose set forth.

Seventh, the combination of the recesses in the skate stock, a metal socket plate with a longitudinal groove, and a vertical perforation, and a screw fastening, substantially as and for the purpose set forth.

Eighth, the combination of the screw or screws, notch or notches for the heads of the screw or screws, longitudinally grooved washer or washers, and the nut or other equivalent fastening or fastenings, as a means of uniting the stock and runner of a skate, substantially as described.

No. 1,455.—CHRISTIAN SHARPS, of Philadelphia, Pa.—*Improvement in Packing Cartridges.*—Patent dated July 10, 1860; reissued April 21, 1863.

Claim.—Packing the detonate in the collar of metallic cartridge cases by means of a wad d, which serves the two-fold purpose of retaining the detonate within the collar and of a rigid medium for resisting the blow of the hammer.

No. 1,456.—N. W. SPAULDING, of San Francisco, formerly of Sacramento, Cal.—*Improvement in Setting Teeth in Saws and Saw Plates.*—Patent dated September 10, 1861; reissued April 21, 1863.

Claim.—First, forming the recesses or sockets in saws or saw plates for detachable or removable teeth, on circular lines, substantially as and for the purpose herein set forth.

Second, in combination with sockets or recesses formed in saws or saw plates, as herein recited, teeth having their base or bottom parts formed on circular lines as described.

No. 1,457.—OREN STODDARD, of Busti, N. Y.—*Improved Shingle Machine*.—Patent dated December 20, 1859; reissued April 21, 1863.

Claim.—First, the relative arrangement of the knife frame E, and connecting rod D, by which the pull of the latter is made to act lengthwise of the former, as herein before described.

Second, the combination of the jointing planes *q* with the fly-wheel F, connecting rod D, and knife F, as described, when all the parts are arranged in relation to each other as set forth.

Third, the combination of the fluted rollers H H', provided with ratchet wheels and operated by pawls as represented, with the cutting knife F, as set forth.

Fourth, the combination with the cutting knife F of the adjustable guides G G, by which the cut of the knife can be varied, as herein set forth.

No. 1,458.—THOMAS R. TAYLOR, of Brooklyn, N. Y., formerly of Cleveland, Ohio.—*Improved Machine for Making Horseshoes*.—Patent dated April 30, 1860; reissued April 21, 1863.

Claim.—First, cutting off from a heated bar of iron a blank piece, then bending, swaging, pressing, and creasing the same, thus forming a shoe by the conjoint and continuous operation of the described mandrel head N, jaws R R, and female dies *p p*, and male die O, substantially as herein set forth.

Second, the reciprocating male die O, and mandrel head N, conjointly with the female dies *p p*, contained within mutually reciprocating jaws R R, arranged and operating as and for the purpose specified.

Third, the recessed reciprocating and vertically swinging jaws R R, together with the closing of the same, by their descent into an opening in the bed-plate, as and for the purpose described.

Fourth, the projectors 10 10, on the mandrel head N, and the recesses 11 11, on the male die O, for forming the heel caulk of the shoe, in the manner specified.

Fifth, the recesses *r r* in the female dies, and the recess *f* in the male die, for forming the toe caulk, as set forth.

Sixth, operating the cutter U, by the movement of the mandrel K, lever V, slider U', and rod *u'*, as and for the purpose specified.

No. 1,459.—WALTER A. WOOD, of Hoosick Falls, N. Y.—*Improved Guard Finger for Harvesters*.—Patent dated July 1, 1856; reissued April 21, 1863.

Claim.—The particular form and construction of the finger or guard as herein represented, viz., with the forked cap E, recess or depression A, raised edges *a a*, and neck *c*, behind them, by means of which the cutting is facilitated in the manner set forth.

No. 1,460.—WALTER A. WOOD, of Hoosick Falls, N. Y.—*Improved Guard Finger for Harvesters*.—Patent dated July 1, 1856; reissued April 21, 1863.

Claim.—First, a finger or guard recessed or dropped-off so as to be fastened to the under side of the finger-beam which has a bevel or inclined form, or is similarly dropped-off, while its shear or cutting edge is raised up near the top of said bar, or to a line passing over the bar, for the purpose of allowing the cut grass to readily pass over the finger-bar, substantially as described.

Second, also, as a means of making the elevation of the shear edge above the base or heel of the finger or guard, and of affording a bearing for the finger-bar and for the sickle or cutters, the four planes 1 2 3 4, substantially as described and represented.

No. 1,461.—GEORGE DOUGLAS, of Scranton, Pa.—*Improved Car Spring*.—Patent dated December 29, 1857; reissued April 28, 1863.

Claim.—The combination of elliptically-curved plates A and B, of different degrees of curvature, in the formation of an elliptic or semi-elliptic spring, in such a manner as that, when it is under the influence of weight or pressure, one or more plates B, of said spring, will tie the remaining plates, and, by limiting their expansion, prevent an undue diminution of their curvature and elasticity, all substantially in the manner and for the purpose herein set forth.

No. 1,462.—G. D. DOWS, of Boston, Mass.—*Improved Apparatus for Soda Water, Ice, Syrups, &c.*—Patent dated December 10, 1861; reissued April 28, 1863.

Claim.—Arranging and combining with a rotating ice-cutter or shaver, an ice-containing receptacle in such a manner that the ice therein held shall move toward the cutter and by the revolutions thereof shall be reduced to a finely divided state in readiness for use, substantially as described.

Also, arranging an ice-cutter, when made to operate substantially for the purpose described, in combination with a chest containing fluid receptacles, and an ice-containing chamber, in such a manner that the chest and its contents are refrigerated by the ice which is operated upon by the cutter.

Also, the combination of the cream chest D, enveloping chest A, ice chest C, and sirup vessel B, all arranged substantially as described.

No. 1,463.—JOHN FIRTH and JOHN INGHAM, of Philadelphia, Pa.—*Improvement in Pipe Moulding*.—Patent dated December 20, 1859; reissued April 28, 1863.

Claim.—Black-washing pipe moulds by causing a stream or volume of the wash to flow through the interior of the mould, the said stream being controlled in the manner described.

No. 1,464.—L. P. HARRIS, of Mansfield, Ohio.—*Improved Apparatus for Evaporating Saccharine Juices*.—Patent dated January 18, 1859; reissued April 28, 1863.

Claim.—First, an evaporating pan which allows of a bottom-surface flow of the juice, and stops a top-surface flow, substantially as and for the purpose set forth.

Second, a high ledge between the defecator and evaporator, for the purpose set forth.

Third, the application of an adjustable gate to an evaporating and defecating apparatus, substantially as and for the purpose set forth.

Fourth, the application of a strainer to an evaporator, substantially as and for the purpose set forth.

Fifth, the combination of two or more high ledges, each of which is constructed with an under-surface flow space in connexion with shallow evaporating pans, substantially as and for the purpose set forth.

Sixth, the application of a gate or a strainer to each additional ledge which has the under-flow passage, substantially as and for the purpose described.

Seventh, the combination of a high ledge and a gate or strainer with that portion of the pan known as the evaporator, substantially as and for the purpose set forth.

No. 1,465.—L. P. HARRIS, of Mansfield, Ohio.—*Improved Apparatus for Evaporating Saccharine Juices*.—Patent dated January 18, 1859; reissued April 28, 1863.

Claim.—First, an evaporating pan which is constructed with one or more longitudinal channels, so as to allow the juice to circulate, and in its circulation to be deprived of its feculencies or scum, substantially as set forth.

Second, short ledges extending out from one or both sides of the pan, in combination with long ledges, substantially as and for the purpose set forth.

Third, the combination of one or more high ledges, each having an under-flow passage, one or more adjustable gates, and a system of long and short ledges, substantially as and for the purpose set forth.

Fourth, the combination of one or more strainers, one or more high ledges, and a system of long and short ledges, substantially as and for the purpose set forth.

No. 1,466.—STEPHEN HULL, assignor to Himself and WM. VAN ANDEN, of Poughkeepsie, N. Y.—*Improved Harvester*.—Patent dated November 16, 1858; reissued April 28, 1863.

Claim.—First, providing a free opening between the rear inner depressed extensions B B of the draught frame, and hinging within the same a shoe or support for the cutting apparatus, substantially as and for the purposes set forth.

Second, in combination with a cutting apparatus which is arranged to rise and fall to a governed extent at its outer end, and also to be adjusted against the side of the machine, or out of operative position, substantially as described, a small supporting wheel so arranged with respect to the cutting apparatus and the one large supporting wheel that it sustains the cutting apparatus at its inner end when the machine is cutting grain, and also acts in combination with the one large supporting wheel to sustain the inner side of the draught frame when the cutting apparatus is thrown up out of operation, substantially as herein described.

Third, combining in a single rocking shoe C the advantages of controlling the extent of vibration of the cutting apparatus when the machine is in operation, and also of securing the cutting apparatus in place when it is thrown up out of action, by means substantially as described.

Fourth, hinging or pivoting a shoe or support for the cutting apparatus of a harvesting machine directly to the depresser ends of the transverse beams thereof, substantially in the manner and for the purposes herein described.

Fifth, the small supporting wheel J so applied to the extended frame of the machine, and with the brace, beam, or shoe, that it will preserve its perpendicular position whether the finger bar be on the ground or thrown up against the machine; substantially as herein described.

No. 1,467.—SIDNEY SHEPARD, assignee of H. O. PERRY, of Buffalo, N. Y.—*Improved Screw Propeller*.—Patent dated December 7, 1859; reissued April 28, 1863.

Claim.—Making that part of the shank end of the blades of screw propellers which enters

the hub, and from which the blade derives its main strength in the hub, tapering or conical in connexion with a corresponding tapering or conical socket in the hub, with a key inserted as to draw and hold the shank firmly in its place in the hub, substantially as described.

No. 1,468.—C. J. WOOLSON, of Cleveland, Ohio.—*Improved Hinge for Stove Doors*.—Patent dated March 16, 1862; reissued April 28, 1863.

Claim.—Hanging the doors by a double or compound hinge attached to the inside of them and to the outer edge of the front of Franklin stoves and grates, so that all the connecting parts of the hinges are concealed from view when the doors are closed, permitting them to be fully opened and swung away from the front and around to the sides or ends of the stove and there folded compactly into place, again concealing the connecting hinges, as herein set forth.

No. 1,469.—LINUS YALE, jr., of Shelburne Falls, Mass., formerly of Philadelphia, Pa.—*Improved Lock*.—Patent dated May 14, 1861; reissued April 28, 1863.

Claim.—First, a disconcerting contrivance, substantially such as specified, arranged and acting under a mode of operation substantially as described, to attain substantially the object herein set forth.

Second, in combination with a disconcerting contrivance, substantially such as is described, an apparatus, substantially such as is herein set forth, for imparting to the same an enforced motion when a key handle is moved, the combination being and operating as hereinbefore described.

Third, in combination with a disconcerting contrivance, substantially such as is described, a contrivance which always shoots the bolt back to the same position when the lock is fully unlocked, under a mode of operation substantially as hereinbefore recited.

No. 1,470.—LINUS YALE, jr., of Shelburne Falls, Mass., formerly of Philadelphia, Pa.—*Improved Lock*.—Patent dated May 14, 1861; reissued April 28, 1863.

Claim.—First, the combination of a revolving tumbler with a revolving tooth, the two being relatively arranged so that a revolution of the latter moves the former only through the angular distance from one of its teeth to the next in succession, the combination being substantially such as described.

Second, in combination with a pack or series of tumblers set separately and in succession, a vibrating fence and a bolt, and a proper stop against which the fence may abut, the whole being and operating substantially as set forth.

Third, in combination a revolving tooth or pack or series of tumblers, a vibrating fence, and a bolt, the whole operating substantially as hereinbefore specified.

No. 1,471.—SAMUEL F. HILTON, of Providence, R. I., and WILLIAM D. HILTON, of Cranston, R. I., assignees of said SAMUEL F. HILTON.—*Improvement in Cement for Uniting Leather and other Substances*.—Patent dated August 13, 1861; reissued May 5, 1863.

Claim.—As a new article of manufacture, a cement made of the two materials heretofore first mentioned, in combination substantially as described.

No. 1,472.—WALTER A. WOOD, of Hoosick Falls, N. Y., assignee of JOHN RICHARDSON.—*Improved Rake for Harresters*.—Patent dated June 19, 1865; reissued May 12, 1863.

Claim.—In combination with a self-acting rake for harvesting machines, the crank motion, the turning or rocking guide, and the long rake stake passing through said guide, substantially as and for the purpose described.

No. 1,473.—C. H. BROWN, of Fitchburg, Mass.—*Improved Low-water Detector for Steam-boilers*.—Reissued May 19, 1863.

Claim.—A combination consisting not only of an expansion tube, its valve seat and valve, and a whistle or its equivalent, but a mechanism or apparatus so arranged and combined therewith as to produce, during the expansion of such tube, and while the valve seat is being moved in one direction by such expansion, a counter or opposite movement of the valve, substantially as specified.

Also, the combination of the expansion pipe B, the lever H, and the rod F, in their application to or combination with the tube A, the valve seat, valve and whistle thereof, as arranged and applied together, substantially as specified.

And furthermore, the arrangement of the pipes A B, the valve f, the valve seat a, the whistle W, the lever H, and the rod P, and also their arrangement and combination with an air vessel F, as described.

No. 1,474.—D. R. BOWKER and W. P. BENSEL, of New York city.—*Improved Machine for Chiming and Jointing Staves*.—Patent dated February 12, 1861; reissued May 19, 1863.

Claim.—First, the swinging clamp frame J, in combination with the rotating cutter disk C, arranged substantially as shown, for the purpose of jointing the staves, as set forth.

Second, the combination of the rotating cutter disk C with the cutter heads G G, and swinging clamp frame J, arranged for joint operation, substantially as and for the purpose set forth.

No. 1,475.—JOHN DICKINSON, of Brooklyn, N. Y.—*Improved Diamond Protector*.—Patent dated September 3, 1861; reissued May 19, 1863.

Claim.—First, the stem B having a ledge or stop c in its side, in combination with a diamond stem-holder or stock A, having a ledge D or other equivalent device for uniting the motion of the stem, substantially as hereinbefore set forth.

Second, the combination of the tension spring F, applied as hereinbefore set forth, in combination with the stem B and protector stock A, for the purposes hereinbefore set forth.

Third, the combination of the gauges H, or equivalent device for supporting the diamond-holder on a single or double straight-edge rule, with the diamond-holder, substantially as hereinbefore set forth.

Fourth, the combination of a double straight-edge guide rule with the gauges H and diamond-protector stock, substantially as hereinbefore described and for the purposes set forth.

No. 1,476.—RICHARD DONALDSON, of Mount Nebo, Pa.—*Improved Lime Kiln*.—Patent dated February 19, 1861; reissued May 19, 1863.

Claim.—First, the cooler F beneath the kiln, communicating therewith and exposed to the air, all substantially as described.

Second, in combination with the said cooler, the bevelled blades I, so arranged and operating as to support the lime within the said cooler, and to permit the lime to fall therefrom, substantially as described.

Third, the tray-like lid G, when hung to the cooler, and arranged for closing the same, substantially as specified.

Fourth, making that part of the interior of the kiln beneath the flues of the funnel-form, and illustrated and described for the purpose specified.

Fifth, combining with a lime kiln, substantially as described, a chimney surmounted with a damper T, or its equivalent, for the purpose specified.

No. 1,477.—J. F. GRIFFIN, assignee of W. D. LUDLOW, of New York city.—*Improvement in Stopping Jars, Cans, &c.*—Patent dated August 6, 1861; reissued May 19, 1863.

Claim.—First, the employment, in combination with a jar having lugs b b of a clamping device, which has its inclined or cam surfaces a a located on each side of a cross-bar C, bearing upon the cover of the jar, the whole constructed to operate substantially as set forth.

Second, in combination with a clamping device which forces the lid down to its seat by the operation of inclined or cam surfaces, a device for effecting a yielding or elastic pressure upon the lid of the jar, substantially as and for the purposes described.

Third, so forming the lid or cover B, and so arranging a packing ring d with it as that the packing will be retained in connexion with the lid, substantially as hereinbefore described.

No. 1,478.—D. G. LITTLEFIELD, of Albany, N. Y.—*Improved Stove*.—Patent dated January 24, 1864; reissued November 19, 1861; reissued August 26, 1862; again reissued May 19, 1863.

Claim.—The combination of the fire-pot E, having vertical openings C C with the supplying cylinder F, when the same are immersed within the outer cylinder M, which forms the chamber G and G', substantially as and for the purpose herein described.

No. 1,479.—D. G. LITTLEFIELD, of Albany, N. Y.—*Improved Stove*.—Patent dated January 24, 1864; reissued November 19, 1861; reissued August 26, 1862; again reissued May 19, 1863.

Claim.—Combining with a supplying cylinder for reserve coal, a fire-pot having vertical openings C C extending up from near the grate to the closed sides or portions of the same, as high as it is desirable to ignite the coal, substantially as and for the purpose described.

No. 1,480.—ADOLPH MILLOCHAU, of New York city, assignor to himself and ALFRED BERNEY, of Jersey City, N. J.—*Improvement in Preparing a Paint Oil*.—Patent dated March 17, 1863; reissued May 19, 1863.

Claim.—Making paint oil of a character substantially as described from petroleum or coal oil, or other bituminous oils, substantially in the manner set forth.

No. 1,481.—NATHAN BRAND, of Leonardsville, N. Y.—*Improvement in Manufacture of Hoe Blanks*.—Patent dated February 26, 1861; reissued May 26, 1863.

Claim.—The vibrating reciprocating roller dies E E', constructed and operated as described for the purpose set forth.

Also, in combination with the dies E E' having a longitudinal score, a pair of vibrating reciprocating dies or rollers provided with a lateral or circumferential score for the shank of the hoe blank, so as to roll the hoe blank and elongate it parallel with the shank.

No. 1,482.—NATHAN BRAND, of Leonardsville, N. Y.—*Improvement in Manufacture of Hoe Blanks*.—Patent dated February 26, 1861; reissued May 26, 1863.

Claim.—In the production or manufacture of hoe blanks with shanks made of the same

piece of metal with the plate, and extending on to the plate as a rib, and strengthened around and at the point of the rib by making the metal thicker than in the more extended portions of the hoe blank, forming said hoe blanks by rolling them in different directions at a right angle to each other, as set forth.

No. 1,483.—L. C. CHASE, of Boston, Mass.—*Improved Girth Buckle*.—Patent dated November 8, 1859; reissued May 26, 1863.

Claim.—Confining a buckle to a strap, or other article, by means of one or more rivets or screws passing through one or more wings or flanges, substantially as set forth and for the purpose described.

No. 1,484.—L. L. LANGSTROTH, of Oxford, Ohio.—*Improved Beehive*.—Patent dated October 5, 1852; reissued May 26, 1863.

Claim.—First, constructing and arranging the movable comb frames of beehives in such a manner that when placed in the hive or case, they have not only their sides and bottoms kept at suitable distances from each other, and from the case, substantially in the manner and for the purposes described, but have likewise their tops separated from each other throughout the whole or a portion of their length, substantially in the manner and for the purposes set forth.

Second, constructing and arranging movable frames in such a manner that when they are inserted in the hive, the distances between them may be regulated at will, substantially in the manner and for the purposes described.

Third, constructing movable frames, and arranging them in the hive in such a manner that the bees can pass above them into a shallow chamber or air space, substantially in the manner and for any or all of the purposes set forth.

Fourth, the shallow chamber in combination with the top bars of the laterally movable frames, or their equivalents, and with the perforated honey-board upon which to place surplus honey receptacles, substantially as and for the purposes set forth.

Fifth, a movable partition or divider, substantially as described, when used in combination with movable frames, substantially in the manner and for the purposes described.

Sixth, the use of movable blocks for excluding moths and catching worms, so constructed and arranged as to increase or diminish at will the size of the bee entrance, substantially in the manner and for the purposes set forth.

No. 1,485.—W. N. WHITELEY, of Springfield, Ohio, assignee of JOHN L. HARDEMAN, deceased, late of Arrow Rock, Mo.—*Improved Harvesting Machine*.—Patent dated August 20, 1850; reissued June 18, 1861; again reissued May 26, 1863.

Claim.—First, the combination of a wedge or guiding board with the platform or framework in rear of the cutting apparatus of a side-cutting harvester, having moving cutters, each of which cuts from and towards the main frame, and with the separator at the outer end of said apparatus, so as to incline or guide the cut crop from the cutting apparatus when pushed, heads foremost, therefrom, over the platform or framework, in such a direction that the butts of that portion of it cut by the outer end of said apparatus will, when on the ground, be further back than those cut at the same time by the inner end of said apparatus.

Second, the construction and combination of an automatic conveying or discharging mechanism with the side-cutting apparatus of the harvester described in the first claim, its platform or framework, and the guiding board thereto secured, whereby it is enabled to move the cut crop, heads foremost, from the cutting apparatus over the platform, and so deposit it on the ground that the butts of that portion of it cut by the outer end of the cutting apparatus will be further back than that cut at the same time by the inner end.

Third, the connexion of the aforesaid platform, with its wedge or guiding board thereto secured to the finger bar of the harvester described in the first claim, whereby the attendant of the machine can detach and attach it at pleasure.

Fourth, the use, in combination with a cutting apparatus having moving cutters, each of which cuts from and towards the main frame, of a sustaining rod upon which the bunches or gavels may be formed, and which is withdrawn inward, endwise, from under them, for effecting their discharge from the cutting apparatus.

Fifth, the combination of a rack or reel with the platform or framework and wedge or guiding board described in the first claim.

Sixth, the combination of a rack or reel with an automatic conveying or discharging mechanism which moves the cut crop, heads foremost, from the cutting apparatus described in the first claim, in the manner therein described.

Seventh, the combination of a rack or reel with the cutting apparatus described in the first claim, and the gavelling device described in the fourth claim.

Eighth, the combination or arrangement of the following parts of a side-cutting harvester, having moving cutters, each of which cuts from and towards the main frame, viz: a rack or reel in front of said cutters for pressing the standing crop towards them, the open unobstructed space between the first of said cutters and the vertical plane in which their driving wheel moves, herein described, and the platform or framework in rear of said cutters, so secured thereto that the attendant can detach it at pleasure, so as to allow the cut crop to fall to the ground as fast as cut.

Ninth, the combination or arrangement of the following parts of a side-cutting harvester, having moving cutters, each of which cuts from and towards the main frame, viz: a rack or reel in front of said cutters for pressing the standing crop towards them, the open unobstructed space between the first of said cutters and the vertical plane in which their driving wheel moves, herein described; the projecting point or shoe at the inner end of the cutting apparatus, heretofore described, and the platform or framework in rear of said cutter, so secured thereto that the attendant can detach it at pleasure so as to allow the cut crop to fall to the ground as fast as cut.

No. 1,486.—W. L. WHITELEY, of Springfield, Ohio, assignee of JOHN L. HARDEMAN, deceased, late of Arrow Rock, Mo.—*Improved Harvesting Machine*.—Patent dated August 20, 1850; reissued June 18, 1861; again reissued May 26, 1863.

Claim.—First, a rack or reel, the outer end of whose swords or gathering arms has no connexion either with the outer end of that next in front or rear of it, or with the outer end of the cutting apparatus, when pressing the standing crop towards it, in combination with a side-cutting harvester, having moving cutters, each of which cuts from and towards the main frame of the machine.

Second, a rack or reel whose sword or gathering arms move nearly in a horizontal plane outward from the main frame of the machine and rearward to its cutting apparatus when pressing the standing crop towards it, in combination with a side-cutting harvester, having moving cutters, each of which cuts from and towards the main frame of the machine.

Third, the combination, on a side-cutting harvester, of a rack or reel having no connexion at its outer end with the outer end of the cutting apparatus, with a platform or receiving frame immediately in rear of the finger bar, upon which the crop falls as it is cut, and from which it is discharged, heads foremost, backward and sidewise from the cutting apparatus, and removed from the standing crop so as to permit the passage of the team while cutting the succeeding round.

No. 1,487.—W. M. WHITELEY, JEROME FASSTER, and O. S. KELLY, of Springfield, Ohio, assignees of D. H. and J. K. HARRIS, of Allensville, Ind.—*Improved Mowing Machine*.—Patent dated November 6, 1849; reissued May 26, 1863.

Claim.—First, the combination of the bar which carries the cutting blades, the driving wheel, and the shaft on the draught frame, which is rotated by said wheel through a band or other gearing, and around which, as a common centre, said bar and wheel will vibrate in respect to each other, when drawn over undulating surfaces, substantially as described.

Second, the combination of a handle piece with the bar which carries the cutting blades, vibrating upon an axis of motion at or near its rear edge, by which the attendant of the machine may elevate or depress the points of said blades while they are moving forward and cutting the grass, substantially as described.

No. 1,488.—E. B. REQUA, of Jersey City.—*Improved Lamp*.—Patent dated May 6, 1862; reissued June 2, 1863.

Claim.—First, the tube G, made of metal, with its metal deflector H, insulated by plaster of Paris, or other good non-conducting cement, or made of glass with the deflector H fitted upon it without cement.

Second, the tube J, made of glass, with its deflector I of metal, insulated by plaster of Paris, or other good non-conducting cement.

Third, the combination of the two tubes G J, one placed within the other, and the inner one, including the wick-tube E, when said tubes are constructed with deflectors so as to admit of a space *e* between them, having a narrow passage *e'* to increase the rapidity of the draught against the sides of the flame, substantially as and for the purpose herein set forth.

Fourth, providing the lower end of the wick-tube E with a cap F to serve as a top for the fountain A, when the said cap is used in connexion with the tube G applied to the burner D, the latter screwed into the jacket or case B, and all arranged as shown to form a simple device to admit of the flame being supplied with a requisite quantity of air at its base, and by a current which passes around the fountain A to keep its contents cool, as herein described.

Fifth, the combination of the two tubes G and J, cones H I, wick-tube E, cap F, burner D, flange *g*, jacket or case B, and fountain A, in short, the whole lamp, all arranged and constructed as and for the purpose and in the manner represented and described.

No. 1,489.—WILLIAM H. TOWERS, of Boston, Mass., late of New York, N. Y.—*Improved Inkstand*.—Patent dated October 2, 1860; reissued June 2, 1863.

Claim.—An inkstand, the cap or cover of which consists of two concentric plates or disks, one above the other, and perforated by a correspondingly eccentric hole, the lower of said two plates being provided with a flange or rim raised around its hole in such a manner as to avoid all leakage of ink between the plates, and made to operate substantially as above described.

No. 1,490.—NOYES D. LAMB and ANSEL CLARK, assignees of NOYES D. LAMB, of Norwich, Conn.—*Improved Alarm Whistle*.—Patent dated October 8, 1861; reissued June 2, 1863.

Claim.—The combination of the mouth-piece, receiving cylinder, and sounding cup or bell, constructed and operating together substantially as herein described.

No. 1,491.—J. H. CRANE, of Charleston, Mass.—*Improved Spring Bed*.—Patent dated April 3, 1860; reissued June 9, 1863.

Claim.—The employment of springs formed, arranged, and operating as described, in combination with the slats and rails of a spring bed.

No. 1,492. (A.)—W. A. KIRBY, of Buffalo, N. Y., and D. M. OSBORN, of Auburn, N. Y., assignees of said W. A. KIRBY.—*Improved Harvesting Machine*.—Patent dated July 2, 1861; reissued June 9, 1863.

Claim.—In combination with an automatic rake in a reaping machine, a hinged reaching post and two connecting rods, operated from one and the same crank, for the purpose of giving said rake its motions, substantially as described.

Also, hinging and supporting the rake post on the main frame and inclining it backward, so that the rake will be out of the way of the falling grain when at rest, and be raised high enough, as it moves toward the outside divider, to avoid the falling grain, and drop beyond the stalks on the platform, preparatory to sweeping them off, substantially as described.

Also, in combination with an automatic rake, the lever, trigger and clutch arm, substantially as described, so that the driver at his seat may stop or set the rake in motion at his will, or set the trigger so that it will stop the rake after making one operation, as described.

No. 1,493. (B.)—W. A. KIRBY, of Buffalo, N. Y., and D. M. OSBORN, of Auburn, N. Y., assignees of said W. A. KIRBY.—*Improved Harvesting Machine*.—Patent dated July 2, 1861; reissued June 9, 1863.

Claim.—In combination with a rake post on the main frame and the rake-driving shaft supported at one of its ends on a supplemental frame, the two frames having motions independent of each other, the universal joint *k*, in the rake shaft, for the purpose and in the manner substantially as described.

No. 1,494. (C.)—W. A. KIRBY, of Buffalo, N. Y., and D. M. OSBORN, of Auburn, N. Y., assignees of said W. A. KIRBY.—*Improved Harvesting Machine*.—Patent dated July 2, 1861; reissued June 9, 1863.

Claim.—Placing or making a guard or shield upon a supplemental frame or plate, to which the driving wheel is attached, and passing it under and partially around the gearing attached to said wheel to protect it from injury or from being clogged, substantially as described.

No. 1,495. (D.)—W. A. KIRBY, of Buffalo, N. Y., and D. M. OSBORN, of Auburn, N. Y., assignees of said W. A. KIRBY.—*Improved Harvesting Machine*.—Patent dated July 2, 1861; reissued June 9, 1863.

Claim.—First, driving the reel of a harvesting machine by means of a pulley placed within an endless belt, so as to spread apart the belt, and thus be driven by the friction of the belt on diametrically opposite sides of said pulley, this arrangement admitting of an easy adjustment of the reel, without loosening the belt, substantially as described.

Second, placing a tightening pulley above the reel pulley, for the purpose of allowing the reel with the reel pulley attached to be raised and lowered to points between the driving pulley and the tightening pulley, without materially affecting the tension of the belt, and thus avoiding the necessity of changing its length, substantially as described.

No. 1,496.—O. H. BURDICK, of Auburn, N. Y., assignee of HUGH FORESMAN, of Enon, Ohio.—*Improved Raking Attachment to Harvesters*.—Patent dated May 13, 1856; reissued June 16, 1863.

Claim.—First, in combination with a rake receiving its sweeping motion from a revolving wheel and pin, a raising and lowering mechanism, that brings the rake into position, to clear the platform of the cut grain, and returns it out of reach of the platform for the next sweeping operation, substantially as described.

Second, in combination with a sweeping rake, an adjustable crank-pin, for varying the sweep thereof, in the manner and for the purpose described.

Third, the combination of a revolving wheel and pin, with a slotted rake stake, to give the rake its sweeping motion to clear the platform, and to return for the next sweeping motion, substantially as described.

No. 1,497.—LEVI L. HILL, of Hudson, N. Y.—*Improvement in Making Illuminating Gas*.—Patent dated June 17, 1862; reissued June 16, 1863.

Claim.—First, generating gas for illuminating and other purposes by bringing water and a hydro-carbon fluid simultaneously in contact with freshly formed incandescent charcoal, substantially as set forth.

Second, generating gas for illuminating and other purposes, by bringing water and a hydro-carbon fluid simultaneously in contact with freshly formed incandescent coke, substantially as set forth.

Third, the use of freshly formed incandescent charcoal or coke for the decomposition of water or a hydro-carbon fluid, or of both combined, when applied simultaneously to the charcoal or coke, for the production of gas for illumination and other purposes, substantially as described.

Fourth, the combination of the gas from the distillation of wood, with that produced from the action of water and a hydro-carbon fluid, simultaneously applied to the freshly formed incandescent charcoal from the wood, in the manner substantially as set forth for the production of gas for illuminating and other purposes.

Fifth, the combination of the gas from the distillation of bituminous coal, or its equivalent, with that produced from the action of water and a hydro-carbon fluid, simultaneously applied to the freshly formed incandescent coke from the coal, in the manner substantially as set forth for the production of gas for illuminating and other purposes.

No. 1,498.—JOHN KEDZIE, of Rochester, N. Y.—*Improved Filter*.—Patent dated July 11, 1854; reissued June 16, 1863.

Claim.—A crock *B*, provided with perforations *a a*, and the eduction pipe *c*, at its bottom, and communicating with the outer air at the top by means of the pipe *f*, or in an equivalent manner, said crock being used in combination with the surrounding packing *C* and receptacle *A*, substantially as herein set forth.

No. 1,499.—DAVID M. OSBORNE and WM. A. KIRBY, of Auburn, N. Y., assignees by mesne assignments of JEREMIAH W. MULLEY, of Amsterdam, N. Y.—*Improved Reaping and Mowing Machine*.—Patent dated February 10, 1857; reissued November 29, 1859; again reissued June 16, 1863.

Claim.—In combination with a reel supported on a single reel post, an adjusting mechanism by which the reel may be raised up or let down upon the post, and the reel and post leaned more towards or from the standing grain or grass, as the condition of the crop may require, and substantially as herein described.

No. 1,500.—AMERICAN SHOE-TIP COMPANY, assignees by mesne assignments of GEORGE A. MITCHELL, of New Haven, Conn.—*Improved Machine for Swaging Shoe Tips*.—Patent dated June 26, 1860; reissued June 16, 1863.

Claim.—The die block formed to give the required shape to the outside of a shoe or boot tip, and with its outer face flat to receive and hold the sheet-metal blank substantially as described, in combination with a swage of the form of the inside of the tip to be produced, and so operated as to act on the sheet-metal blank at an angle, substantially as and for the purpose specified.

Also, in combination with a die block and swage having a mode of operation substantially as herein described, a guide or gauge to hold the convex edge of the blank in required position relatively to the die, and to resist the force of the swage when it first acts obliquely on the sheet-metal blank, substantially as described.

No. 1,501.—GUSTAVUS FINKEN, of New York city.—*Improved Sugar-Draining Apparatus*.—Patent dated November 11, 1856; reissued June 23, 1863.

Claim.—First, the employment, for the purposes of carrying sugar moulds to the cooler or cistern from which they are filled, of containing them while being filled, and of transporting the filled moulds to a convenient place for draining, of a wheel carriage constructed with suitable seats and means of holding several moulds in an upright position, substantially as herein described, whereby is effected the saving of labor herein explained.

Second, furnishing such a carriage as is hereinabove specified with movable mould stoppers applied to be operated by means of one or more levers, or their equivalent, outside of the carriage, substantially as and for the purpose herein specified.

Third, providing in such a carriage as is hereinbefore specified a vacuum chamber for the connexion of an air pump or its equivalent, substantially as and for the purpose herein specified.

No. 1,502.—C. B. HUTCHINGS, of Rochester, N. Y.—*Improved Grain Separator*.—Patent dated November 20, 1860; reissued June 23, 1863.

Claim.—The tubes *T* and *T'*, screens *S* and *S'*, and division *D*, or their mechanical equivalents, when constructed, arranged and operated substantially in the manner and for the purposes specified.

Also, the relative arrangement of the screens *S*, the blank surface of one being opposite the perforated section of the one next above it, as specified, so as to catch the kernels of oats or other similar grain which may pass through the upper screen and strike the blank surface of the next endwise, and cause them to fall to a horizontal position, and thereby pass over the perforated section of this screen and be discharged at the side of the machine, while the wheat kernels, being short, pass through the perforations, as and for the purpose described.

No. 1,503.—**SOCRATES SCHOFIELD**, of Norwich, Conn.—*Apparatus for Teaching the Art of Swimming*.—Patent dated May 12, 1863; reissued June 23, 1863.

Claim.—The combination of a float with a suitable apparatus to prevent the entrance of water while breathing, the whole being constructed to operate substantially in the manner described.

Also, a mouth-piece D, arranged with the pipes *a* and *b b*, to be applied directly to the mouth and nostrils, substantially as specified.

No. 1,504.—**W. H. GWYNNE**, of White Plains, N. Y.—*Apparatus for Making Water Gas*.—Patent dated March 11, 1862; reissued June 30, 1863.

Claim.—The distributing box B, with its circulating and heating passage D, and its perforated cover or top C, the whole operating substantially as herein described and shown for the purpose set forth.

No. 1,505.—**W. H. GWYNNE**, of White Plains, N. Y.—*Improved Process of Making Water Gas*.—Patent dated March 11, 1862; reissued June 30, 1863.

Claim.—The within described mode of obtaining a more uniform mixture of gases eliminated from coal and water, or their equivalents, in separate retorts, by supplying the hydrocarbon gas retort with gases eliminated from vapor of water in a separate retort by passing steam super-heated to about the temperature of the incandescent decomposing material in a finely divided state through the mass of said decomposing material, substantially as and for the purposes set forth.

No. 1,506.—**JOSEPH C. HENDERSON**, of Albany, N. Y.—*Improved Stove*.—Patent dated May 29, 1860; reissued June 30, 1863.

Claim.—First, a reservoir or hopper constructed at its lower end to contain and supply fuel, in combination with a fire-pot, separate from said reservoir, and to which the coal is supplied at or near the centre, so that the products of combustion pass away from the surface of the fire around the contracted base of the said hopper, substantially as specified.

Second, a chamber or horizontal flue around the base of the reservoir or hopper, supplying coal, and over the surface of the fire, to receive and detain the products of combustion in contact with the fire heat until perfectly consumed, as set forth.

Third, a contracted outlet or opening from the said chamber or horizontal flue, formed as aforesaid, to prevent a too rapid escape of the products of combustion, as specified.

Fourth, the surrounding case *b*, in combination with the said hopper, fire-pot, and chamber above the fire, for receiving the products of combustion from the said chamber and radiating heat, substantially as set forth.

Fifth, in combination with a hopper over the fire, a circulating current of air surrounding such hopper to aid in cooling the fuel in said hopper, substantially as specified.

Sixth, the supply door *f* and register *i*, in combination with the hopper *e*, and draught space *g*, as set forth.

Seventh, a circulating current of air passing through the hollow lower end of the supply hopper and entering the combustion chamber over the fire for promoting combustion and keeping the hopper from injury by heat, as set forth.

No. 1,507.—**WILLIAM H. LYMAN**, of Newark, N. J.—*Improved Whip Socket*.—Patent dated April 15, 1856; reissued June 30, 1863.

Claim.—The application to a whip socket A of an elastic disk B, provided with a hole *a*, substantially in the manner and for the purpose herein shown and described.

No. 1,508.—**OREN E. MILES**, of Aurora, Ill.—*Improvement in Construction of Wheeled Vehicles*.—Patent dated February 5, 1862; reissued June 30, 1863.

Claim.—First, in wheel vehicles the arrangement of the rotating arm C, and the wheel hub or centre B, the latter being fitted within the other and confined and released by the bolt *c*, or its equivalent, substantially in the manner and for the purpose herein set forth.

Second, in wheel vehicles the arrangement of the bolster A, truss rods *f*, centre-frame or part G, outer bearing frames E, or its equivalent, and a rotating arm C, carrying a wheel rigidly connected, substantially as and for the purpose herein set forth.

Third, in wheel vehicles having a rotating arm C, rigidly connected with the wheel B, the within described and represented arrangement of the springs *s* and *h*, and guiding pin *i*, relatively to the bolster A, hole *j*, and box D, or their equivalents, for the purpose set forth.

Fourth, in wheel vehicles the within described arrangement of the rotating arm C, parts *k*, and trunnions *l l*, relatively to the levers *r r*, frame *w*, and block G, or their respective equivalents, for the purpose above set forth.

No. 1,509.—**FLORIAN GROSJEAN**, of New York city.—*Improved Sheet-Metal Spoon*.—Patent dated January 28, 1862; reissued June 30, 1863.

Claim.—Stamping or swaging spoons of single pieces of sheet-metal with a middle corrugation or raised ridge, extending along the narrow or weaker part of the handle and prolonged into the bowl of the spoon, so as to give full strength to the junction of the bowl and handle, either leaving the handle flat on both sides or with a bead around the middle corrugation, substantially as and for the purposes herein specified.

No. 1,510.—**DOUGLAS BLY**, of Rochester, New York, assignee of R. H. NICHOLAS and DOUGLAS BLY.—*Improved Artificial Leg*.—Patent dated July 28, 1857; reissued June 30, 1863.

Claim.—A universal joint in connexion with two parts A B of an artificial leg, substantially as and for the purpose herein set forth.

Also, two tendons *t t*, and their springs *s s*, or their equivalents, in combination with two parts A B of an artificial leg, for the purpose of holding the said parts properly together, and keeping the articulating surfaces of the joint in constant coaptation, substantially as herein specified.

No. 1,511.—**F. F. FOWLER**, of Crane township, Ohio.—*Improved Machine for Gathering Hay*.—Patent dated January 22, 1861; reissued July 14, 1863.

Claim.—First, connecting the side and cross pieces of the machine together by flexible or yielding joints, so that either side of the machine may rise or fall, in yielding to the inequalities of the ground, independent of the other side, substantially as described.

Second, constructing and combining the fingers with the runners, so that the rear under portions of the fingers shall also act as runners and supporters, and mutually aid, and be aided by, the runners proper in carrying the load, substantially as described.

Third, the combination of a hinged tongue, a twining finger bar, and the flexibly-connected runners, so that as the machine is raised behind it may roll down in front on the curve of the runners, for the purpose of dumping or discharging the load, substantially as herein described.

No. 1,512.—**JOSIAH J. SHERMAN**, of Albany, New York.—*Improved Car and Truck Connection*.—Patent dated April 14, 1863; reissued July 14, 1863.

Claim.—First, the employment or use of balls E, or rubbers F', interposed between the trucks and the car body in suitable boxes, when the said parts are constructed and combined in the manner herein specified, so as to permit free motion of the car body laterally in either direction, and afterwards restore it automatically to its normal position.

Second, the combination of the annular springs *g* with the bearings *e f g h i j*, or any of them, when arranged to operate, in the manner and for the purposes herein specified.

Third, the combination of the annular springs *g* with the bearings *e f g h i j*, or any of them, or the mechanical equivalent of said springs when used in connexion with the balls E, or rubbers F', to restrain or qualify their action, substantially in the manner herein set forth.

No. 1,513.—**J. H. LOCKEY** and **W. M. HOWLAND**, (assignees of HORATIO KEYS,) of Leominster, Mass.—*Improved Apple-paring Machine*.—Patent dated December 16, 1856; reissued July 21, 1863.

Claim.—First, giving the knife a circular movement around the fork G and apple, or other article thereon, substantially in the manner and for the purposes shown and described.

Second, the combination of the wheel or turn-table K, cam O, and shank M, of the knife head P, constructed and operating in the manner and for the purpose substantially as herein set forth.

No. 1,514.—**LUCIUS C. CHASE**, of Boston, Mass.—*Improved Halter Ring*.—Patent dated April 30, 1861; reissued July 23, 1863.

Claim.—First, attaching a halter dee, or other harness ring, to a halter or harness strap, by means of one or more rivets passing through holes in one or more flanges on said dee or ring, substantially as set forth and for the purpose described.

Second, providing the edge of the flange or flanges *a* with the rim or rims *f*, substantially as described and for the purposes specified.

No. 1,515.—**PAUL DENNIS**, of Bemus's Heights, N. Y.—*Improved Cultivator*.—Patent dated September 23, 1858; reissued August 4, 1863.

Claim.—First, the inclined shovel mould board B, formed and mounted substantially as described, and constructed highest at its outer edges, so as to form on each side of the standard A a recess *c*; through which recess a portion of the earth may, after rising upon the mould-board, descend into the furrow in the rear of the plough.

Second, the combination with the beam A, and mould-board B, of the adjustable wheel F, arranged and operating substantially as and for the purposes specified.

No. 1,516.—**DENNIS G. LITTLEFIELD**, of Albany, N. Y.—*Improved Fire-Pot for Stoves*.—Patent dated June 26, 1861; reissued August 4, 1863.

Claim.—In the construction of that class of stoves which has a supply cylinder for reserve coal and an external case which surrounds the fire-pot and encloses a space into which the products of combustion pass sideways through apertures in said fire-pot, the employment of scapolite, fire-brick, or other equivalent refractory or indestructible and slowly-conducting material to compose that part of the fire-pot or burning chamber between or immediately around said apertures, substantially as and for the purposes specified.

Also, in combination with the supply cylinder M, the rings or framing pieces U R, constructed so as to admit the use, removal, and replacement of separate soapstone, fire-brick, or other equivalent refractory or heat-resisting material, substantially as and for the purposes herein specified.

No. 1,517.—SILAS SHEPARD, of Taunton, Mass.—*Improved Loom*.—Patent dated July 29, 1862; reissued August 4, 1863.

Claim.—The combination of an escapement mechanism (connected to the warp-beam by means of gearing) with the mechanism by which the yarn is let off from the beam by its tension and the stroke of the lay, and by which uniform tension is maintained upon the warp, all arranged and operating together substantially as described.

No. 1,518.—JEDEDIAH WILCOX, of Meriden, Conn., assignee by mesne assignments of BELA A. MANN, of West Meriden, Conn.—*Improved Machine for Clasping Hoops to Ladies' Skirts*.—Patent dated December 24, 1861; reissued August 4, 1863.

Claim.—A clasp-feeding device, consisting substantially of an inclined plate and one or more guide bars, the whole operating substantially as herein set forth.

Also, the said feeding device constructed with an opening to permit the escape of misarranged clasps, substantially as herein set forth.

Also, the combination of a hopper with a clasp-feeding device and with a clasp-supplying device, the combination as a whole operating substantially as herein set forth.

Also, the combination of a clasp-clinching device with a clasp-supplying device, the whole operating substantially as herein set forth.

Also, the combination of a hopper, a clasp-feeding device, a clasp-supplying device, and a clasp-clinching device, the combination as a whole operating substantially as herein set forth.

Also, the combination of a clasp-clinching device with a liberating device, operating substantially as herein set forth.

Also, the combination of a clasp-clinching device and of a clasp-supplying device with a treadle, operating substantially as herein set forth.

No. 1,519.—J. B. BARCELO, of Tuscarora, N. Y.—*Improved Grain Separator*.—Patent dated December 9, 1862; reissued August 11, 1863.

Claim.—The vertically-adjusting screen B, having projecting bearings c c, when arranged in combination with the shoe A and its gains d d, in such a manner that the screen can be applied to any ordinary mill without special adaptation, said screen being adjusted relatively to the blast by means of the rod and nut f g, or equivalent, the whole arranged and operating substantially as herein set forth.

Also, in combination with the vertically-adjusting screen B, the longitudinally-adjusting discharge board C, substantially as herein described.

No. 1,520.—CONRAD FURST, DAVID BRADLEY, and JOHN LACEY, of Chicago, Ill.—*Improved Horse Rake*.—Patent dated April 15, 1862; reissued August 11, 1863.

Claim.—First, the slide and socket M and P, arranged in combination with a rake head and axle, substantially as and for the purposes specified.

Second, the combination of the lever A, connecting bar B, front pad or pin e, and the treadle c, with the rake head, substantially as set forth and specified.

No. 1,521.—WILLIAM HANES, of Albany, N. Y.—*Improved Grate for Stoves*.—Patent dated November 18, 1862; reissued August 11, 1863.

Claim.—First, a grate having varying openings or spaces extending from or about the centre thereof to the circumference or rim, when constructed substantially as shown in figure 1, with a series of long and short projections a b running towards its centre, substantially as described.

Second, in combination with the above, the projections a' a' on the circumference, all for the purpose herein described.

Third, casting a grate with the tongue portion B, forming an extension of the rim of the grate, and constituting the means whereby the grate can be vibrated, substantially as described.

Fourth, the supporting bar for the grate, when constructed with the vertical segmental slot D through it, for receiving and allowing a free circular play to be given to the tongue B, and also to the grate, of which this tongue forms a part, substantially as described.

Fifth, the curved-tongue portion B, formed on the grate, in combination with the vertically-slotted segmental portion D, formed on the rocking bar, operating substantially as and for the purposes described.

No. 1,522.—FREDERICK STEVENS, of New York city, assignee of LUTHER FOGG, of Boston, Mass.—*Improved Buckle*.—Patent dated June 2, 1863; reissued August 11, 1863.

Claim.—First, the curved frame a a, swinging on its axis A, at or near its centres, provided with stops i i, and with the anterior front b' bevelled, all as set forth.

Second, the grooved tongue c, with its lugs f f, working on its own axis g, and furnished with the axis h, upon which the curved frame a a is hinged, all as set forth.

Third, the shank k, when rigidly attached to the strap, in combination with and hinged to the posterior bar q of the tongue c, substantially as described.

Fourth, the combination of the curved frame a a, with its stops i i, and bevelled front b', with the grooved tongue c, and its lugs f f, and the rigidly-attached shank k, substantially as set forth.

No. 1,523.—ERASTUS B. BIGELOW, of Boston, Mass.—*Improved Brussels Carpet Loom*.—Patent dated March 20, 1847, and extended; reissued August 18, 1863.

Claim.—First, the organized means of operating the pile wires automatically, whereby they are successively withdrawn, supported, transferred, and inserted, substantially as described.

Second, the employment of fingers, or the equivalent thereof, as a means of transferring the pile wires towards their desired position for insertion into the shed of the figuring warps, substantially as described.

Third, the method of introducing the pile wires into the shed of the figuring warps by means of a trough, or the equivalent thereof, which supports and carries them into the shed, drops them therein, and then moves back for the succeeding wire, substantially as described.

Fourth, the above-described means of supporting the pile wires while being transferred toward their desired positions prior to and for insertion into the shed of the figuring warps.

Fifth, the above-described means of supporting the pile wires in positions ready for insertion into the shed of the figuring warps, and all equivalent means of effecting the same end, when said means form a part of an organized method of wholly operating the pile wires automatically.

Sixth, the above-described and all equivalent means of supporting the pile wires while being inserted into the shed of the figuring warps, when said means form a part of an organized method of wholly operating the pile wires automatically.

Seventh, making the mechanism which weaves or forms the body of the cloth separate and with a distinct organization from the mechanism which operates the pile wires, each mechanism being operated separately, and the two being connected by an intermediate mechanism, which starts one of them as it arrests the other by shifting what communicates the motive power from the one to the other.

No. 1,524.—ELISHA FITZGERALD, of New York city.—*Improved Aerating Paste or Dough*.—Patent dated October 8, 1861; reissued August 18, 1863.

Claim.—First, forcing the dough or paste into the reservoir A against the pressure of the gas.

Second, the process of keeping up a continuous supply of dough or paste under pressure in the receiver.

No. 1,525.—THEODORE R. TIMBY, of Saratoga Springs, New York.—*Improved Solar Time Globe*.—Patent dated July 7, 1863; reissued August 18, 1863.

Claim.—First, a globe A, surrounded by a ring or dial D, and revolved with the same once in twenty-four hours, in combination with a stationary index F, substantially in the manner and for the purpose specified.

Second, the adjustable dial C, attached to the ring D, and revolving with the same and with the globe A, under a stationary index F, as and for the purpose set forth.

No. 1,526.—JAMES HAYNES, of Hollis, Maine.—*Improvement in Wood Saw Frames*.—Patent dated August 9, 1859; reissued August 25, 1863.

Claim.—A wood saw frame as made, with a wooden top cross-bar E tenoned or firmly fastened in the frame, and combined with the central or bottom wooden bar D, the wooden front and handle ears F G, the saw blade and a straining mechanism, separate from such top bar, or employed and to operate substantially as described.

Also, the improved straining mechanism, substantially as described, the same consisting of the inclined plane, the rack and strainer or lever arranged and combined with saw blade and its frame, as specified.

No. 1,527.—JOHN RICHARDS, of Columbus, Ohio.—*Improvement in Guide and Support for Scroll Saws*.—Patent dated May 27, 1862; reissued August 25, 1863.

Claim.—First, running the upper portion of a web or scroll saw above the table in a groove of an anti-friction guide and support substantially as and for the purpose described.

Second, operating practically an unstrained web or scroll saw, by combining with such saw mills an upper anti-friction guide, which supports the back of the saw blade, and also sustains the saw blade at its sides or faces, substantially as set forth.

Third, the use of anti-friction guides as a substitute for straining devices, in combination with web or scroll saw blades, the guide to be raised and lowered to suit the thickness of the stuff, substantially as set forth.

Fourth, an anti-friction guide which is adjustable so as to accommodate different thicknesses of saw blades, and to compensate for wear, in combination with the upper portion of a web saw blade, substantially as set forth.

Fifth, the combination of the anti-friction saw support and guide, or the equivalent thereof, with an adjustable guard, or its equivalent, substantially as and for the purpose set forth.

No. 1,528.—EBENEZER H. PLANT, of New Haven, Conn., HENRY REYNOLDS, of Springfield, Mass., and AMZI P. PLANT and ALFRED HOTCHKISS, of Southington, Conn., assignees of WILLARD C. ELLIS and JOHN N. WHITE, of Springfield, Mass.—*Improvement in Revolving Fire-arms*.—Patent dated July 12, 1859; reissued August 25, 1863.

Claim.—The construction of the rear portions of the chambers of the cylinder of a revolver with openings through which the hammer may strike the cartridges, but otherwise closed, or partly closed, to prevent the cartridge from slipping through, whereby the loading at the front with a metallic cartridge carrying its own priming, and the firing of such cartridge by the blow of the hammer upon its shell, as herein specified, are provided for, without the employment or arrangement of an abutment to press up against the rear end of the cartridge case, all as set forth.

No. 1,529.—EBENEZER H. PLANT, of New Haven, Conn., HENRY REYNOLDS, of Springfield, Mass., and AMZI P. PLANT and ALFRED HOTCHKISS, of Southington, Conn., assignees of WILLARD C. ELLIS and JOHN N. WHITE, of Springfield, Mass.—*Improved Metallic Cartridge*.—Patent dated July 12, 1859; reissued August 25, 1863.

Claim.—The hollow flange *b* projecting from the rear of the shell in a backward direction parallel, or nearly, with the length of the cartridge, substantially as and for the purpose herein specified.

No. 1,530.—NATHAN F. BURNHAM, of York, Pa., formerly of Laurel, Md.—*Improved Water Wheel*.—Patent dated February 22, 1859; reissued September 1, 1863.

Claim.—First, a hub, formed with a concave exterior in any manner, substantially as described, so as to derive a lifting tendency from the entrance of the water, and deflect it downward, in the described combination with a bucket formed with face vertical, or nearly so, at the top, to receive the direct force of the water, and inclined at bottom to receive its gravitating force.

Second, the combination of the chutes or scrolls *M M* and wheel *Q R*, constructed as herein described, to adapt the wheel to operate with good effect with any proportionate quantity of water.

No. 1,531.—GEORGE ASMUS, of Houghton, Mich., assignee of AUGUST W. SCHELL, of Clausthal, kingdom of Hanover.—*Improved Machine for Separating and Cleaning Ores*.—Patent dated March 10, 1863; reissued September 1, 1863.

Claim.—First, the employment or use, for the purpose of separating ores, of an apparatus, substantially such as herein described, whereby the layer of grains of the greatest specific gravity, formed by imparting to the ore a motion in water, is partially insulated from the next succeeding layer of smaller specific gravity, while at the same time the accretion of the first layer is continually drained off.

Second, insulating, either wholly or partially, the layer of the heaviest grains from the succeeding layer of specific lighter grains, said layers being formed by the motion of the ore in water, substantially in the manner and for the purpose herein set forth and described.

No. 1,532.—TISDALE CARPENTER, of Providence, R. I.—*Improved Steam Engine*.—Patent dated January 29, 1861; reissued September 1, 1863.

Claim.—First, regulating the velocity of a steam engine by connecting a regulator permanently or positively with the induction valves by means of levers of variable length working between a pair of corresponding cam disks, and employed to close as well as open the valve in a positive manner, substantially as herein specified.

Second, the cam *C C'* and variable rocking levers *D Z D Z*, working between and controlled by said cams, when used in combination with each other and with the induction valves of a steam engine, substantially as herein described, either in connexion with a regulator, to constitute an automatically variable cut-off gear, or without a regulator, to serve as an adjustable cut-off.

Third, the arrangement of the eduction valves and their chambers and ports in the cylinder heads, substantially as and for the purpose herein specified.

No. 1,533.—ENOCH HIDDEN, of New York city.—*Improvement in Side Lights for Ships*.—Patent dated June 21, 1853; reissued September 8, 1863.

Claim.—The arrangement of screws *F* tapped into the main frame *B*, in combination with inclined planes or spirals *O*, forming part of said screws that hold the light frame or cell containing the glass fast to the India-rubber in its grooved seat in the main frame, with its stop-pin *a*, for stopping the screw in its proper position when the light is to be opened for ventilation.

Also, the projecting ears *E*, with slots or chase mortises in which the pivots of the light frame or cell turn, allowing the light to be hauled from its seat, and consequently out of contact with the India-rubber, so as to allow the plane of the light to be placed at an angle to the main frame thus freely admitting of ventilation.

Also, the arrangement of a lead or other ductile metallic ring soldered on or otherwise joined to the main brass frame of the light as that it can be turned round the outer edge of the opening in the vessel, securing any suitable material, completely making the main frame of the light water-tight to the vessel, substantially as herein set forth.

No. 1,534.—ISAAC E. PALMER, of Montville, Conn.—*Improved Tackle Block*.—Patent dated November 1, 1859; reissued September 8, 1863.

Claim.—So constructing a tackle block and pulley that the rope or fall, when desired, may be clamped between a fixed portion of the block and a portion of the pulley, substantially as herein described, by simply leading it in a direction oblique to the plane of revolution of the pulley without tying or the use of dogs, movable stops, or any other means of fastening.

No. 1,535.—WILLIAM F. WARBURTON, of Philadelphia, Pa.—*Improvement in Ventilated Hats*.—Patent dated December 11, 1860; reissued September 8, 1863.

Claim.—A flexible band or strip of metal, or other equivalent material, secured to the inside of a hat, at such a distance from the same, and between such points, that it will accommodate itself to the wearer's forehead without interfering with the passage of air between the said band and the hat, as set forth.

No. 1,536.—JAMES B. EADS, of St. Louis, Mo.—*Improvement in Operating Gun and Gun Tower*.—Patent dated March 31, 1863; reissued September 15, 1863.

Claim.—Making the gun-tower in sections, so that the top section may be lowered into the hold of the vessel, for the purpose and in the manner substantially as described.

Also, depressing and elevating the aim of the gun whilst the muzzle is kept at or near the centre of the porthole, by raising and lowering the carriage of said gun, substantially in the manner and for the purpose herein described.

Also, levelling the gun in the tower, in the act of raising it, by means of the tripping-pin near its point or muzzle and the guide on the tower, so that a very small port may be used, as the gun must enter it fairly without striking the sides of the port, substantially as described.

Also, the causing of the recoil of the gun, or its recoil or reaction, to open the steam ports of the cylinder that moves it out and in, and thus cause the steam to resist the recoil, or recoil and reaction.

No. 1,537.—D. H. FITCH, jr., of Litchfield, Ill.—*Improved Liquid for Galvanic Batteries*.—Patent dated June 16, 1863; reissued September 15, 1863.

Claim.—The use of chlorate of potassa, in combination with sulphuric acid and water, for the purpose specified.

Also, the use of the salts of chloric acid, in combination with sulphuric acid and water, for the purpose specified, their action being substantially the same as chlorate of potassa.

Also, the use of chloric acid when obtained by the decomposition of a chlorate by sulphuric acid, for the purpose specified.

No. 1,538.—JOHN PEPPER, of Holderness, N. H.—*Improved Knitting Machine*.—Patent dated July 17, 1855; reissued September 15, 1863.

Claim.—First, the bar *c*, with its grooves *c'*, having its rear elevated above its forward portion, for the purpose of preventing the needle from rolling, as described.

Second, in combination with the hooked sinkers and ribbed needles, made to operate substantially as described, the series of cast-off sinkers, or those formed without hooks, the same being arranged in the sinker bar, and not only so as to admit the rib needles to work between the hooked sinkers, but so as to render the machine capable of performing either plain or ribbed work, as specified. Also, making the ribbed needle take the place of the front or hook of the sinker in forming the loops for the rib stitch.

No. 1,539.—ABBY A. LIVINGSTON, of New York city, assignee of W. F. GEORGE.—*Improved Hair Crimper*.—Patent dated January 29, 1861; reissued September 15, 1863.

Claim.—First, a hair crimper formed of a pair of fluted or corrugated plates or blocks *D* of any suitable material, connected by a hinge or hinges *B* attached either directly to the plates or blocks or through the medium of separate backs *A*, and thus either with or without the handles *C*.

Second, the handles *C C* connected by hinges *a a* to the corrugated blocks or plates *D*, or backs *A*, in the manner and for the purpose set forth.

No. 1,540.—SETH NILWARTH, of Charlestown, Mass.—*Improved Machine for Drawing Bolts*.—Patent dated November 29, 1859; reissued September 15, 1863.

Claim.—The combination of the stock or frame to form a rest against the timber from which a spike is to be drawn, the gripping jaws to take hold of the bolt, the rotating nut and the hollow lifting screw for drawing the jaws by a wedge-like action, so that the force applied to draw the bolt shall act upon the jaws and cause them to grasp the bolt by a force corresponding to the force required to draw it, the screw being tubular or hollow, and the jaws being so constructed as to permit the bolt to pass them, substantially as herein described.

Also, the hollow ram, in combination with the stock, the lifting screw and the gripping jaws, substantially as and for the purpose specified.

No. 1,541.—WILLIAM BAKER, of Utica, N. Y.—*Improved Clapboard Joint*.—Patent dated May 16, 1854; reissued September 22, 1863.

Claim.—First, the construction of the joint of clapboards or jointed siding for houses and other buildings in such manner that the boards, when laid on the frame, shall lie flat and solid for their whole width against the frame of the building; and at the same time shall preserve the appearance and advantage of clapboarding in front by the outer lip of the upper board at each joint overlapping outside the board next and below it, for shedding the water, as described.

Second, the combination of the lock *a* in the rear of the joint for holding the board to the frame at the lower edge, as described, with the extended lip *C*, Fig. 1, in front, for covering the head of the nail, as described; the whole being constructed, combined, and arranged substantially in the manner and for the purposes herein set forth.

No. 1,542.—THEO. A. HAVEMEYER, assignee of T. A. HAVEMEYER and HENRY SMITH, of New York city.—*Improved Sugar Mould Carriage*.—Patent dated March 18, 1863; reissued September 22, 1863.

Claim.—First, the adjustable plates *G H* provided with arms *f f'*, and arranged or applied to the carriage, substantially as and for the purpose set forth.

Second, in combination with the adjustable plates *G H*, the frame *A*, provided with recesses *k*, to receive the tips *l* of the moulds, as specified.

Third, providing the frame *A* with a recess *e* and its front part or end, substantially as shown; to receive the caster wheel *C*, when said frame, recess, and caster wheel are used in combination with or applied to a sugar-mould carriage, for the purpose herein specified.

Fourth, the hollow post *E* arranged to receive the arbor *c* of the caster wheel *C*, and attached to the frame *A* to support the front end of the plates *G H*, substantially as set forth.

Fifth, the combination, construction, and arrangement of the parts herein shown and described, to operate as and for the purpose specified.

No. 1,543.—JOHN BATCHELDER, of Lisbon, Conn.—*Improvement in Sewing Machines*.—Patent dated May 8, 1849; extended May 8, 1863; reissued September 22, 1863.

Claim.—First, in combination the holding surface which supports the material immediately about the needle horizontally under the thrust of the needle, and the continuous discharging feed, which moves the material horizontally under and past the needle upon and over such holding surface, each having the functions and mode of operation herein specified.

Second, in combination the holding surface which supports the material immediately about the needle horizontally under the thrust of the needle, the continuous discharging feed which moves the material horizontally under and past the needle upon and over such holding surface, and the receiving and supporting or discharging plate which receives the material from the feed and insures its free passage from the feed and machine during the operation of the machine in sewing a seam, each having the functions and mode of operation hereinbefore specified.

Third, in combination the horizontally holding surface immediately about the needle, the continuous discharging feed, the receiving and supporting or discharging plate and the yielding pressure holder, each having the functions and mode of operation hereinbefore specified.

Fourth, in combination the horizontally holding surface immediately about the needle, the continuous discharging feed, and the yielding pressure holder, each having the functions and mode of operation hereinbefore specified.

Fifth, in combination the horizontally holding surface immediately about the needle, the continuous discharging feed, the yielding pressure holder, and a sewing mechanism, each having the functions and mode of operation hereinbefore specified.

Sixth, in combination the horizontally holding surface immediately about the needle, the continuous discharging feed, the yielding pressure holder, and the reciprocating eye-pointed needle, each having the functions and the mode of operation hereinbefore specified.

Seventh, in combination the receiving and supporting or discharging plate, and the continuous discharging feed, each having the functions and mode of operation hereinbefore specified.

Eighth, in combination the horizontally holding surface immediately about the needle, the continuous discharging feed and the reciprocating eye-pointed needle, each having the functions and mode of operation as hereinbefore specified.

Ninth, in combination the continuous discharging feed, the receiving and supporting or discharging plate, and the yielding pressure holder, each having the functions and mode of operation hereinbefore specified.

No. 1,544.—JOHN EVANS, of New Haven, Conn.—*Improved Forge Fire*.—Patent dated March 24, 1863; reissued September 29, 1863.

Claim.—First, an enclosed Lehigh forge fire, substantially in the manner and for the purpose herein set forth.

Second, the arrangement of the hollow water-chamber front *D*, in combination with the fireplace *B*, of a Lehigh fire *A*, constructed and supplied substantially as and for the purpose set forth.

Third, the combination of the air-chamber *G G'*, in combination with the fireplace *B*, of a Lehigh fire *A*, and communicating with the air-supply channel *j* and discharge pipe or tongue *m*, the whole being constructed and operating substantially as and for the purpose specified.

No. 1,545.—B. T. TRIMMER, of Rochester, N. Y.—*Improved Grain Separator*.—Patent dated July 7, 1858; reissued September 29, 1863.

Claim.—First, the combination of the blast or draught tube *D*, pocket *P*, and screens *a b d*, or equivalent, arranged in such a manner that the grain that is carried into the pocket is discharged on to the screens, to be separated with the main portion of grain fed directly thereon, substantially as herein described.

Second, in combination with the blast or draught tube *D*, pocket *P*, and screens *a b d*, or equivalent, also the pivoted double spout *g*, arranged in such a manner as to discharge the contents of the receptacle either upon or aside from the screens, to accommodate different kinds and conditions of grain, substantially as herein specified.

Third, the arrangement of the triple blast or draught tubes *D E F* connected with the fan case, and uniting in a common discharge head *G*, the tube *D* being provided with the valve *f*, and the tubes *E F* having a valve *k* at their junction, by which arrangement the current of air may be intensified or modified in either or all the tubes, substantially as herein set forth.

Fourth, the adjustable diaphragm *S*, situated in the discharge area, at the outlet junction of the triple blast or draught tubes, in combination with said tubes *D E F*, by which means the current of air in either is modified, substantially as described.

Fifth, the combination and arrangement of the blast generator *B*, triple blast tubes *D E F*, and their valves *f k*, movable diaphragm *S*, with the screen box *J*, and return spouts *P* and *Q*, operating conjointly for separating, screening, and returning the grain, and for increasing, diminishing, and modifying the blasts for the various purposes required, substantially in the manner set forth.

Sixth, the adjustable deflector *R*, in combination with the screen box *J*, for returning the lighter grain through the screens, and resubjecting it to the blast or discharging it as refuse, as described.

Seventh, giving the screens an unequal reversible, gyratory motion, for the purpose of neutralizing the centrifugal force of the grain, and retaining it in the centre thereof, in combination with the vertical, vibratory motion, by means of the double reverse acting cranks *n*, arms *s*, and springs *m*, or their equivalents, arranged and operating substantially in the manner and for the purpose set forth.

No. 1,546.—C. L. SPENCER, of New York city.—*Improvement in Converting Motion*.—Patent dated March 4, 1862; reissued September 29, 1863.

Claim.—The use of the spring *I*, or its equivalent, in combination with the curved connecting rods *G G*, for the purpose of enabling the operating pawls to be so adjusted as to obtain an effect upon the shaft equal to the action of the crank, while the danger of hanging upon the dead point is prevented, substantially as described.

No. 1,547.—C. L. SPENCER, of New York city.—*Improvement in Converting Motion*.—Patent dated March 4, 1862; reissued September 29, 1863.

Claim.—Two hubs, each composed of the two parts *G* and *B*, in combination with friction rollers *C*, spring *S*, and axle *I*, so that each of the said hubs may be alternately fixed to said axle, one revolving loosely while the other is clutched and in action, for the purpose of producing a continuous rotary motion, in the manner and for the purpose herein set forth.

No. 1,548.—JAMES ADAIR, of Pittsburg, Pa.—*Improved Lamp*.—Patent dated July 31, 1860; reissued October 6, 1863.

Claim.—First, constructing a hood or cap *L*, having an orifice through its upper end, in such a manner that the flame of the lamp will be contracted in thickness at the centre, and expanded beyond this point, so that the ascension thereof will be such as sufficiently to allow the particles of carbon to become so highly heated as to unite rapidly with the oxygen of the air, which is supplied beneath said cap, substantially as described.

Second, the hood or cap *L*, provided with air entrances beneath it, and also with a slot or opening *Z* in its top, having its central part or space narrower than the space at its ends, substantially as described.

Third, making the deflecting and flame-retarding lips of the cap *L* adjustable, substantially as described.

Fourth, the gas tube or burner *H* having an elliptical and centrally-depressed orifice, side openings *k k*, ring or band *h*, and distended connecting arms or strips *j j*, substantially as described.

Fifth, the wire-gauge thimble *G*, arranged within the space in the lower part of the burner, substantially as described.

Sixth, the central wick tube *g*, in combination with the valve *b*, adjustable wick tube *E*,

and the chamber beneath this tube, substantially as described, for the purpose of causing cold oil from the reservoir to flow over the upper part of the wick, as set forth.

Seventh, condensing the gas evolved after the light is extinguished, and thus preventing this gas from escaping from the lamp, by means substantially as described.

No. 1,549.—DAVID CONLON, of New York city.—*Improved Shade for Billiard Tables*.—Patent dated June 7, 1859; reissued October 6, 1863.

Claim.—First, a shade for billiard tables, having two reflecting parts B' B'', and otherwise made as herein shown and described.

Second, determining the inclination of the shades of reflector B' from the edges of the table, substantially as and for the purpose set forth.

No. 1,550.—J. R. HALL, of Brunswick, Maine.—*Improved Shingle Machine*.—Patent dated June 22, 1858; reissued October 6, 1863.

Claim.—First, the combination of rods *q q'*, with their pins 7 7', thimbles 5' 5'', with their slots 6 and 8, sleeve 2 2', and pawls 1' 1'', in combination with the notched wheels 4 4' and rolls T T' for feeding the bolt to the saw.

Second, the arrangement of the frame U in relation to the other parts for fastening and holding the bolt while being sawn.

Third, the hinged fender E, with its cords and spring Z.

Fourth, the combination of springs *m'* and *n'*, clutch lever *j'*, lever R, bar *n*, with its catch S', cams Q' and P, and pin P', in combination with the pulleys 1' 1'' and *h h''* for giving motion to the carriage Y, all of which operate substantially as and for the purpose set forth.

Fifth, the feed rollers T T' in combination with the ratchet wheels 4 4', with unequal spaces between the teeth for the purpose of moving the bolt unequal distances at the respective ends for the purpose specified.

No. 1,551.—JAMES TOMLINSON and ANDREW GAGE, (assignees of JAMES TOMLINSON aforesaid,) of Wellington Square, Canada.—*Improved Steam Coiled Hoop*.—Patent dated May 26, 1863; reissued October 6, 1863.

Claim.—A sawn or cut hoop or hoop splint, prepared in coiled form for coopers' use, in any manner substantially as set forth.

No. 1,552.—DANIEL BARNUM, of New York city.—*Improved Surface Condenser*.—Patent dated May 24, 1859; reissued October 13, 1863.

Claim.—First, the use of India-rubber grummit rings, or the equivalent thereof, in recesses made in tube sheets and around tubes for making perfectly tight compensating joints between tubes and tube sheets in surface condensers, substantially as and for the purposes specified.

Second, making compensating joints between tubes and tube sheets, with India-rubber grummit packing rings in the condensing water compartments of surface condensers for the purpose of securing the combined action of the water and vacuum in preparing and holding the packing within the recesses and around the tubes when in operation, and thus maintaining perfectly tight joints, whether followers are or are not passing upon the packing, substantially as and for the purposes specified.

Third, the method, substantially as specified, of making yielding joints between the tubes and tube sheets in the condensing water compartments of surface condensers, and of thus compensating the expansions and contractions in the tube by means of having a portion of India-rubber or other elastic packing immediately surrounding each tube free, so that its elasticity can yield longitudinally with the tubes and compensate for the varying lengths without causing the packing to slip on the metal, substantially as and for the purposes specified.

No. 1,553.—ABEL BREAR, of Saugatuck, Conn.—*Improved Device for Raising and Forcing Water by Steam*.—Patent dated April 1, 1862; reissued October 27, 1863.

Claim.—The combination of the steam or air pipe A, terminating in a nozzle of cylindrical or nearly cylindrical form, the open socket C, and delivery pipe D, substantially as and for the purpose herein specified.

No. 1,554.—M. J. BARCALO, of Tuscarora, N. Y.—*Improved Grain Separator*.—Patent dated June 23, 1863; reissued October 27, 1863.

Claim.—The combination of the plate *f* with the open mesh screen B, arranged and operating substantially as and for the purpose herein set forth.

Also, in combination with the screen B, provided with the plate *f*, the separating plate D, for the purpose of catching and discharging the foreign seed, substantially as described.

No. 1,555.—JOHN PEPPER, of Holderness, N. H.—*Improved Circular Knitting Machine*.—Patent dated December 5, 1854; reissued October 27, 1863.

Claim.—The sliding detached needles, in combination with a cam, or its equivalent, for operating two, three, four or more of them at one and the same time, substantially as described.

Second, the series of ribbing needles, in combination with the plain needles of a circular knitting machine, operating in the manner substantially as set forth, for the purpose specified.

Third, making a part of the cam or lip which actuates the ribbed needles removable for the purpose of introducing and withdrawing the needles, as set forth.

Fourth, making a part of the lip of the cam plate adjustable for the purpose of varying the length of the stitches as required.

Fifth, inclining the plane of one series of needles to the plane of rotation of the other series for the purpose set forth.

No. 1,556.—EMMA C. WOOSTER, assignee of THOMAS ROBJOHN, of New York city.—*Improved Apparatus for Making Ruffing*.—Patent dated July 21, 1863; reissued October 27, 1863.

Claim.—First, the combination of two pairs of rotating fluting rollers and an interposed presser, to operate substantially as and for the purpose herein set forth.

Second, the combination with the two pairs of fluting rollers of an interposed stripper, operating substantially as and for the purpose herein specified.

Third, the combination of the two pairs of fluting rollers and a gauge to guide a strip of muslin or other material to both pairs of rollers, substantially as and for the purpose herein specified.

Fourth, the flat tubular guide J, constructed with two slits *i i* and a tongue J, substantially as and for the purpose herein set forth.

Fifth, the combination of two pairs of fluting rollers, a presser, a stripper, and a guide, to operate substantially as herein set forth.

Sixth, the combination with the guide for conducting the strip of muslin or other fabric to the fluting rollers of a starching roller K and a pressure roller L, applied and operating substantially as herein specified.

Seventh, the employment of a thread conductor *m*, applied and operating substantially as herein specified, in combination with the fluting rollers and presser, for the purpose herein set forth.

Eighth, the employment of a gas-burner or lamp and chimney having the fluting roller shafts entering the chimney, substantially as and for the purpose herein set forth.

No. 1,557.—ROLLIN WHITE, of Springfield, Mass., (late of Hartford, Conn.)—*Improved Repeating Fire-arm*.—Patent dated April 3, 1855; reissued October 27, 1863.

Claim.—First, a breech-piece projecting from the face of the recoil shield opposite to the stationary barrel, substantially as described, in combination with the rotating cylinder, having the chamber extended through the rear, as and for the purpose herein specified.

Second, a non-rotating, oblique surface, arranged in rear of, and in combination with, a rotating cylinder, having its chambers extended through its rear, substantially as herein described, for the purpose of forcing forward the cartridges to their proper positions in the chambers.

Third, the spring-protecting plate applied and operating substantially as specified, at the rear of the cylinder, to protect the charges from the effects of lateral fire from the chamber in line with the barrel, in combination with a rotating chambered cylinder, having the chambers extended through the rear, substantially as described.

No. 1,558.—ROLLIN WHITE, of Springfield, Mass., (late of Hartford, Conn.)—*Improved Repeating Fire-arm*.—Patent dated April 3, 1855; reissued October 27, 1863.

Claim.—The non-rotating breech or recoil shield, in combination with a stationary barrel and a revolving cylinder, having its chambers extending through the rear end thereof, substantially as and for the purpose herein described.

Also, the rotating cylinder, having cylindrically-formed chambers extending entirely through it, in combination with a stationary barrel, substantially as herein described.

No. 1,559.—ROLLIN WHITE, of Springfield, Mass., (late of Hartford, Conn.)—*Improved Repeating Fire-arm*.—Patent dated April 3, 1855; reissued October 27, 1863.

Claim.—First, the arrangement of the magazine and charging tube, substantially as herein described, for supplying cartridges to the chambers, as set forth.

Second, combining the rotating chambered cylinder with the charging piston, or its equivalent, in the manner substantially as herein set forth, whereby in the operation of retracting the said piston, or equivalent, after charging a chamber of the cylinder, the cylinder shall be rotated to the extent required to bring a new chamber in line with the barrel.

Third, combining the hammer with the charging piston in the manner substantially as herein described, so that by the operation of moving the charging piston to drive a cartridge from the magazine into the chamber the hammer shall be raised to cock the lock, as set forth.

No. 1,560.—BENJAMIN F. FIELD, of Sheboygan Falls, Wis.—*Improved Grain Discharge*.—Patent dated June 3, 1863; reissued November 3, 1863.

Claim.—First, the seed box or hopper A, when so attached to the frame B by hinges or any equivalent device, that it may be turned completely upside down, in the manner and for the purpose set forth.

Second, the combination of the grain measuring slide G, screw I, thumb-wal g, index and dial N, with the bottom a, and shut-off slide I, when arranged in the manner and for the purpose set forth.

Third, the combination of the compartments E F, false bottom a, slides G I, tubes J, and chute O, when arranged as described.

Fourth, the agitators, consisting of elliptically-formed plates p, secured in an oblique position on a horizontal shaft q, arranged to operate in the manner and for the purpose set forth.

No. 1,561.—THEODORE A. HAVEMEYER, assignee of T. A. HAVEMEYER and H. SCHNITZ PAN, of New York city.—*Improved Sugar-Mould Carriage*.—Patent dated March 18, 1862; reissued September 22, 1863; again reissued November 3, 1863.

Claim.—First, the employment or use in a sugar-mould carriage of a series of arms ff, arranged or applied in pairs in such a manner as to be capable of being adjusted towards and from each other to grasp and retain moulds of different sizes, substantially as set forth.

Second, in combination with the adjustable plates G H, the frame A, provided with recesses k to receive the tips l of the moulds, as specified.

Third, providing the frame A with a recess c at its front part or end, substantially as shown, to receive the caster wheel C, when said frame recess and caster wheel are used in combination with or applied to a sugar-mould carriage, for the purpose herein specified.

Fourth, the hollow post E, arranged to receive the arbor c of the caster wheel C, and attached to the frame A, to support the front end of the plates G H, substantially as set forth.

Fifth, the combination, construction, and arrangement of the parts herein shown and described to operate as and for the purpose specified.

No. 1,562.—CHARLES PARHAM, of Philadelphia, Pa.—*Improved Sewing Machine*.—Patent dated November 21, 1854; reissued November 3, 1863.

Claim.—First, so forming and constructing the shuttle driver of a sewing machine that while it performs the required duty of driving the shuttle it serves to maintain the latter in the desired proximity to the plate C, as set forth.

Second, the combination of the driver A, shuttle B, and stationary plate C, the whole being formed and arranged substantially as described, so as to retain the shuttle during its flight in its proper position, for the purpose specified.

No. 1,563.—WILLARD ROBINSON, assignee of JOHN HATCH, of Attleboro', Mass.—*Improved Button*.—Patent dated February 20, 1845, and extended; reissued November 3, 1863.

Claim.—The improved manufacture of a pantaloons button, as made of two metallic plates and having two or more eyelets, each of which is formed with a countersink in each of the plates, and with the countersink of one plate arranged in reverse of that of the other, substantially as described.

No. 1,564.—DANIEL SHAW, of Chicago, Ill.—*Improved Smut Mill and Grain Separator*.—Patent dated April 6, 1852; reissued November 3, 1863.

Claim.—The combination and joint operation of a smut mill and an exhaust fan grain separator, substantially as herein specified and set forth.

No. 1,565.—F. D. DRAKE, of Four Corners, Ohio.—*Improved Evaporator for Saccharine Liquids*.—Patent dated January 6, 1863; reissued November 10, 1863.

Claim.—The return flue C, applied in combination with the furnace A and pan B, substantially in the manner and for the purpose herein set forth.

No. 1,566.—JAMES FERGUSON, of Dubuque, Iowa.—*Improved Grain Separator*.—Patent dated November 5, 1861; reissued November 10, 1863.

Claim.—First, dividing, screening, and concentrating grain or other substances in their passage over and through one or more riddles, substantially as described.

Second, the riddle boxes D, operating in the manner substantially as described, for the purpose set forth.

Third, the combination of the riddle D, spring G, and eccentric f, or its equivalent, substantially in the manner and for the purposes described.

Fourth, the combination of the box riddles D, pins or their equivalents j, and bottomless hopper E, substantially as and for the purposes described.

Fifth, the combination of the box riddles D and the cockle screen I, substantially as and for the purpose described.

Sixth, the combination of the riddles or riddle boxes D and fan B, substantially as and for the purposes described.

Seventh, the adjustability of the hopper E, relatively to the upper riddle box D, substantially in the manner and for the purposes described.

No. 1,567.—G. W. LUDLOW, of Elizabeth, N. J.—*Improved Gaiter*.—Patent dated April 21, 1863; reissued November 10, 1863.

Claim.—A new article of manufacture, a gaiterette A, constructed as hereinbefore described, with flaps or projections C connected by a shank strap D of trapezoidal form.

No. 1,568.—O. F. MORRILL, of Chelsea, Mass.—*Improved Gridiron*.—Patent dated December 6, 1859; reissued November 10, 1863.

Claim.—An improved steak broiler, as not only made or provided with a deflector for its end, but as having a heat passage arranged underneath such deflector and surrounded by a heavy trough, substantially in manner as specified.

Also, the grid as provided with a deflector arranged with respect to the bars of the grid, as specified.

Also, the gravy pan as made with a trough and a heat passage, arranged substantially as specified.

No. 1,569.—ALFRED and L. D. DAVIS, of Worcester, Mass., assignees by mesne assignments of S. E. BLAKE and THOMAS JOHNSTON, of Louisville, Ky.—*Improved Hemming Guide for Sewing Machines*.—Patent dated October 11, 1859; reissued November 10, 1863.

Claim.—First, the hem turner G combined with and attached to a spring B, applied and arranged for adjustment to a sewing machine, substantially as described and set forth.

Second, the combination and arrangement of the hem turner G, spring B, and roller f, substantially as and for the purposes set forth and specified.

Third, the yielding spring plate B with its hem turner G and B', with its presser piece H, in combination with the adjustable gauge C, substantially as described and specified.

Fourth, the yielding presser roller K, to smooth, flatten, and present the hem or tuck to the action of the needle as the material is fed forward for stitching, substantially as described and set forth.

Fifth, the presser piece H attached to the spring B', and holding the material to the feeding surface of the sewing machine in combination with the hem turner G, substantially as set forth and specified.

Sixth, the combination and arrangement of the hem turner G, presser piece H, roller K, and adjustable gauge C, substantially as described and for the purposes specified.

No. 1,570.—J. A. LOCKE, of Watertown, Mass., assignee by mesne assignments of JOHN PETRIE, jr., of Rochdale, England.—*Improved Machine for Drying Wool*.—Patent dated April 1, 1862; antedated August 12, 1854; reissued November 17, 1863.

Claim.—First, the herein described machine or apparatus for drying wool or other fibrous substance, the same consisting of a chamber or enclosure, closed on top by a perforated or other open-work sheet, arranged to support and maintain in position over the said chamber or enclosure the material to be dried, and having combined with it, a fan or its mechanical equivalent to force or draw atmospheric air through the said sheet, substantially as set forth.

Second, the combination with a chamber or enclosure provided with a fan, as described, of an inclined table or tables made of perforated or woven wire sheets, whereby a large quantity of wool or other fibrous matter may be acted upon, substantially as set forth.

Third, the combination with a chamber or enclosure, and fan, of a perforated or woven wire flap or flaps hinged at one side and forming the top of the chamber, for the purpose or facilitating the discharge of the wool, &c., after being dried, substantially as set forth.

Fourth, the combination with a chamber or enclosure covered on top with a perforated sheet or sheets, or the equivalent thereof, and provided with a fan or fans, as described, of main pipes arranged within said enclosure, in the manner and for the purpose set forth.

Fifth, the general construction, combination, and arrangement of apparatus, consisting of a case or air chamber, fan, and inclined perforated or woven wire flaps to receive the wool to be dried, said flaps being disposed so as to expose the wool on an extended surface to the immediately surrounding air to facilitate its placement, drying, and removal, substantially as herein set forth.

No. 1,571.—EMERSON GAYLORD, (assignee by mesne assignments of L. M. FERRY,) of Chicopee, Mass.—*Improved Hose Coupling*.—Patent dated October 7, 1856; reissued November 24, 1863.

Claim.—Combining with an interposed elastic packing ring the connecting and disconnecting of the two parts, substantially as described, so that by the application of force to one side only of the coupling the two parts will be drawn together all around, as described, and thereby insure a water-tight joint, or entirely release them from their bond of union with each other.

No. 1,572.—G. P. GORDON, of Brooklyn, N. Y.—*Improved Printing Press*.—Patent dated January 1, 1856; reissued November 24, 1863.

Claim.—First, combining with a rotating disk an annular ring or outside disk, the two revolving each in an opposite direction to the other, for the purpose of breaking up the ink, so that it shall, by such contrary motions, become evenly distributed and thus imparted to the inking rollers.

Second, moving one or more of the inking rollers from the parallel position they occupy for inking the form to an oblique position, which shall give to them a lateral motion when in contact with the distributing disks or their equivalent, for the purpose specified.

Third, combining with a rotating reciprocating cylinder or segment of a cylinder a bed,

which during its reciprocating movement alternately changes its motion: first travelling under and in contact with the cylinder or segment of a cylinder, to give an impression, then being withdrawn from contact with the cylinder or segment of a cylinder, and remaining withdrawn during the return movement, to prevent an impression being taken; such bed alternating from one of these positions to the other, thus performing two separate and distinct motions, entirely independent of and in a contrary direction to each other, while remaining in gear with the cylinder or segment of a cylinder.

Fourth, attaching to a reciprocating bed an adjustable rack as well as a stationary rack, which two racks shall play into gear upon a cylinder or segment of a cylinder, so that any and all wear or variation may at once be taken up by adjusting the movable rack, and by this means always cause the bed and cylinder or segment of a cylinder to work in harmony with each other, and produce a clear and sharp impression, free from slur.

Fifth, placing a reciprocating bed in a vertical position or in any given angle from a horizontal position, when said bed is combined with a rotating reciprocating cylinder or segment of a cylinder, which shall place or pile the printed sheets upon a pile board, as herein described.

Sixth, using with a vibrating bed a rotating disk for the purpose of distributing the ink.

Seventh, using with a vibrating bed a rotating disk surrounded by an annular ring or outside disk, the two revolving each in an opposite direction to the other, for the purpose of breaking up the ink, as herein fully described.

Eighth, the use or employment of a rotating ink-distributing table, in combination with an impression produced by a cylindrical surface.

No. 1,573.—J. F. GRIFFEN, of Brooklyn, N. Y., assignee by mesne assignments of THEODORE SELLERS, of East Birmingham, Pa.—*Improvement in Closing Preserver Cases*.—Patent dated May 22, 1863; reissued November 24, 1863.

Claim.—The employment of a yielding packing ring, arranged on either the jaw, neck, or the cover, in combination with a neck and cover, so constructed as that in forcing the two together the ring will be compressed, and its yielding surfaces accommodated to the surface of the neck and cover, and a tight joint be formed, substantially as described.

Also, providing either the cover or the jar neck with a depression for the retention of the packing ring, when the cover and jar are separated, substantially as hereinbefore described.

No. 1,574.—OSCAR PADDOCK, of Watertown, N. Y.—*Improved Hot-air Furnace*.—Patent dated November 27, 1860; reissued November 24, 1863.

Claim.—First, the mechanism herein described, or its mechanical equivalent, for automatically operating, in the manner and for the purposes set forth, valves of hot-air furnaces or other heat generators, by means of the furnace door, the mechanism being such as to afford the means of regulating the draught in the furnace independently of the door, substantially as herein shown and described.

Second, the weighted valve or damper coupled with the furnace door, under an arrangement whereby the opening or closing of said door will cause the weight to operate the valve, substantially in the manner and for the purposes set forth.

Third, combining the weighted valve with the door by means of a connecting rod, so constructed or so arranged, that while actuated by the door, as set forth, the valve may also be operated by hand to regulate the draught in the furnace, substantially as herein shown and described.

No. 1,575.—OSCAR PADDOCK, of Watertown, N. Y.—*Improved Hot-air Furnace*.—Patent dated November 27, 1860; reissued November 24, 1863.

Claim.—First, in combination with both the main and the auxiliary chimney, arranged respectively in rear and front of the fire, coupled valves or dampers actuated by the furnace door or otherwise, in the manner and for the purposes set forth.

Second, the herein-described valve arrangement, capable of being operated by the movement of the furnace door as well as by hand, the same consisting of a weighted oscillating valve, and a connecting rod extending in front beyond, but abutting, at a shoulder or some projecting part thereof, against the door or against any fixture of the same, the whole being combined for operation substantially as herein shown and described.

Third, the herein-described valve arrangement, capable of being operated by the movement of the furnace door, as well as by hand, the same consisting of a pivoted slotted sector forming connexion between the door and a slotted valve rod of a weighted valve or damper, the whole being arranged for operation substantially as herein shown and described.

No. 1,576.—W. A. SHAW, of Boston, Mass.—*Improved Bottle and Bottle Stopper*.—Patent dated December 17, 1861; reissued November 24, 1863.

Claim.—Constructing a stopper of vulcanized rubber or its equivalent, when made hollow to facilitate changes of its diameter, and with a confining shoulder for the purpose specified.

Also, constructing a stopper of vulcanized rubber or its equivalent, when made with a shoulder *a*, substantially as described, or with two shoulders *a* and *b*.

Also, constructing the neck of a bottle or other socket, which receives a stopper, with a

shouldered contraction *c*, which extends entirely around the socket and operates in conjunction with the stopper, substantially as described.

Also, constructing the neck of a bottle or other socket, which receives a stopper, with shouldered contractions *1 2*, which operate in conjunction with the stopper, substantially as described.

No. 1,577.—JAMES TURNER, of New York city.—*Improvement in Composition for Lubricating*.—Patent dated July 7, 1863; reissued November 24, 1863.

Claim.—First, a lubricating compound made of the ingredients herein specified and mixed together in the manner and about in the proportion set forth.

Second, the use of red oil, or the residuum obtained in the manufacture of candles, in combination with paraffine or the heavy oil of petroleum and lime water or alkaline lye, substantially as and for the purpose herein described.

Third, the use of saw-dust, in combination with the fatty substances and alkaline lye or lime water, as and for the purpose specified.

No. 1,578.—PRESTON WARE, jr., of Newton, Mass., assignee by mesne assignments of J. M. WIMLEY, of Philadelphia, Pa.—*Improvement in Composition Sole for Boots and Shoes*.—Patent dated February 5, 1866; reissued November 24, 1863.

Claim.—First, the method of forming soles of a suitable plastic composition, by moulding the same upon staples or other mechanical clinching devices, so as to partly incorporate them, said composition being such as will, after being moulded, undergo a change whereby it becomes more or less hard, tough, flexible, or impervious to water.

Second, the method of securing or fastening composition soles to boots and shoes or the uppers thereof, by means of staples or their mechanical equivalents, which are incorporated with the soles during the act of moulding the same.

No. 1,579.—PRESTON WARE, jr., of Newton, Mass., assignee by mesne assignments of JOHN WIMLEY, of Philadelphia, Pa.—*Improvement in Composition Sole for Boots and Shoes*.—Patent dated February 5, 1866; reissued November 24, 1863.

Claim.—The combination of a composition sole with staples or other metallic clinching devices, when the latter are partly imbedded in or incorporated with the former, substantially as set forth.

No. 1,580.—PRESTON WARE, jr., of Newton, Mass., assignee by mesne assignments of J. M. WIMLEY, of Philadelphia, Pa.—*Improvement in Boots and Shoes with Composition Soles*.—Patent dated February 5, 1866; reissued November 24, 1863.

Claim.—As a new article of manufacture, a shoe or boot the sole of which is made with composition, and attached by means of staples or other metallic clinching devices, partly imbedded in or incorporated with the sole.

No. 1,581.—ALTEMUS & COMPANY, of Philadelphia, Pa., assignees of J. D. METS, of Dubuque, Iowa.—*Improved Photographic Album*.—Patent dated July 21, 1863; reissued December 1, 1863.

Claim.—First, a photographic album or other book consisting of a succession of leaves hinged together, substantially as described.

Second, the use of the perforated plates *a*, secured to the leaves, and hinged together, substantially as set forth.

No. 1,582.—T. S. BLAIR, of Pittsburg, Pa.—*Improvement in Railroad Rails*.—Patent dated May 19, 1863; reissued December 1, 1863.

Claim.—As a new article of production, useful in the arts, to wit, a tempered or untempered railway rail, partly iron and partly steel, carbonized and rerolled, substantially in the manner and for the purpose hereinabove described.

No. 1,583.—SAMUEL NICHOLSON, of Boston, Mass.—*Improved Wooden Pavement*.—Patent dated August 8, 1864; reissued December 1, 1863.

Claim.—The so combining or arranging the foundation or support, or its equivalent, of said wooden pavement resting on the roadway surface or bed, substantially as herein described, with said long and short blocks above described, or their equivalents, which said blocks are combined in such a manner as that partitions shall be made leaving cells or channels between them with a wooden bottom formed by the shorter blocks some distance above the lower end of the blocks, for the reception of the broken stone or gravel and tar or other like material, and also combined with such cells or channels filled with broken stone, gravel, and tar, or other like material, substantially as herein described, having such wooden bottom to rest upon, substantially as herein described, whereby the particles of broken stone or gravel are prevented from working under the lower ends of the longer blocks, and whereby water is prevented from passing from the surface of the pavement downward through the joints of said wooden blocks, and also moisture is prevented from being absorbed upward from the ground by said wooden blocks, substantially as herein described.

No. 1,584.—THOMAS PINNER, assignee of JOHN ALEXANDER, of New London, Conn.—*Improvement in Securing Bottle Stoppers*.—Patent dated July 24, 1855; reissued December 1, 1863.

Claim.—Forming the confining strap of a permanently attached bottle cork fastener in the manner and for the purpose substantially as set forth.

Also, corking and fastening the cork by the combination of the plunger and of a confining strap, such substantially as is herein described, whereby the cork may be permanently secured before the bottle is removed from the filling machine, as set forth.

No. 1,585.—T. T. PROSSER, M. C. and K. A. DARLING, assignees of T. T. PROSSER, of Fond du Lac, Wis.—*Improved Steam Boiler*.—Patent dated August 11, 1863; antedated January 31, 1863; reissued December 1, 1863.

Claim.—First, the application of the exhaust steam of a steam engine to the exterior surface or surfaces of a steam boiler or boilers, or any part thereof, for the purpose of utilizing the latent and sensible caloric thereof in the production of more steam.

Second, the chambers A A' A'' A''', severally or in combination.

Third, the chambers A A' A'' A''', severally or collectively, in combination with one or more tubes or flues of a steam boiler, in the manner and for the purpose set forth.

Fourth, using one or more of the tubes or flues ordinarily used for the transmission of the products of combustion from the fire-chamber to the chimney or smoke-stack, for the reception of the exhaust steam of an engine, for the purpose set forth.

Fifth, introducing a flue or flues, a tube or tubes, into the water space of a steam boiler and using it or them for the reception of the exhaust steam of an engine, for the purpose set forth.

No. 1,586.—MARTIN WESSON, of Springfield, Mass.—*Improvement in Channelling Soles of Boots and Shoes*.—Patent dated May 24, 1859; reissued December 1, 1863.

Claim.—First, the combination of one or more feed rolls E F, knife or knives b b, and guide R, or its mechanical equivalent, when operating substantially in the manner and for the purpose herein set forth.

Second, the combination of lever L, sliding pieces h h', and knives b b', when arranged and operating as described, and forming a knife-holding arrangement, for the purpose specified.

No. 1,587.—CHARLES MCBURNEY, of Roxbury, Mass.—*Improved India-rubber Soles for Boots and Shoes*.—Patent dated April 5, 1859; reissued December 8, 1863.

Claim.—As a new article of manufacture, a sole for boots or shoes made of vulcanized India-rubber or other vulcanized gum provided with holes for the reception of nails, pegs, rivets, threads, or other mechanical devices, by means of which the sole may be attached to the uppers, such soles having a protecting external vulcanized surface, substantially as herein described.

Also, making India-rubber soles or soles of any other vulcanizable gum in moulds, in combination with forming therein, previous to vulcanization, holes designed to contain nails, pegs, rivets, thread, or other mechanical means for the attachment of the sole to the uppers.

No. 1,588.—CHARLES MCBURNEY, of Roxbury, Mass.—*Improved India-Rubber Soles for Boots and Shoes*.—Patent dated April 5, 1859; reissued December 8, 1863.

Claim.—As a new manufacture, a vulcanized India-rubber sole or sole made of any other vulcanized gum adapted for attachment to boots or shoes by means of pegs, nails, rivets, or sewing, or other equivalent means, the sole being made in such manner that said attachment does not require any previous preparation of the sole by piercing or cutting holes.

Also, as a new manufacture, boots and shoes produced by combining with the uppers thereof a moulded sole made of vulcanized India-rubber or other vulcanizable gum, when the latter is attached to the former by nails, rivets, or other metallic clinching devices, or threads, applied in such manner as will neither disfigure the shape nor require the piercing of the face or bottom of the sole after vulcanization.

No. 1,589.—THOMAS LOVELIDGE, of Philadelphia, Pa.—*Improved Loom*.—Patent dated February 14, 1860; reissued December 15, 1863.

Claim.—A yarn-delivering mechanism, consisting of a toothed wheel and a detent and escapement lever, or other equivalents, applied to or operating with the yarn beam, substantially as set forth, when the said mechanism is controlled by the tension of the yarn through the medium of the devices herein set forth, or the equivalent to the same.

No. 1,590.—J. B. PALSER and GARDNER HOWLAND, of Fort Edward, N. Y.—*Improvement in the Preparation of Straw for Paper Pulp*.—Patent dated June 21, 1859; reissued July 3, 1860; again reissued December 15, 1863.

Claim.—The process of subjecting straw or similar stalks to the simultaneous action of an alkaline liquid, agitation, and a high temperature, such as is produced by contact with a surface heated by a fire heat, whereby such a change is effected in the organization of the glutinous or resinous matters contained in the material that the fibrous material can be separated from them by washing.

No. 1,591.—J. B. PALSER and GARDNER HOWLAND, of Fort Edward, N. Y.—*Improvement in the Manufacture of Paper Pulp*.—Patent dated March 20, 1860; reissued December 15, 1863.

Claim.—As a new article of manufacture, the staple fibre, made substantially as herein set forth.

No. 1,592.—WILLIAM STANLY, of New York city, assignee by mesne assignment of A. H. HOOK.—*Improved Sewing Machine*.—Patent dated November 30, 1859; reissued December 15, 1863.

Claim.—The combination of the levers m and n, arm K, spring o, and cam p, constructed and arranged substantially as and for the purpose set forth.

Also, the combination of the two washers or plates z z, concave at the centre and rounded at their outer edges, with a centre pin, and any suitable means to give such plates pressure, substantially as and for the purposes set forth.

No. 1,593.—J. F. GRIFFIN, of New York, assignee of JAMES SPRATT, of Cincinnati, Ohio.—*Improvement in Sealing Fruit Cans*.—Patent dated July 18, 1854; reissued December 22, 1863.

Claim.—The employment, in combination with the can, or jar, and its cover, of an elastic and compressible packing ring of vulcanized rubber, or its equivalent, substantially as and for the purpose set forth.

Also, the employment of wax, or other sealing material, in combination with a can, or jar, and its cover, when a packing is employed between the jar and its cover, for the purpose set forth.

No. 1,594.—D. G. LITTLEFIELD, of Albany, N. Y.—*Improved Coal Stove*.—Patent dated August 18, 1863; reissued December 22, 1863.

Claim.—The suspension or arrangement of the fire-pot in a chamber C at the base of the stove, entirely shut off or separated from the chamber which receives the heat directly from the burning fuel and the heated products of combustion, so that said chamber C may separately receive the heat radiated from the outer surface of the fire-pot, and transmit it to the surrounding case, and from thence radiate it near the floor to the apartment to be warmed, substantially as herein specified.

Also, in combination with the fire-pot, suspended or arranged in a separate chamber, at the base of the stove, the suspension of the supplying cylinder in the chamber G, above and separate from the fire-pot, substantially as and for the purpose herein set forth.

Also, the construction and arrangement of the stove in such a manner that it not only may be a connected whole, but may be readily separated into two sections, (Figs. 3 and 4,) each complete in itself, to the extent described, when thus applied to the suspended fire-pot, in a separate chamber at the base of the stove, and to a separately suspended supplying cylinder, substantially as and for the purpose herein set forth.

Also, suspending the detachable soapstone, or fire-brick supporting cylinder or section L, of the separately suspended supplying cylinder, by means of eyes O O and stirrups or hasps P P, or their equivalents, substantially as herein specified.

No. 1,595.—C. E. JOHN, and SAMUEL WETHERED, of Baltimore, Md.—*Improvement in Steam for Actuating Engines*.—Patent dated September 21, 1853; antedated May 25, 1853; reissued December 22, 1863.

Claim.—Combining superheated steam with saturated steam for actuating steam engines, substantially as specified.

Also, in combination with the steam chamber of a steam boiler and the engine, two or more pipes—one for conveying the saturated steam, and the other the superheated steam, as and for the purpose herein described.

DESIGNS.

No. 1,703.—MOSES C. BIGNALL, of Seneca Falls, N. Y., assignor to DOUNES & Co., of same place.—*Design for a Pump*.

No. 1,704.—G. B. HALSTEAD, of New York city.—*Design for the Air-Jacket of a Lamp*.

No. 1,705.—A. E. CHAMBERLAIN, (assignor to CHAMBERLAIN & Co.,) of Cincinnati, Ohio.—*Design for a Stove*.

No. 1,706.—JAMES HUTCHINSON, (assignor to J. E. WHIPPLE,) of Lansingburg, N. Y.—*Design for a Floor-cloth*.

No. 1,707 to 1,718.—H. G. THOMPSON, of New York city, assignor to the HARTFORD CARPET COMPANY, Hartford, Conn.—*Twelve Designs for Carpet Patterns*.

- No. 1,719.—J. A. BAILLY, of Philadelphia, Pa.—*Design for a Statuette.*
- No. 1,720.—W. W. SKAATS, (assignor to GIDEON SKAATS,) of Brooklyn, N. Y.—*Design for a Lamp Chimney.*
- No. 1,721.—DANIEL MOORE, of Brooklyn, N. Y.—*Design for a Pistol Handle.*
- No. 1,722 to 1,730.—ELEMIR J. NEY, (assignor to the LOWELL MANUFACTURING COMPANY,) of Lowell, Mass.—*Designs for nine patents for Carpet Patterns.*
- No. 1,731.—ROBERT S. STENTON, of New York city.—*Design for a Metallic Skate.*
- No. 1,732.—B. C. CROMWELL, (assignor to Himself, S. D. GREENLEAF, C. F. DOUGLASS, and R. C. DOUGLASS,) of Skowhegan, Maine.—*Design for a Pump.*
- No. 1,733.—B. C. CROMWELL, (assignor to Himself, S. D. GREENLEAF, C. F. DOUGLASS, and R. C. DOUGLASS,) of Skowhegan, Maine.—*Design for a Pump.*
- No. 1,734.—JAMES A. BAZINE, of Canton, Mass.—*Design for a Solitaire Board.*
- No. 1,735.—E. J. CRIDGE, of Troy, N. Y.—*Design for a Plate of a Stove.*
- No. 1,736.—FRANK DOUGLASS, of Norwich, Conn.—*Design for a Skate.*
- No. 1,737.—GEORGE GREEN, of Wappinger's Falls, N. Y., assignor to DEBORAH POWERS, ALBERT E. POWERS, and NATHANIEL B. POWERS, of Lansingburg, N. Y.—*Design for a Floor Oil-cloth.*
- No. 1,738.—GEORGE B. OWEN, of New York city.—*Design for a Clock Case.*
- No. 1,739.—JAMES PATERSON, of Elizabeth, N. J., assignor to DEBORAH POWERS, ALBERT E. POWERS, and NATHANIEL B. POWERS, of Lansingburg, N. Y.—*Design for a Floor Oil-cloth.*
- No. 1,740.—DAVID L. BARTLETT, (assignor to Himself, JONAS H. HAYWARD, and H. W. ROBBINS,) of Baltimore, Md.—*Design for a Stove.*
- No. 1,741.—SAMUEL W. GIBBS, of Albany, N. Y., assignor to BUCK & WRIGHT, of St. Louis, Mo.—*Design for a Stove.*
- No. 1,742.—JOSEPH A. SAFFORD, of Winchester, Mass.—*Design for a Stand of an Eyelet Machine.*
- No. 1,743.—SAMUEL SAILOR, of Philadelphia, Pa.—*Design for a Picture Frame.*
- No. 1,744.—ANNON INGRAHAM, of Centre Cambridge, N. Y., and G. H. PHILLIPS, of Troy, N. Y.—*Design for a Cook Stove.*
- No. 1,745.—JOHN NEIL, of Clinton, Mass., and A. E. POWERS, (assignors to D., A. E., and N. B. POWERS,) of Lansingburg, N. Y.—*Design for a Floor Oil-cloth.*
- No. 1,746.—JAMES L. COLLINS, of Chicago, Ill.—*Design for a Stove Plate.*
- No. 1,747.—ALBERT GRANGER, of New York city.—*Design for a Medallion Pen.*—Ante-dated April 15, 1863.
- No. 1,748.—FREDERICK MCKEE, of Pittsburg, Pa.—*Design for a Goblet.*
- No. 1,749.—H. C. BERLIN, of Bloomfield, N. J., and G. H. JONES, of New York city.—*Design for an Envelope.*
- No. 1,750.—J. L. HADDEN, of Philadelphia, Pa.—*Design for a Cover for a Kettle or Stove.*
- No. 1,751.—ERNST KAUFMANN, of Philadelphia, Pa.—*Design for an Ice Pitcher.*
- No. 1,752.—OLIVER PEARL, of Lawrence, Mass.—*Design for a Spinning Flyer.*
- No. 1,753.—CARL MILLER, (assignor to JOHN MATTHEWS,) of New York city.—*Design for a Draught Stand for Soda Water, &c.*
- Nos. 1,754, 1,755, and 1,756.—E. J. NEY, of Lowell, Mass., assignor to the LOWELL MANUFACTURING COMPANY.—*Design for Carpet Patterns.*

- No. 1,757.—EGBERT S. RICHARDS, of Attleboro', Mass.—*Design for a Link of a Chain.*
- No. 1,758.—EGBERT S. RICHARDS, of Attleboro', Mass.—*Design for a Breastpin and Ear-drop.*
- No. 1,759.—LUCIAN FAY, of Cincinnati, Ohio.—*Design for a Metallic Plate for Burial Cases, &c.*
- No. 1,760.—EBEN T. STARR, of New York city.—*Design for a Skate.*
- No. 1,761.—E. S. RICHARDS, of Attleboro', Mass.—*Design for a Link of an Ornamental Chain.*
- No. 1,762.—M. A. SNEAD, of Louisville, Ky.—*Design for a Brooch.*
- No. 1,763.—S. B. JEROME, of New Haven, Conn.—*Design for a Clock Case.*
- No. 1,764.—ALOYS MEISEL, of New York city.—*Design for a Tea and Coffee Service.*
- No. 1,765 to 1,774.—ELMER J. NEY, (assignor to the LOWELL MANUFACTURING COMPANY,) of Lowell, Mass.—*Designs for Carpet Patterns, (ten cases.)*
- No. 1,775.—S. R. SCOFIELD, of Lisle, N. Y.—*Design for a Chromatic Diagram.*
- No. 1,776.—GARRETTSON SMITH and HENRY BROWN, of Philadelphia, Pa., assignors to DAVID HETRICK, of Mexico, Pa.—*Design for a Cooking Stove.*
- No. 1,777 to 1,788.—HENRY G. THOMPSON, of New York city, assignor to the HARTFORD CARPET COMPANY.—*Designs for Carpet Patterns, (twelve cases.)*
- No. 1,789 to 1,791.—J. F. RATHBONE, of Albany, N. Y.—*Designs for Plates for Cooking Stoves, (three cases.)*
- No. 1,792.—JOHN D. FLANSBURG, (assignor to NORTH, CHASE & NORTH,) of Philadelphia, Pa.—*Design for a Plate of a Stove.*
- Nos. 1,793, 1,794, and 1,795.—GARRETTSON SMITH and HENRY BROWN, (assignors to NORTH, CHASE & NORTH,) of Philadelphia, Pa.—*Designs for a Cook's Stove, (three cases.)*
- No. 1,796 to 1,799.—H. W. HENSEL, of Philadelphia, Pa.—*Designs for a Blind Binding, (four cases.)*
- No. 1,800 to 1,802.—S. B. RANSOM, of Albany, N. Y.—*Designs for a Plate of a Cook's Stove, (three cases.)*
- No. 1,803.—GARRETTSON SMITH and HENRY BROWN, of Philadelphia, Pa., assignors to MARSH & SISLER, of Lawrenceville, Pa.—*Design for a Plate of a Stove.*
- No. 1,804.—HENRY MISHLER, of Mogadore, Ohio.—*Design for a Stoneware Cooking Stove.*
- No. 1,805.—CHARLES H. WELLS, of Philadelphia, Pa., assignor to W. H. SWIFT and HENRY B. COURTNEY, of Wilmington, Del.—*Design for a Label.*
- No. 1,806 to 1,816.—E. J. NEY, of Lowell, Mass., assignor to the LOWELL MANUFACTURING COMPANY.—*Designs for Carpet Patterns.*
- No. 1,817.—ELMER J. NEY, of Lowell, Mass., assignor to the LOWELL MANUFACTURING COMPANY.—*Design for a Carpet Pattern.*
- No. 1,818.—ELMER J. NEY, of Lowell, Mass., assignor to the LOWELL MANUFACTURING COMPANY.—*Design for a Carpet Pattern.*
- No. 1,819.—GARRETTSON SMITH and HENRY BROWN, of Philadelphia, Pa., assignors to H. C. MARSH and E. SISLER, of Lawrenceville, Pa.—*Design for a Stove.*
- No. 1,820.—ELIAS INGRAHAM, of Bristol, Conn.—*Design for a Clock Case.*
- No. 1,821.—A. C. BARSTOW, of Providence, R. I.—*Design for a Parlor Stove.*
- No. 1,822.—WILLIAM CRAIG, of Brooklyn, N. Y.—*Design for a Gas Cooking Stove.*

No. 1,823.—J. D. FLANSBURG and JOHN GARDINER, (assignors to CHASE, SHARP, and THOMPSON,) of Philadelphia, Pa.—*Design for a Parlor Stove.*

Nos. 1,824, 1,825, 1,826, and 1,827.—H. W. HENSEL, of Philadelphia, Pa.—*Designs for four patents for Blind Fastening.*

No. 1,828.—G. SMITH and H. BROWN, (assignors to ABBOTT & NOBLE,) of Philadelphia, Pa.—*Design for Furnace Stove.*

No. 1,829.—G. SMITH and H. BROWN, assignors to ABBOTT & NOBLE, of Philadelphia, Pa.—*Design for a Cooking Stove.*

No. 1,830.—A. C. BARSTOW, of Providence, R. I.—*Design for a Cauldron.*

No. 1,831.—CHARLES LEDIARD, of Brooklyn, N. Y.—*Design for a Bottle.*

No. 1,832.—R. WHEELER and S. A. BAILEY, of Utica, N. Y.—*Design for a Parlor Stove.*

No. 1,833.—R. WHEELER and S. A. BAILEY, of Utica, N. Y.—*Design for a Cooking Stove.*

No. 1,834.—EMMA C. WOOSTER, of New York city.—*Design for a Reel.*

No. 1,835.—ISAAC DE ZENCHE, assignor to BRIDGE, BEACH & Co., of St. Louis, Mo.—*Design for Plates of a Parlor Stove.*

No. 1,836.—ISAAC DE ZENCHE, assignor to BRIDGE, BEACH & Co., of St. Louis, Mo.—*Design for a Cooking Stove.*

No. 1,837.—E. D. LOVERIDGE, of Buffalo, N. Y.—*Design for a Bottle.*

No. 1,838.—ROBERT HAM, assignor to FREDERICK H. SHELDON and CHAUNCEY O. GREEN, of Troy, N. Y.—*Design for a Stove Plate.*

No. 1,839 to 1,847.—E. J. NEY, assignor to the LOWELL MANUFACTURING COMPANY, of Lowell, Mass.—*Design for nine patents for Carpet Patterns.*

No. 1,848.—CHAS. H. WELLING, of New York city.—*Design for a Turn-over Collar.*

No. 1,849.—A. O. BAKER, of Providence, R. I.—*Design for a Belt Fastener.*

No. 1,850.—DAVID BRUCE, of New York city.—*Design for Letter Press Type.*

No. 1,851 to 1,868.—H. G. THOMPSON, of New York city, assignor to the HARTFORD CARPET COMPANY, of Hartford, Conn.—*Eighteen patents for Designs for Carpet Patterns.*

No. 1,869.—W. H. PAGE, assignor to H. PAGE & Co., of Norwich, Conn.—*Design for German Type Alphabet.*

No. 1,870.—GEORGE HILLS, of Plainville, Conn.—*Design for a Clock Dial.*

No. 1,871.—D. E. PARIS and N. S. VEDDER, of Troy, N. Y., assignors to the said D. E. PARIS.—*Design for a Stove Plate.*

No. 1,872.—D. E. PARIS and F. E. RITCHIE, of Troy, N. Y., assignors to D. E. PARIS, aforesaid.—*Design for a Stove Plate.*

No. 1,873.—D. E. PARIS and N. S. VEDDER, of Troy, N. Y., assignors to the said D. E. PARIS.—*Design for Stove Plates.*

No. 1,874.—D. E. PARIS and N. S. VEDDER, of Troy, N. Y., assignors to the said D. E. PARIS.—*Design for a Stove Plate.*

No. 1,875.—GARRETTSON SMITH and HENRY BROWN, of Philadelphia, Pa., assignors to C. S. COLLINS and E. S. HEATH, of Baltimore, Md.—*Design for a Fireplace Stove.*

No. 1,876.—ERNST KAUFMAN, of Philadelphia, Pa.—*Design for a Metal Tea Set.*

Nos. 1,877 and 1,878.—D. E. PARIS, of Troy, N. Y.—*Designs for Stove Plates.*

EXTENSIONS.

JAMES HIBBERT, late of Providence, R. I., (PELEG HULL, administrator.)—*Improved Knitting Needle.*—Patent dated January 9, 1849.

Claim.—The application of a latch or tongue applied to the hook of the needle, and operated as herein described.

P. S. DEVLIN, of Reading, Pa.—*Improved Lubricating Compound.*—Patent dated January 16, 1849.

Claim.—The combination of a solution of caoutchouc, or other similar gum, with animal or vegetable oil, or fatty matter, substantially as specified, applicable as a substitute for oil in lubricating machinery and for other purposes.

E. A. TUTTLE, WILLIAM TUTTLE, and J. S. BAILLY, of New York city, assignees of C. F. TUTTLE, deceased.—*Improved Hot-air Register.*—Patent dated January 23, 1849; reissued October 14, 1862.

Claim.—The application of the upright or vertical wheel G, or part or segment of a wheel, to the opening and closing of hot-air registers or ventilators, the edge or periphery of which wheel is so placed as to adapt it to be operated on by the foot if desired, substantially as set forth.

JOHN P. HAYES, of Boston, Mass.—*Improvement in Baking Apparatus.*—Patent dated January 30, 1849.

Claim.—A cooking or baking apparatus having several parallel baking chambers with divided horizontal flue spaces between them, communicating with vertical flue spaces on each side of them, substantially as hereinabove described, and so as to make the smoke, &c., pass around said chambers, as above set forth. Also, connecting said chambers with each other by the combination of the turning registers *c' c'*, in their backs, with the vertical hollow shaft *d' d'*, in the manner and for the purpose hereinabove set forth.

E. B. HORN, of Boston, Mass.—*Improved Camphene Lamp.*—Patent dated February 6, 1849.

Claim.—The manner in which I construct the fountain in order to allow the rays of light proceeding from the wick of the burner to pass downwards through both the internal and external concentric sides or shells of the fountain, that is to say, an internal translucent side or shell, in combination with an external concentric side or shell, whether the said two concentric translucent sides of the said fountain be connected together by a translucent or opaque bottom.

DAVID SMITH, of New York city.—*Improved Method of Manufacturing Drop Shot.*—Patent dated May 22, 1849.

Claim.—The application of an ascending artificial current of air to cool the descending metal in the manufacture of drop shot.

ERASTUS BIGELOW, of Mass.—*Improvement in Loom for Weaving Brussels Carpets, &c.*—Patent dated March 10, 1849; reissued October 9, 1849; again reissued May 5, 1857.

Claim.—First, in combination with the pile wire or wires for weaving piled fabrics, a grooved receptacle or trough for holding said pile wire or wires in position whilst being pushed into the shed of the warp, substantially as specified.

Second, pushing said pile wire or wires into the shed of the warp by a driver or pusher, substantially as specified.

Third, guiding and supporting the pile wires as they are inserted into the shed of the warp by a guide or guides through, over, or on which said wires slide, substantially as specified.

A. G. POLHAMEUS, of Nyack, N. Y.—*Improved Combination of Adjustable Saddle and Winch.*—Patent dated March 27, 1849.

Claim.—The combination of a winch with a movable and adjustable saddle, connected so that the winch moves with the saddle, the whole being constructed, arranged, and operating substantially as herein described.

JONATHAN HAINES, of Pekin, Ill.—*Improved Harvesting Machine.*—Patent dated March 27, 1849; reissued November 6, 1855.

Claim.—In combination with a frame nearly balanced on its supporting wheels, and a tongue hinged to said frame, a lever connected to one end and projecting toward the driver's stand or seat on the other, so that the driver, who is the sole conductor of the machine, may, from

said stand or seat, raise or depress the cutters at pleasure during the operation of the machine, for cutting the grain or grass at any suitable height above the ground, or for passing over any intervening obstacles, substantially as described.

Also, in combination with the operative parts of a harvesting machine, a conveyer, which first carries the cut grain horizontally across the machine, and then elevates it so as to discharge the grain into the bed of a wagon driven alongside of the machine, when the conveyer frame is connected to the bed by a flexible joint, in manner and for the purpose described.

H. R. WORTHINGTON and WM. H. BAKER, (ADELIA C. MILNER, executrix,) of New York city.—*Improved Method of Insuring the Action of the Valves in Direct-action Pumping Engines.*—Patent dated April 3, 1849.

Claim.—First, the removing or reducing the resistance against the pump piston in direct-action steam pumps at the proper time in the stroke, by effecting a connexion between the water on both sides of the piston, in order to allow either the momentum of the moving parts or the expansion of the steam already within the cylinder, or both conjoined, to act as explained, to throw the steam valve across the ports with certainty, whether at high or low speeds.

Second, the method herein described of effecting the before-mentioned and claimed object, namely, by making two passages into each end of the cylinder, across one of which the piston is forced, opening by this means free communication between the two ends of the cylinder.

THOMAS PROSSER, of New York city.—*Improved Tool for Attaching Tubes to Boilers.*—Patent dated April 17, 1849.

Claim.—First, the combination of the guide ring, having mortises therein, with the segmental expanders and conical or pyramidal mandrel, constructed and operating substantially as herein described.

Second, as separate and component parts of the same, the double projections on the segments, having a hollow between them to be placed opposite to the tube sheet while the tube is being expanded within it.

Third, the guide ring and mortises in the same, together with the projections on the segments to fit into them; I do not, however, confine myself to any specific number of segments, form of projection on the segments to fit into the mortise guide ring, or position of the mortise guide ring itself, which may be placed inside the tube if required.

SAMUEL CROCKER, of Taunton, Mass.—*Improved Yellow-metal Nail or Spike.*—Patent dated April 17, 1849; reissued August 1, 1864; again reissued February 24, 1863.

Claim.—The new article of manufacture hereinabove described, viz., a yellow-metal nail or spike made by the combined processes of heating the metal to redness, and in such state cutting and heading it in a nail machine, and subsequently treating it substantially as described; meaning by the term "yellow-metal" a metal composed of copper and zinc in the proportion in which they are usually combined in the manufacture of the well-known "Muntz sheathing metal."

JOHN BATCHELDER, of Boston, Mass.—*Improved Sewing Machine.*—Patent dated May 3, 1849.

Claim.—The combination with the endless cloth-holder of the curved bar or piece of metal *v*, for discharging the cloth from its points after being sewed, all as described.

CAROLINE CARY, of Brockport, N. Y., administratrix of A. W. CARY, deceased.—*Improvement in Packing Rotary Pumps.*—Patent dated May 15, 1849.

Claim.—The pistons packed as described, and with small orifices in the pistons to allow steam, water, &c., to be admitted, as described, under or inside of the packing when the engine is in operation, for the purpose set forth.

CHARLES PERLEY, of New York city.—*Improved Direct and Counter-motion Winch.*—Patent dated May 29, 1849.

Claim.—The application of the female ratchet 13, conjointly with the mechanical arrangement of the head or cap *d*, with the two reversing pawls 9 and 10, and lever socket 7, to produce a winch that shall be worked by a handspike or lever moving in either direction on the winch centre, for the purposes and substantially in the manner before described.

DEVOLT STOLLEMEYER, of Hancock, Md.—*Improved Bedstead Fastening.*—Patent dated May 29, 1849.

Claim.—The construction of metallic fastenings for confining the rails and posts of bedsteads to each other, of such forms that when the portions of the fastenings secured in the ends of the rails are inserted into the portions of the fastenings attached to the posts, a blow or downward pressure upon the rails will cause the ends of the rails to be closely drawn against and secured to the posts; when this is combined with the arrangement by which the

elevation of the rails for a short distance will permit them to revolve and detach themselves from the cords or sacking that may be connected to them, and also disconnect the portions of the fastenings projecting from the extremities of the rails from their hold upon the fastenings made fast to the posts, without withdrawing one from the other, substantially in the manner and for the purpose herein set forth.

JESSE REED, of Marshfield, Mass.—*Improved Steering Apparatus.*—Patent dated June 5, 1849.

Claim.—The combination of a right and left-threaded screw, on the hand-wheel shaft *a a*, with two half nuts *d d*, arranged, one on each side of said screw, and traversing in guides opposite to each other, as hereinabove set forth; said nuts being connected to the rudder head either by the long arms *o p o p*, as in the first-described arrangement, or as in the second by the slotted arms *a' a'* and sliding buttons *c' c'*, all arranged and operating substantially as hereinabove set forth.

REUBEN MURDOCK, of Rochester, N. Y.—*Improved Barrel Machinery.*—Patent dated June 12, 1849.

Claim.—First, the combination of the revolving dogs *m*, the pawls *n*, the disengaging levers *U*, the vibrating feed lever *R*, and the stops *q q'*, whereby the slab is secured on the carriage and successive staves from the same slab.

Second, disconnecting the carriage *N* from the feed gear during its retrograde motion, while the slab is being fed towards the saw *J*, substantially in the manner and for the purpose herein set forth.

Third, the combination of the oscillating saw *J* with the curved-gated case *T*, whereby the stave is securely held during the action of the saw in the manner and for the purpose herein set forth.

Fourth, the combination of the stave carriage *Y* with the spring dogs and spring hold-fast *t* and stop *v*, whereby the stave is securely held down during the action of the saws, and then thrown from the machine.

Fifth, the combination of the concave and convex pressure feed rollers *C' C''* and the self-adjusting spring clamps or rests *K' K''*, with the concave and convex cutters *A' A''*, when the several members are arranged in the curve of the longitudinal section of the stave, as herein set forth.

EUGENE BOURDON, of Paris, France.—*Improved Pressure Gauge.*—Patent dated June 18, 1849.

Claim.—The application of curved or twisted tubes, whose transverse section differs from a circular form, for the construction of instruments for measuring, indicating and regulating the pressure and temperature of fluids, substantially as above described.

E. C. SAWYER, of Salem, Mass.—*Improved Regulator for Self-acting Mules.*—Patent dated July 3, 1849.

Claim.—The regulator, constructed and made to operate substantially as above described, the same consisting of the combination of the weighted centrifugal lever *e*, the lever pawl or click *k*, the ratchet wheel *k*, its cam *l*, and the lever *n*, applied together and to the main driving shaft *A* and the slide *U* of the hoist cam, essentially as above specified.

And as auxiliary to the above, the second centrifugal weighted lever *r'* and the ring *t*, and retractive spring in combination therewith, the same being for the purpose above explained.

BENJAMIN CHAMBERS, of Washington, D. C.—*Improved Movable Breech for Fire-arms, and Appurtenances for the same.*—Patent dated July 31, 1849; reissued April 19, 1853.

Claim.—In combination with a hinged breech piece, the support *G*, the slot *Y*, and lever *L*, whereby the said breech piece is easily moved into and out of place in closing and opening the gun for the purpose of loading, swabbing, &c., substantially as described.

Also, in combination with a gun having a dissected screw breech, the flanged shield through which the cartridge is made to pass into the chamber over the dissected screw, without danger of being broken by the ends and edges of threads, as herein set forth.

Also, in combination with a rammer for charging guns at the breech, the projecting central point *a*, whereby the cartridge, in being driven to its place in the chamber, is perforated at its base to receive the point of the percussion cap, herein described, for the purpose of insuring the ignition of the gunpowder, as set forth.

Also, the enlargement *z*, near the shoulder *g'* of the rammer, whereby the shield through which the cartridge has been rammed is made to adhere by friction to the rammer, and to be drawn out of the breech of the gun without requiring a separate operation for taking it out.

MARY MURPHY, administratrix of JOHN MURPHY, deceased, of Philadelphia, Pa.—*Improved Method of Regulating the Contraction of Car Wheels.*—Patent dated August 7, 1849.

Claim.—The mode of cooling and thereby regulating the contraction of chilled railroad-car and other wheels and pulleys with solid hubs, by the application of a stream of cold air to the hub, in the manner above described, in combination with the non-conducting case for retarding the cooling of the rim, as herein set forth.

EDWARD HALL and JOSEPH L. HALL, of Cincinnati, Ohio.—*Improved Fire-proof Safe*.—Patent dated August 21, 1849; reissued December 18, 1849; again reissued March 6, 1849.

Claim.—First, the employment of hydraulic cement, in whole or in part, as forming the insulating medium or admixture used between the outer and inner cases of safes and chests, when said inner cases are formed of iron, or other suitable metal, substantially as herein described, for the purposes set forth.

Second, joining the outer and inner metallic cases of safes and chests, by means of the door frame C, and flanges b, or their equivalents, when said hydraulic cement, in whole or in part, is used as the insulating medium between said metallic cases, as herein described; and also by means of the anchors or bolts d, extending from the outer and inner cases into the space between said cases, substantially as and for the purposes set forth.

GEORGE P. COX, of Malden, Mass., administrator of SAMUEL A. COX, deceased, and assignee by mesne assignments of said decedent.—*Improved Machine for Bending the Lips of Wrought Iron Railroad Chairs*.—Patent dated August 28, 1849; reissued July 14, 1857; again reissued August 12, 1862.

Claim.—First, a suitable support for a chair blank, in combination with bending levers, or a bending apparatus or a former, or their equivalents, acting in combination substantially as specified hereinbefore.

Second, a drop hammer, or its equivalent, for the purpose set forth, in combination with the bending levers, a former, and a suitable support for the chair blank, or their equivalents, for the purposes set forth, and acting in combination substantially in the manner hereinbefore set forth.

Third, the use of the discharging lever K, or equivalent therefor, in combination with the former, for the purpose of forcing said former from the chair.

PHILIP ROLLHAUS, of New York city.—*Improved Cooking Range*.—Patent dated September 11, 1849.

Claim.—The arrangement of the inclined flues E, at the sides of the ovens, and inclined flues F, at the back parts of the same, in combination with the diagonal plates G and the dampers H, for either causing the heat to pass directly from the fire-chamber into the chimney over the tops and down the sides, after enlarging its volume below, or up behind the ovens as herein set forth.

NEHEMIAH HODGE, of North Adams, Mass.—*Improved Mode of Operating Brakes for Cars*.—Patent dated October 2, 1849; reissued March 1, 1853; extended September 16, 1863.

Claim.—A combination of two levers *f f'*, a rod *h*, two levers *e e'*, and rods *d d'*, as applied to the brakes, and two windlasses of the car, and operated by either of the windlasses, so as to bring down at the same time the brakes of both trucks upon the wheels thereof with the same, or practically the same, degree of force, and whether, when the car is running on the railway, the axles of one truck, or of the wheels of one truck, are thrown or moved out of the parallelism with those of the other truck, or the rubbers or brakes become unequally worn, or of an unequal thickness, as above stated.

C. G. SARGENT, of Lowell, Mass.—*Improvement in Burring Cylinders*.—Patent dated October 9, 1849.

Claim.—A cylinder for burring, opening, picking, carding, &c., cotton and wool, in which the burring or working surface is formed by alternate rows of sharp-pointed teeth, and thin metallic edges either set spirally or straight across the cylinder, whether said teeth and edges are constructed and shaped as above set forth, or in any other way substantially similar thereto, it being distinctly understood that the claim is to the burring or working surface produced, as above suggested.

B. F. MILLER, of New York city.—*Improvement in Construction of Iron Stairs*.—Patent dated October 23, 1849.

Claim.—Constructing stairs in sections composed of the bent lever and under-brace connected together, as shown in Fig. IV, the tread and brace being part and parcel or continuous with the balusters, the one bent at right angles, the other at the requisite angle for the brace.

Also, the bent levers, as hereinbefore described, in combination with the rail, either continuous or in sections, attached to the end of the long arm of said lever, together with the under-brace attached to the angle or bend of the short arm of said lever.

E. B. BIGELOW, of Clintonville, Mass.—*Improvement in Jacquard Looms*.—Patent dated October 23, 1849.

Claim.—First, giving to the jacquard frames of jacquard looms working by power a separate organization; that is, giving the various motions of the jacquard by a shaft or shafts within or making part of the jacquard in contradistinction to the weaving loom, but receiving motion from the loom or from some first mover governed by or working in unison with the loom, substantially as described and for the purpose specified.

Second, the method of adjusting the jacquard frame relatively to the weaving loom, substantially as described, so that the attendant can, from a given point, make the adjustment to suit the condition of the harness, as described. Z

Third, taking the motions for operating the picker staves, and the apparatus for shifting the shuttle boxes, from a shaft or shafts placed above and in combination with the pendulous frames which carry the shuttle boxes, substantially in the manner and for the purpose specified.

And, lastly, in combination with the power loom, a reversing motion, substantially as described, so that after the driving power has been removed and the momentum of the moving parts arrested the attendant may set in motion the reversing motion, and drive the loom in the reverse direction to bring the parts to the position required for restarting, substantially as described.

NATHAN KINMAN, of Buffalo, N. Y.—*Improved Flour Packer*.—Patent dated October 30, 1849.

Claim.—First, the packing apparatus, consisting of a combination of the tube *b* and inclined blades for condensing the flour and returning it while moving the barrel, substantially in the manner and for the purposes set forth.

Second, the hollow shaft for expelling the air from the barrel in packing, as above described; also, the self-acting clutch in combination with the packing apparatus in the manner above made known.

M. C. BRYANT, of Lowell, Mass.—*Improvement in Binder Pulleys for Belts and Brakes*.—Patent dated November 13, 1849.

Claim.—First, to communicate power to machines used for extracting liquids from other matter by means of a movable binder pulley and a slack belt, the binder pulley being pressed upon the belt by means of a shifting weight, as herein described.

Second, to attach to the same part to which is connected the binder pulley, the friction stop or brake, so that by the same movement that the binder is taken from the belt the brake is brought to act upon the machine to stop it by the means herein described.

CHARLES PERLEY, of New York city.—*Improved Method of Fitting the Hearing Socket and Head of Windlasses*.—Patent dated November 12, 1849.

Claim.—As new and useful in effect, the application of the boss *c* with the wrought-metal band 2 and square 1, acting with the bush *e*, to connect the windlass head B with the shaft *b*, and at the same time support the heaving socket and flanch in such a manner that either the head or the heaving socket and flanch, or both, can be immediately replaced when injured, the whole constructed and operating substantially as described and shown.

E. B. FORBUSH, of Buffalo, N. Y.—*Improved Form of Teeth in Harvesting Machines*.—Patent dated November 27, 1849.

Claim.—An open triangular hollow tooth for cutting grass and grain, with its results, as herein described.

J. F. ROGERS, of South Bend, Ind.—*Improved Railroad Truck*.—Patent dated November 27, 1849.

Claim.—The arrangement and combination of the journal boxes *c*, with the spring casing or pockets *b b*, through which bolts are affixed to the frame and acting as guides to the boxes, the whole being constructed and arranged in the manner and for the purpose substantially the same as herein specified.

W. E. NICHOLS, of East Haddam, Conn.—*Improvement in Machinery for Making Cord*.—Patent dated December 11, 1849; reissued January 20, 1857.

Claim.—First, twisting or controlling the twist of the strands while the main frame is revolving to lay them into the cord by causing an even-faced wheel attached concentrically to and revolving with the bobbin frame, to travel over a fixed and smooth surface, friction causing the frame to revolve.

Second, revolving the bobbin frames on their own axes to twist the strands at the same time that they are carried round a common centre to twist the cord by rolling them on the surface of a stationary annular inclined track toward the inner or outer periphery of which they can be adjusted to run, so as to vary the relative twist of the strands and cords, substantially as herein set forth.

Third, the construction and arrangement of the central stem or spindle of the bobbin frame, operating substantially as herein set forth, whereby the yarns are collectively subjected to progressively increasing tension and twist from the commencement to the end of the process of laying into the strand, whereby the latter is rendered smooth and regular in its figure and of uniform density and strength, and subjected to uniform tension while being laid into the cord.

MOSES MARSHALL, of Lowell, Mass.—*Improved Loom for Weaving Figured Fabrics*.—Patent dated December 11, 1849; reissued April 24, 1860.

Claim.—Combining with the jacks that operate the series of leaves of heddles and with the lifter and depresser and pattern chain, or any equivalent apparatus for determining the pattern, a mechanism for holding the jacks either in their elevated or depressed position, when not required to be operated, substantially as and for the purpose specified.

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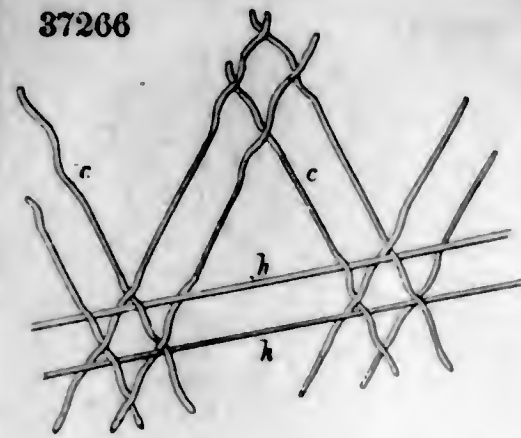
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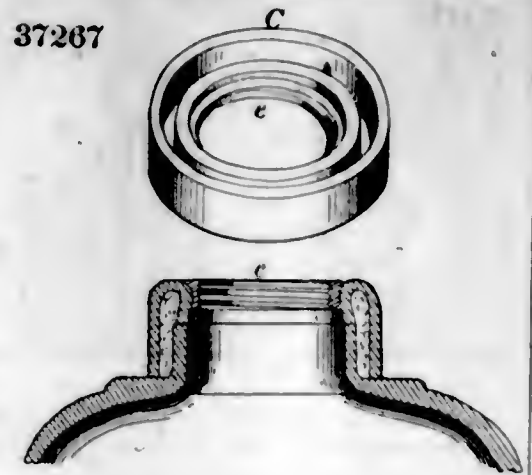
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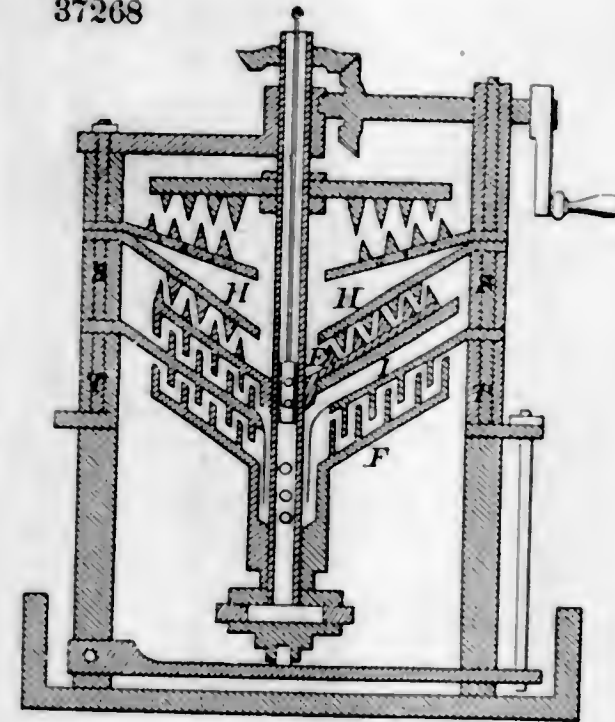
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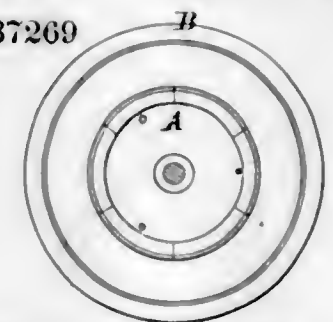
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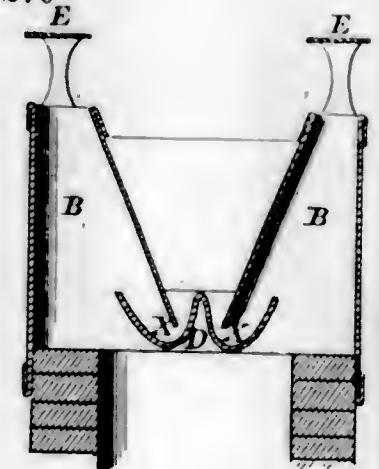
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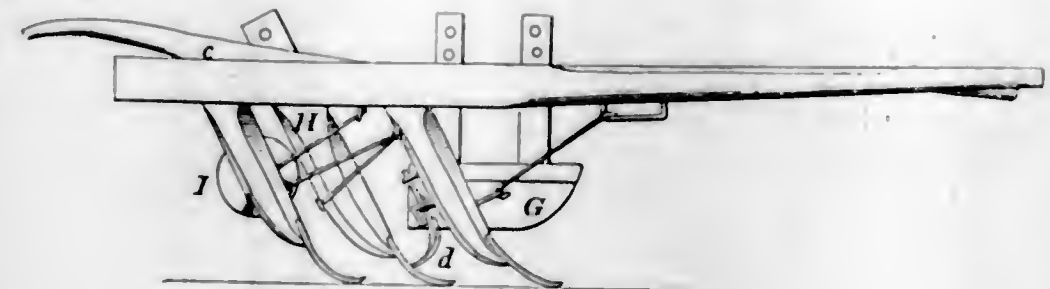
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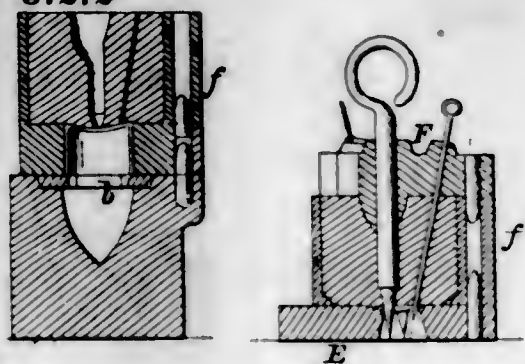
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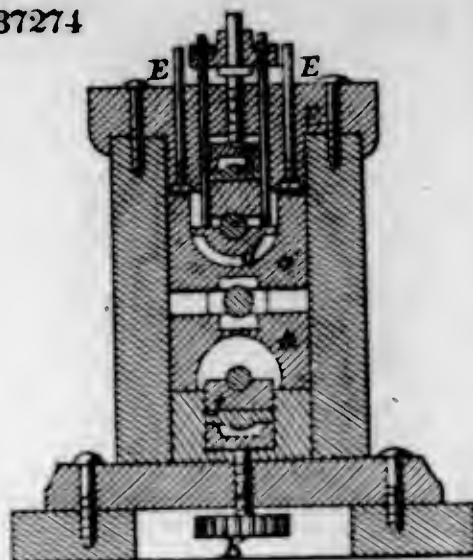
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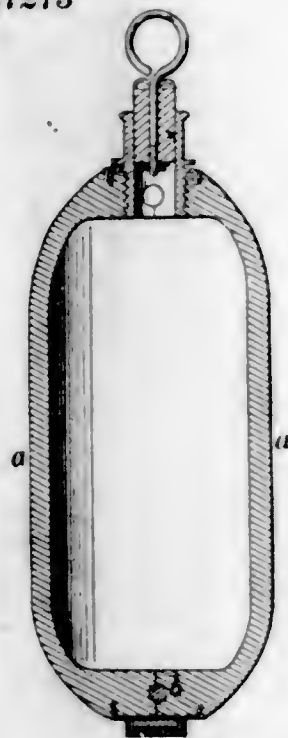
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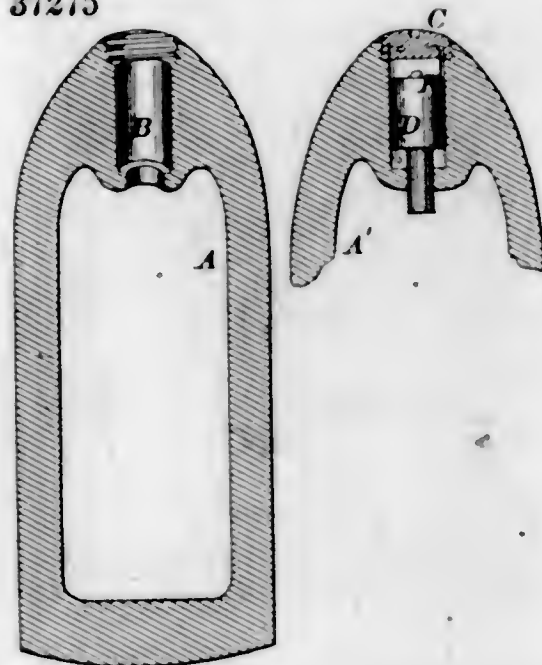
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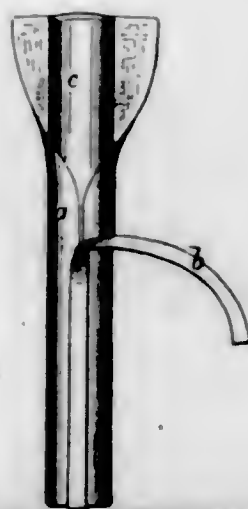
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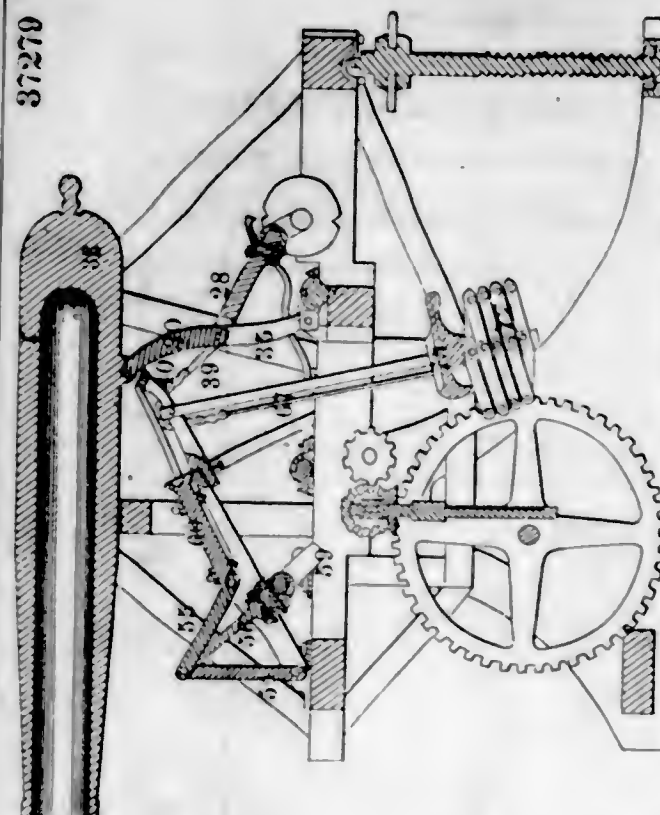
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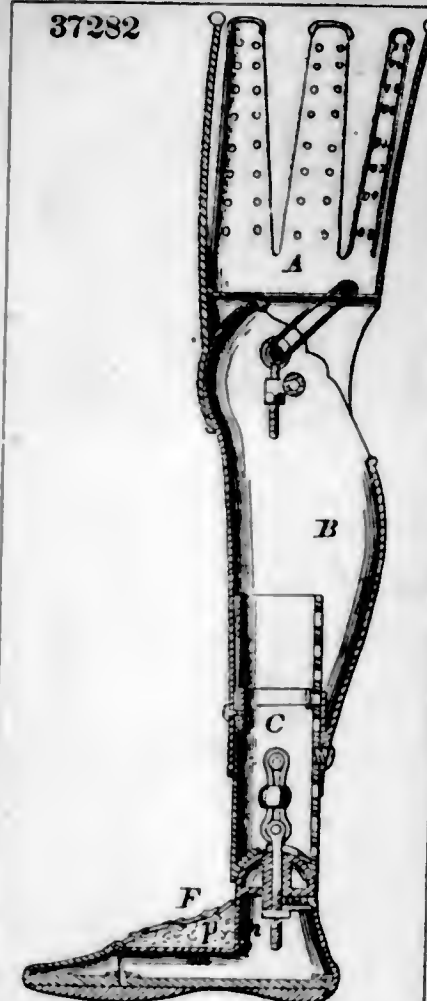
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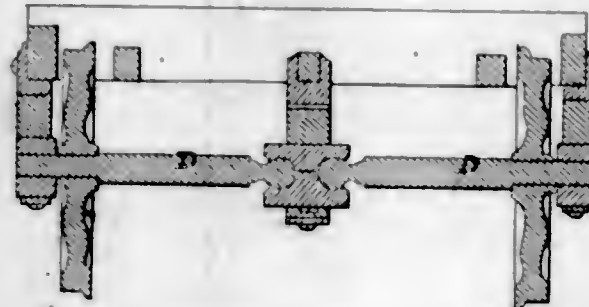
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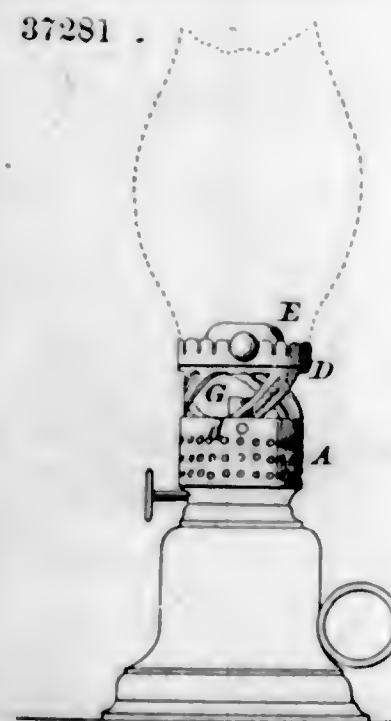
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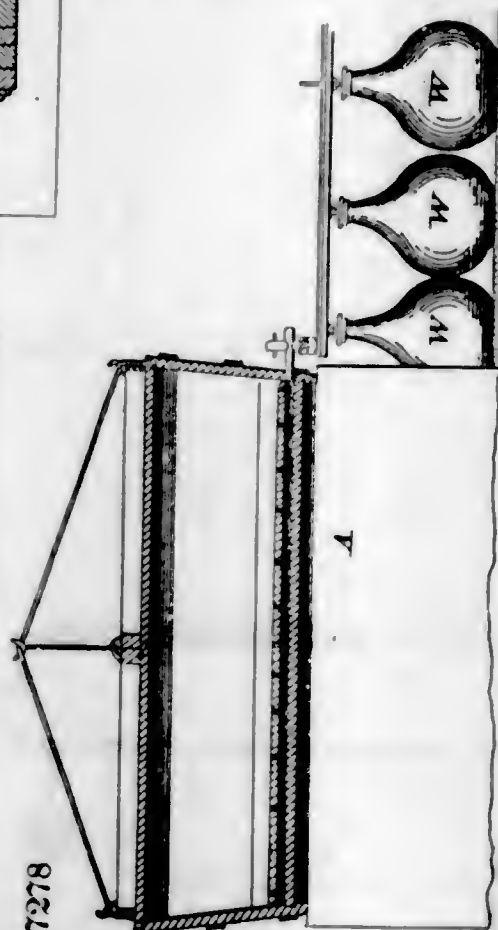
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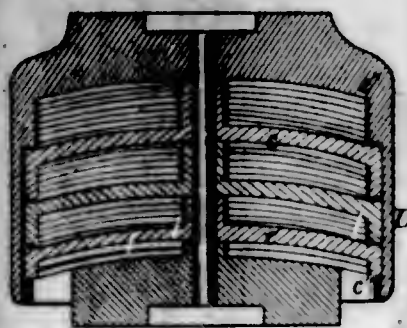
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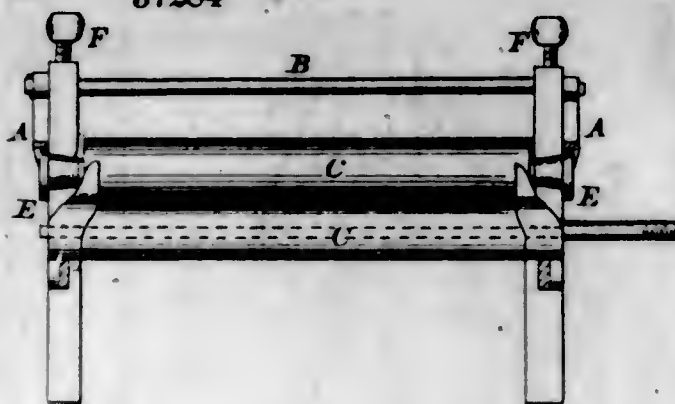
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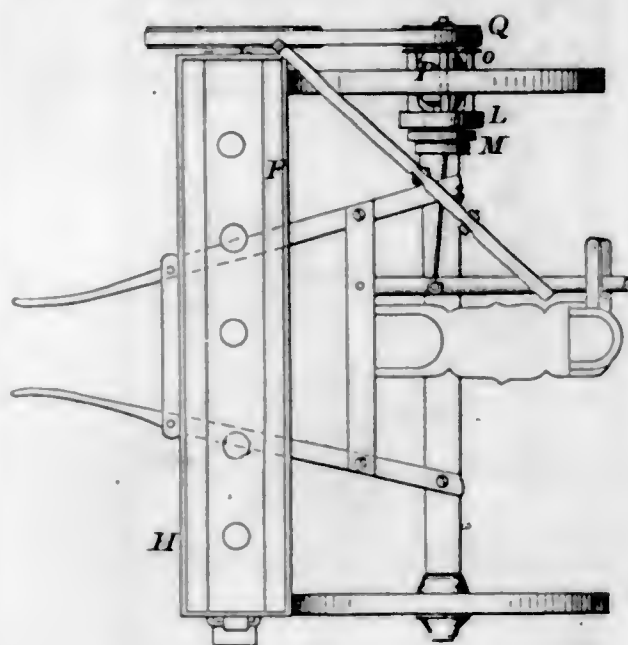
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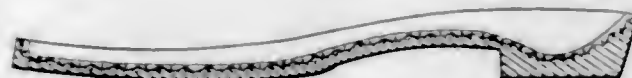
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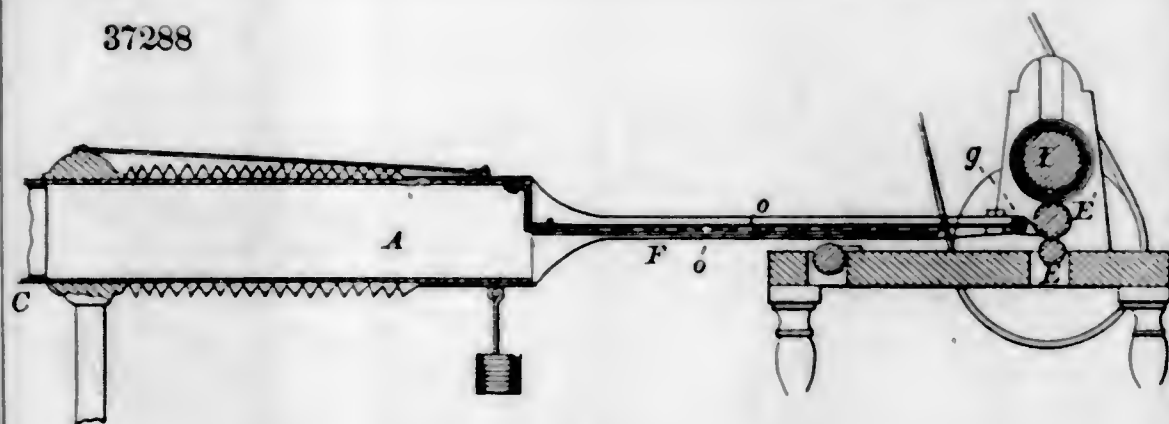
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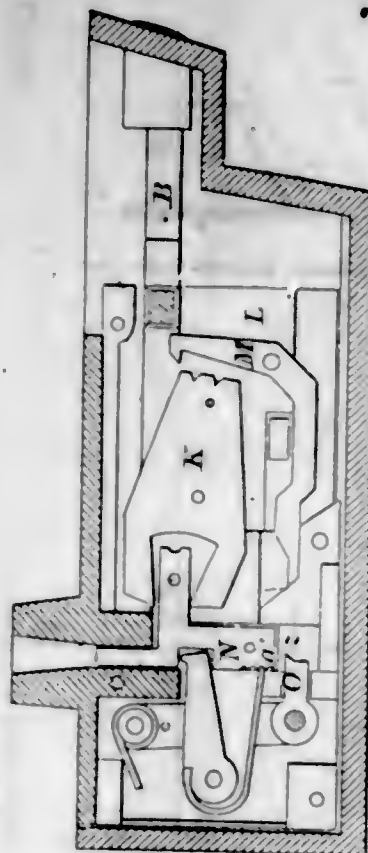
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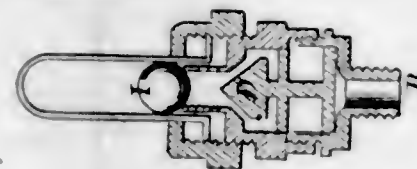
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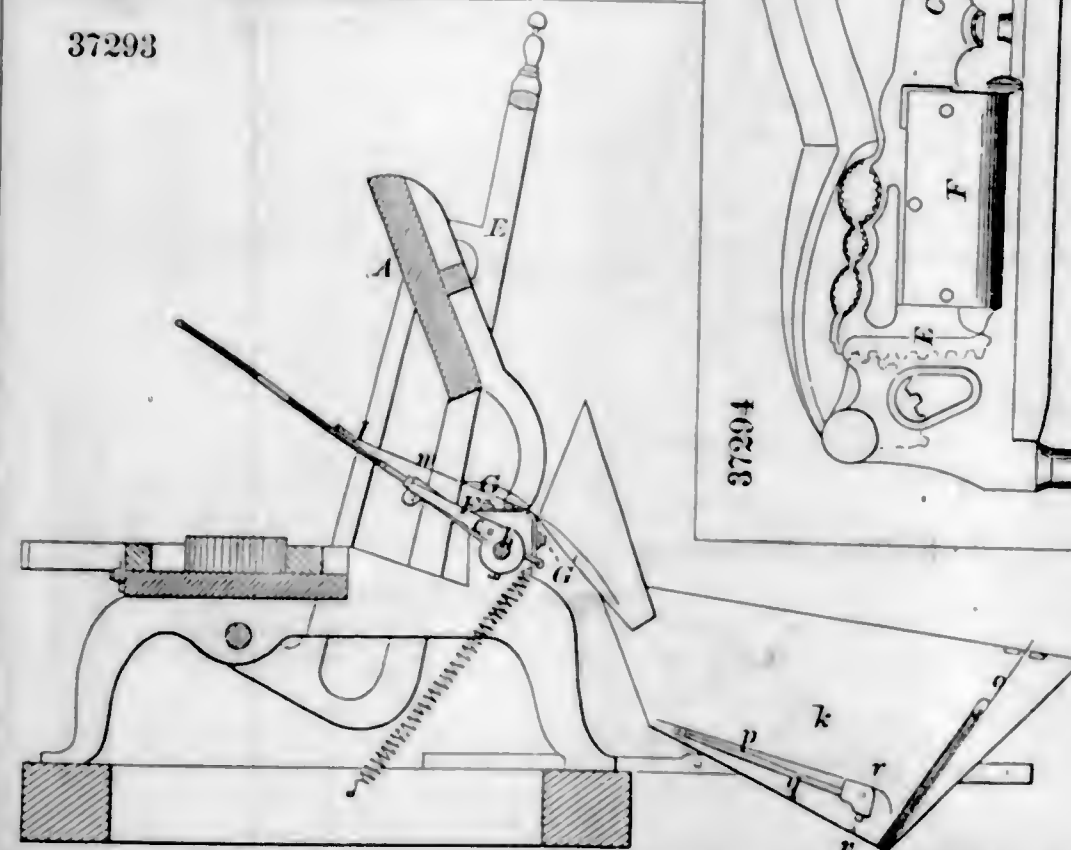
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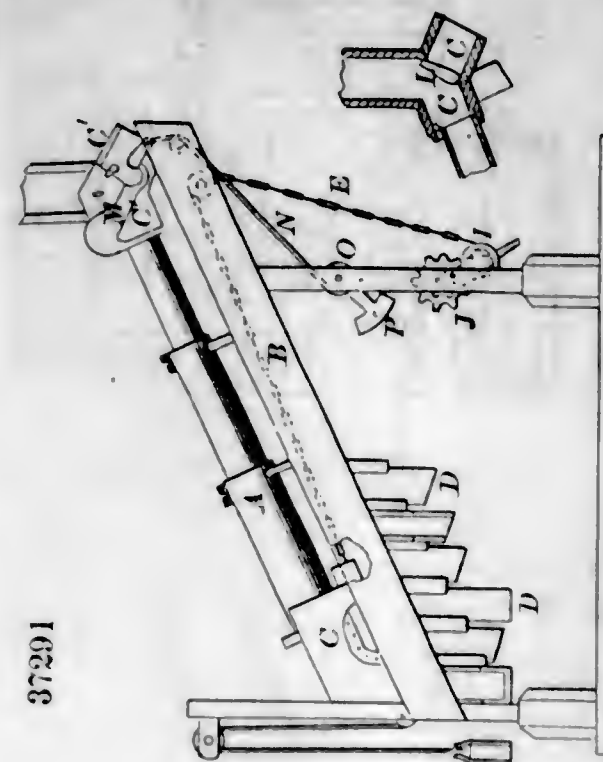
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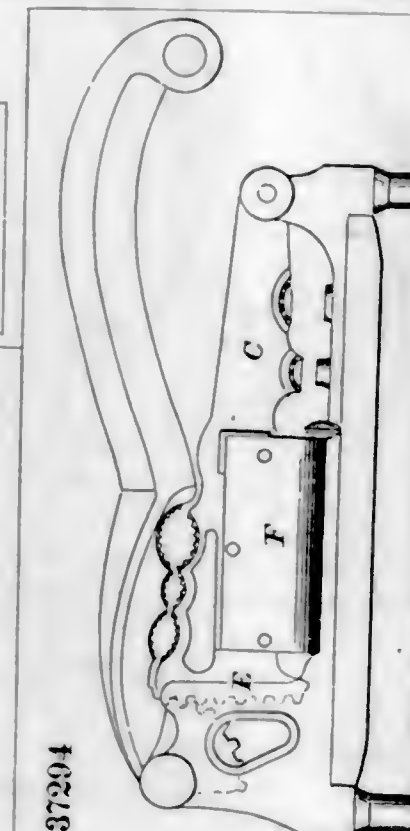
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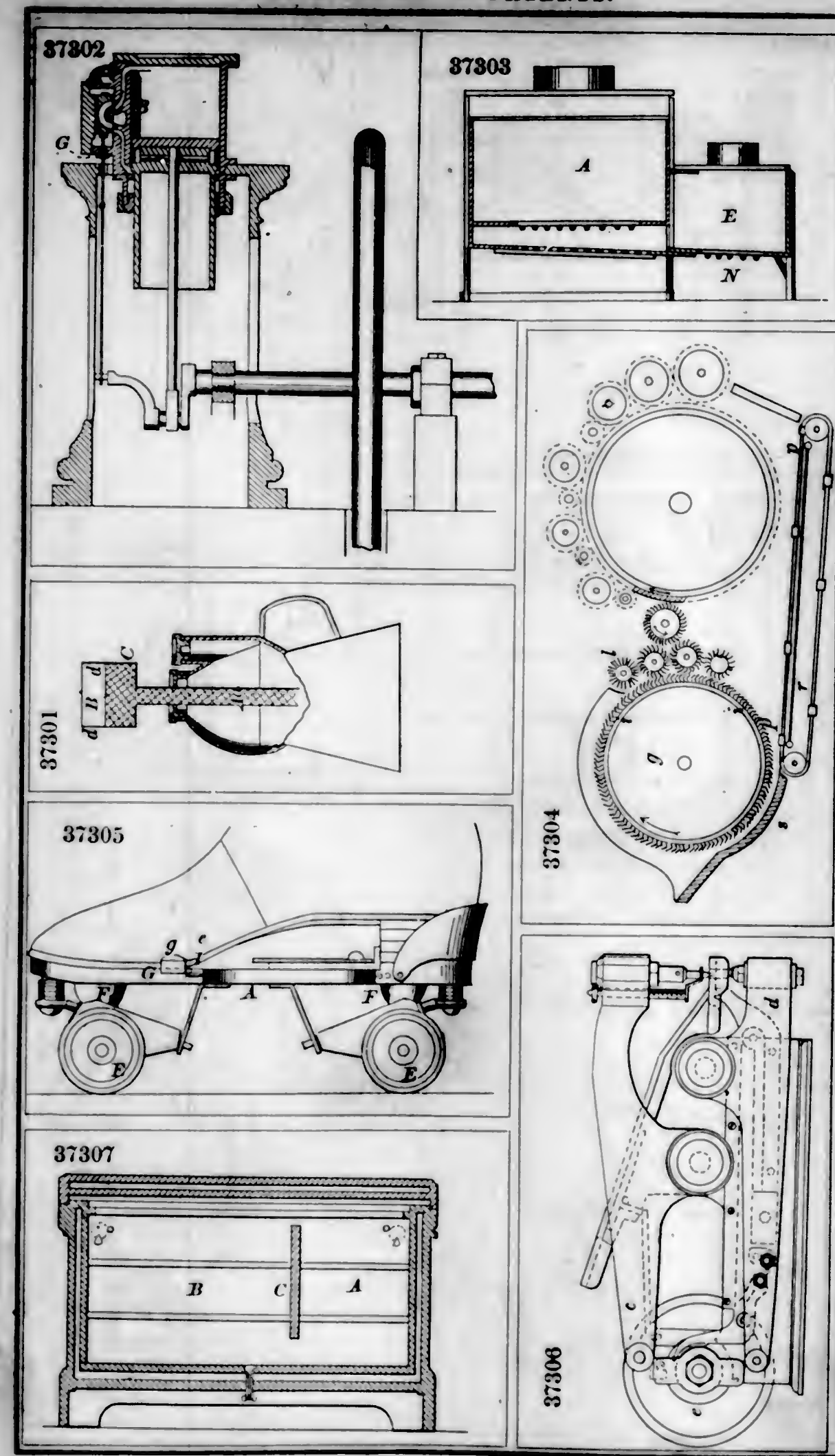
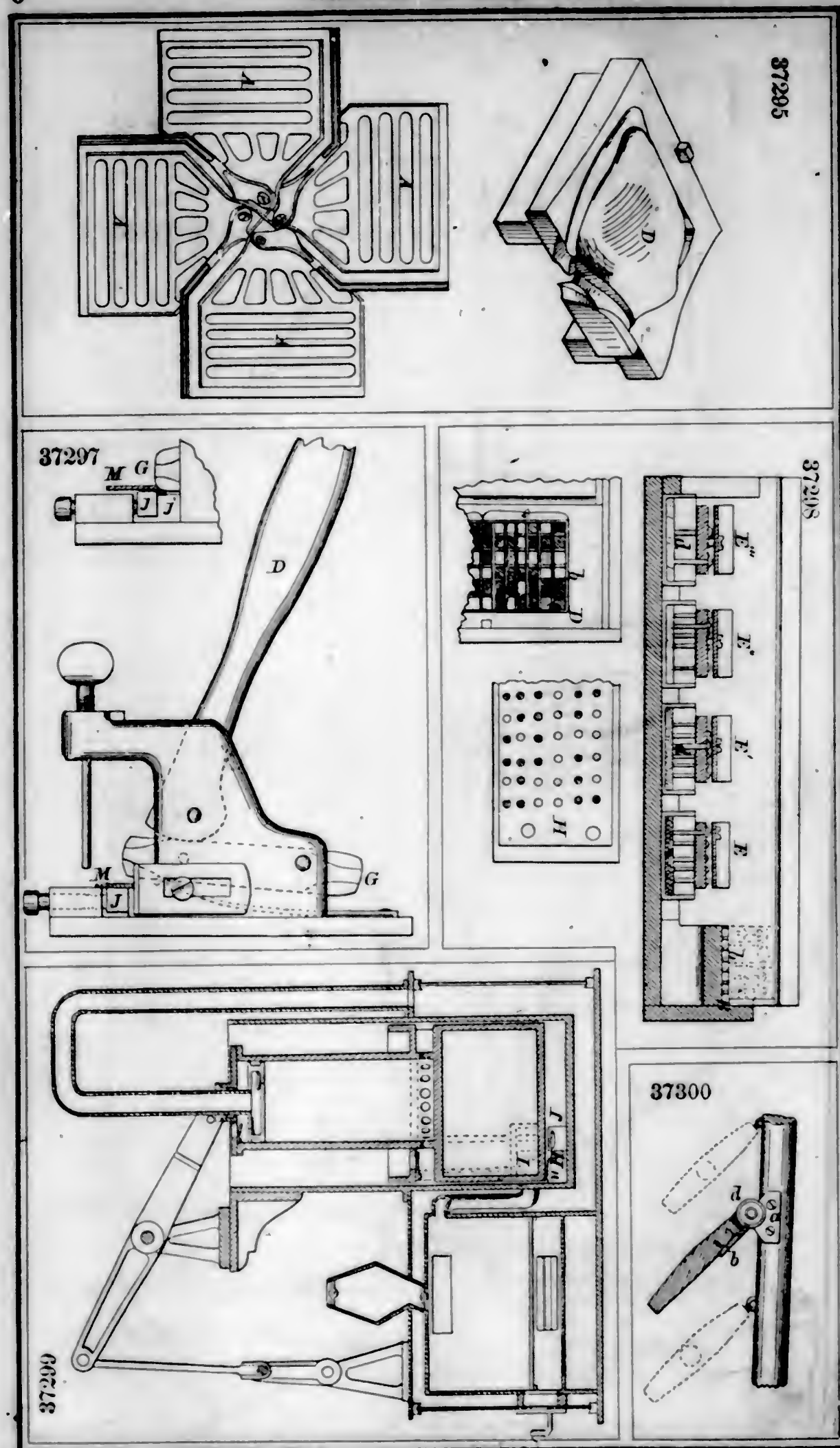


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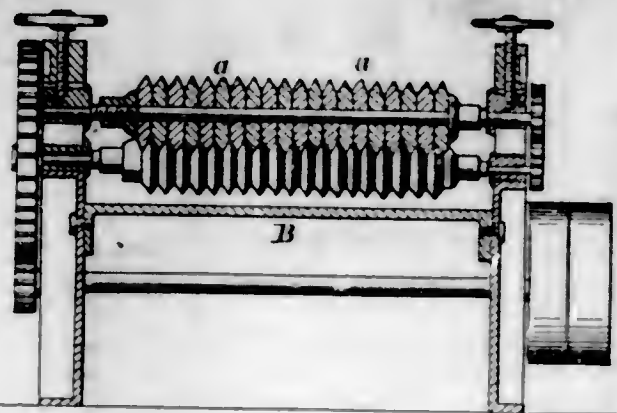


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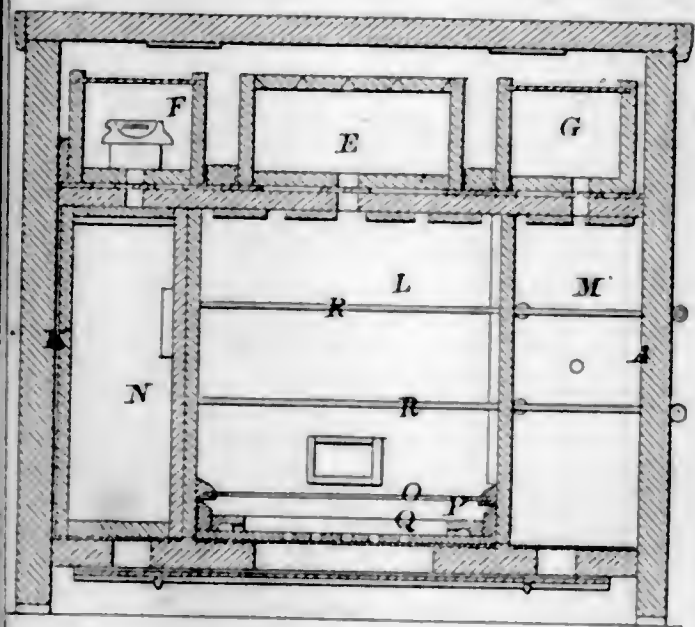




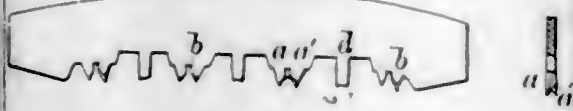
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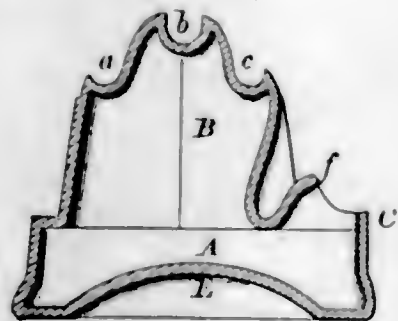
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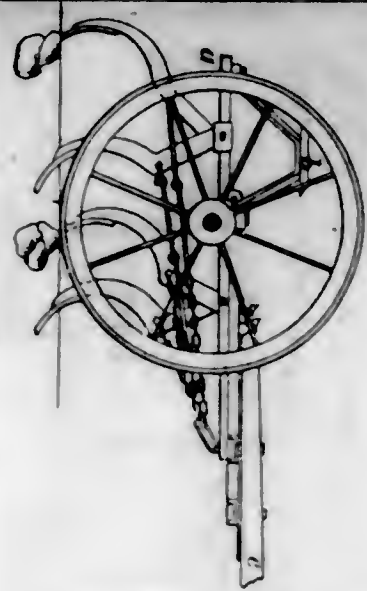
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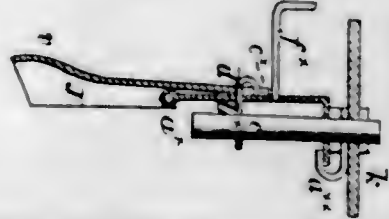
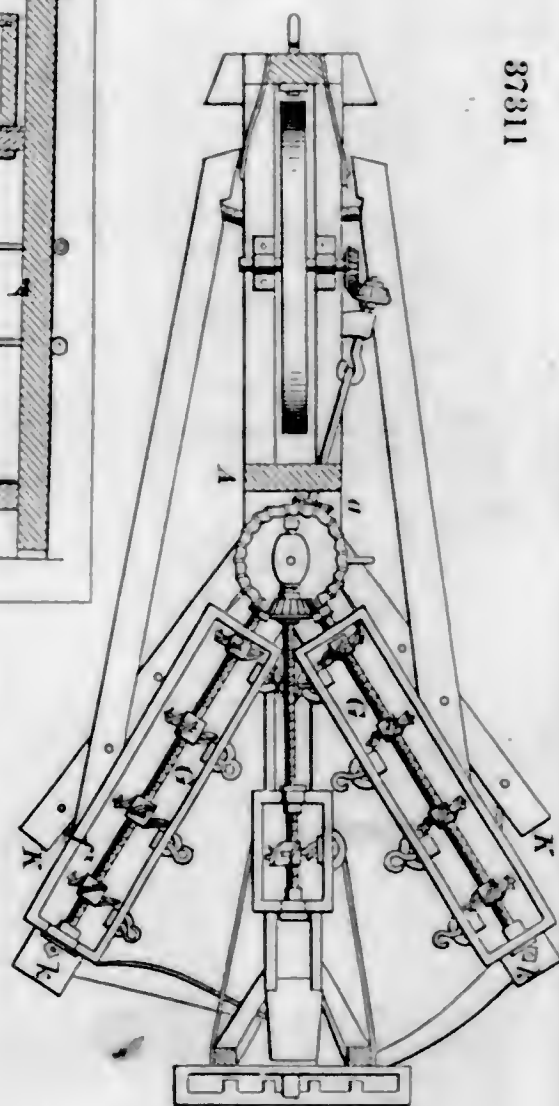
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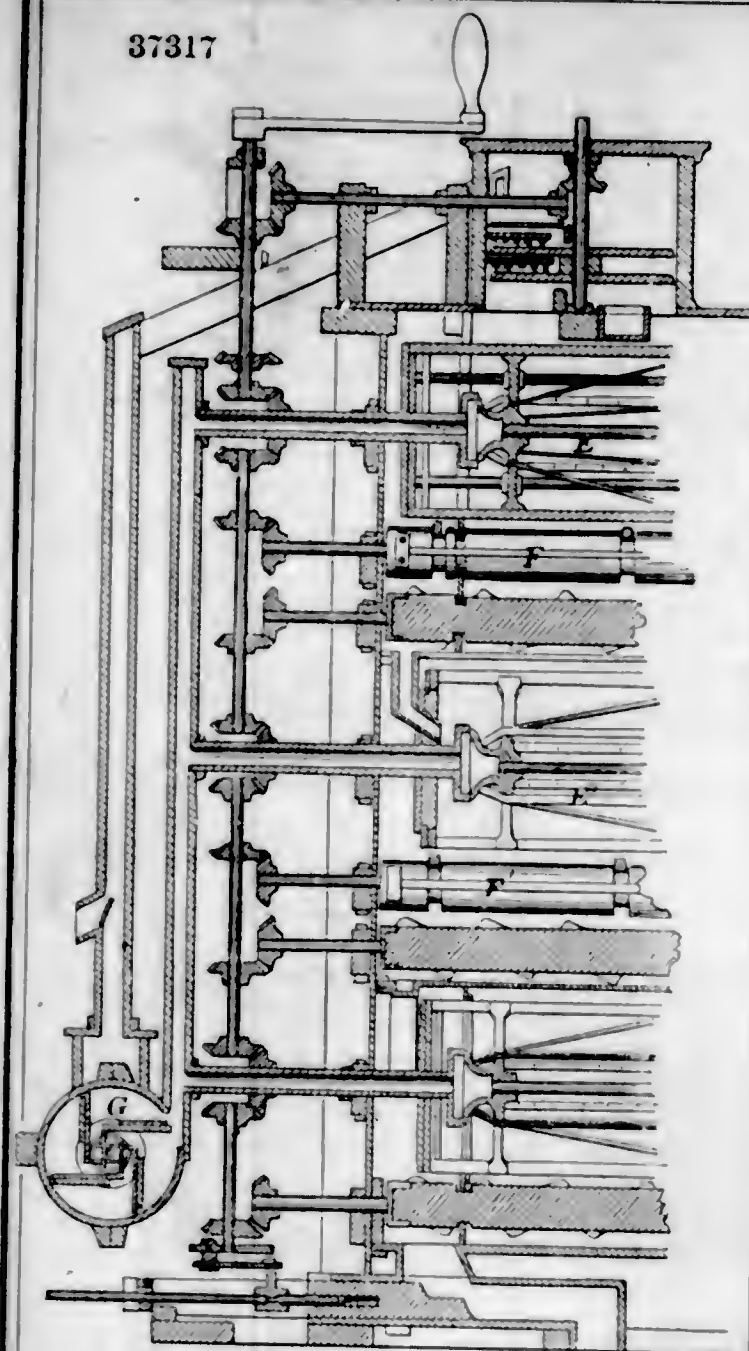
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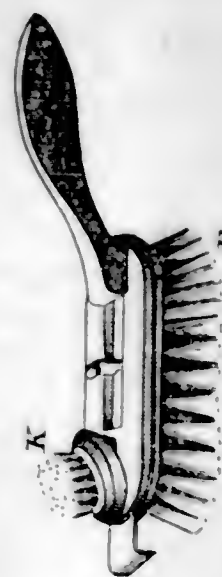
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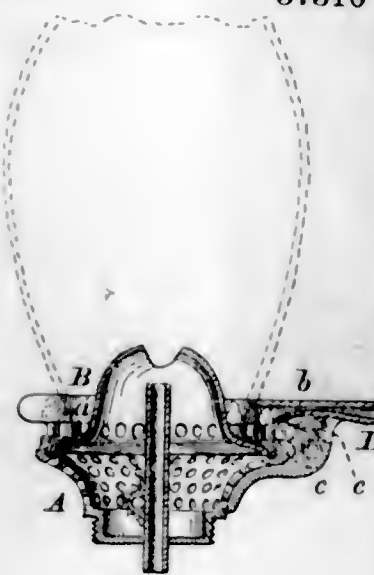
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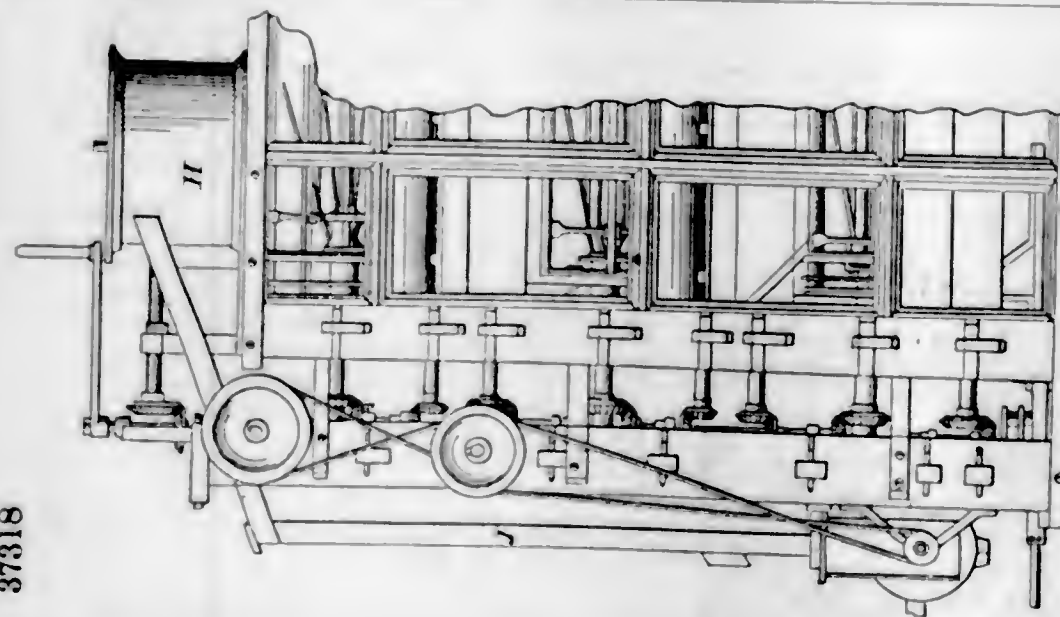
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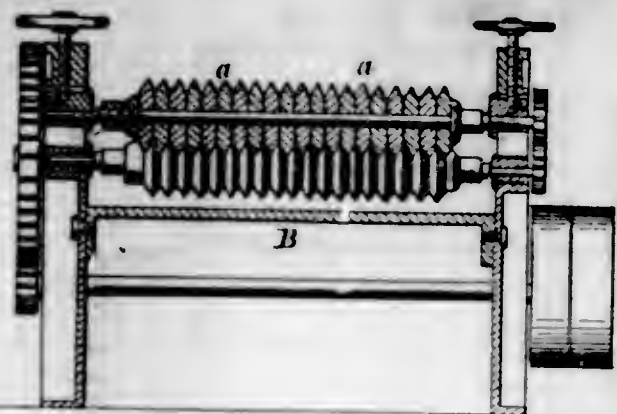
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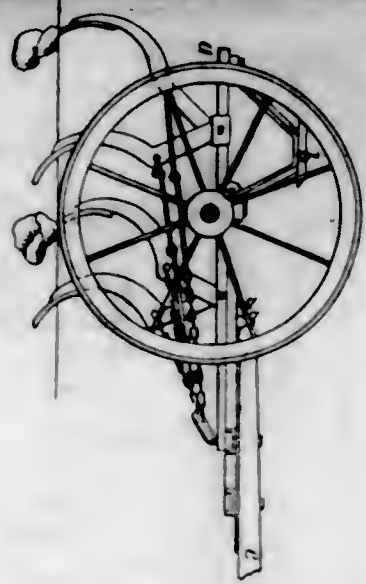
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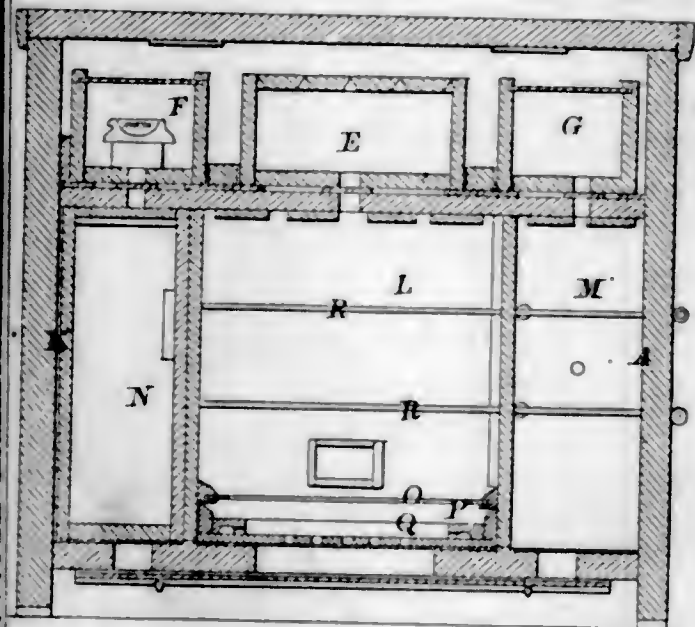
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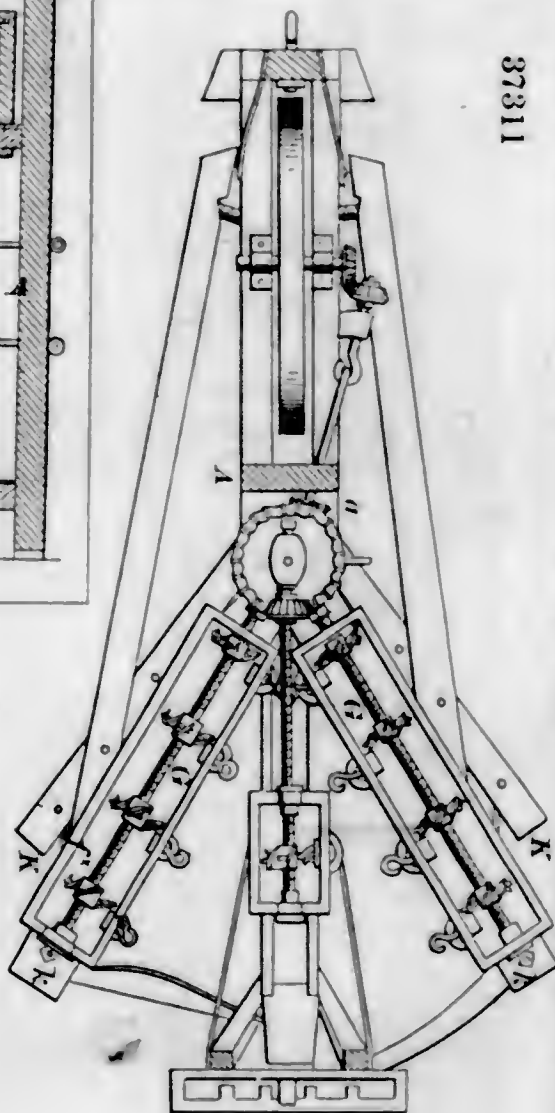
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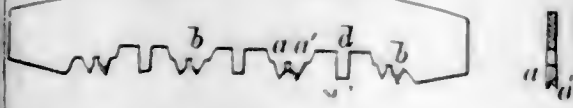
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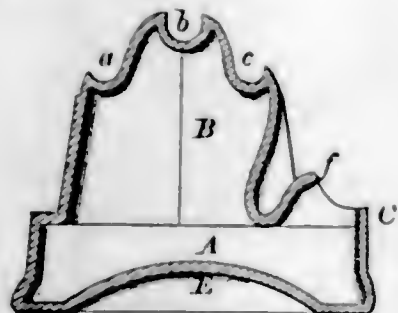
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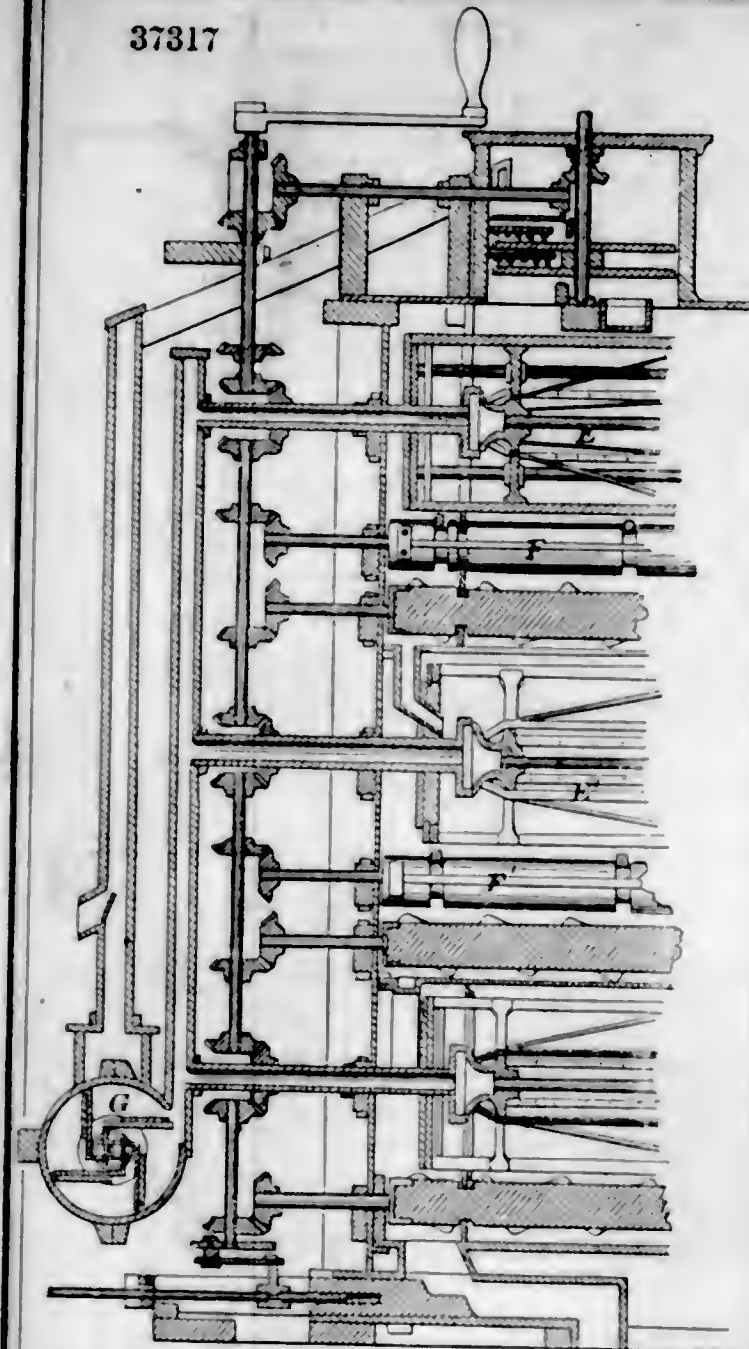
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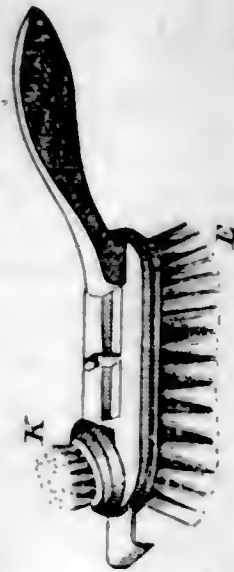
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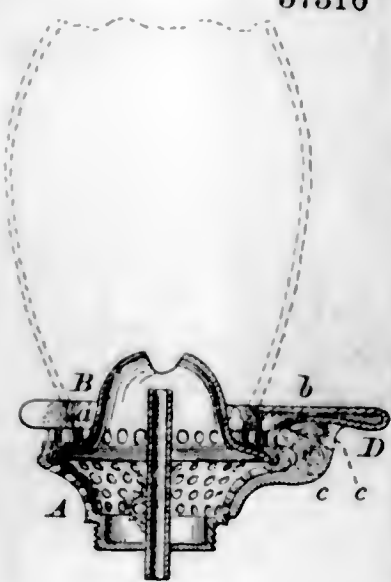
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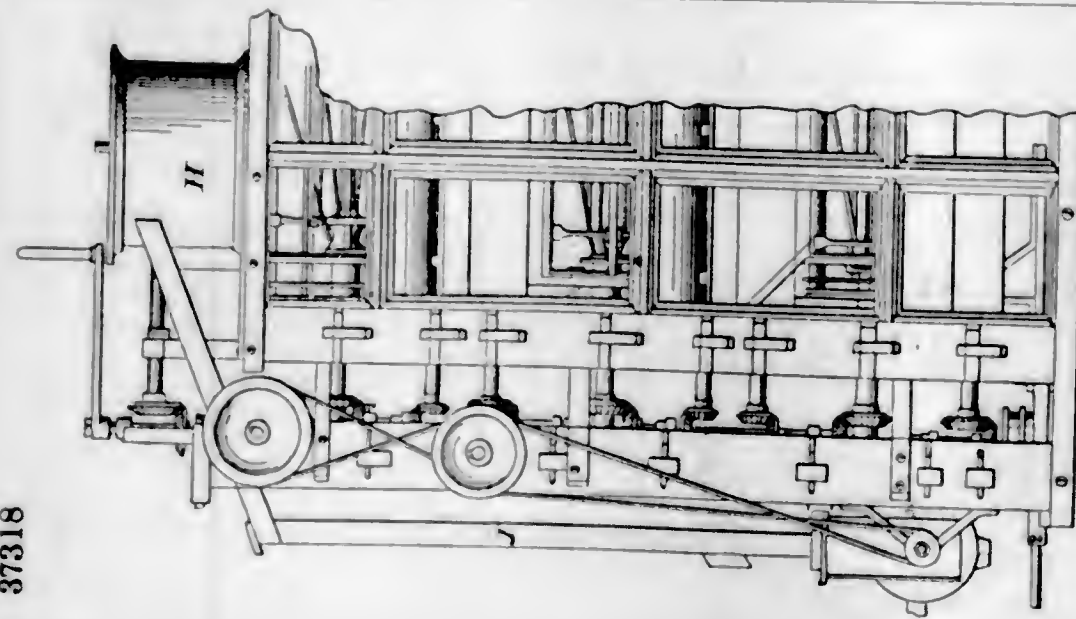
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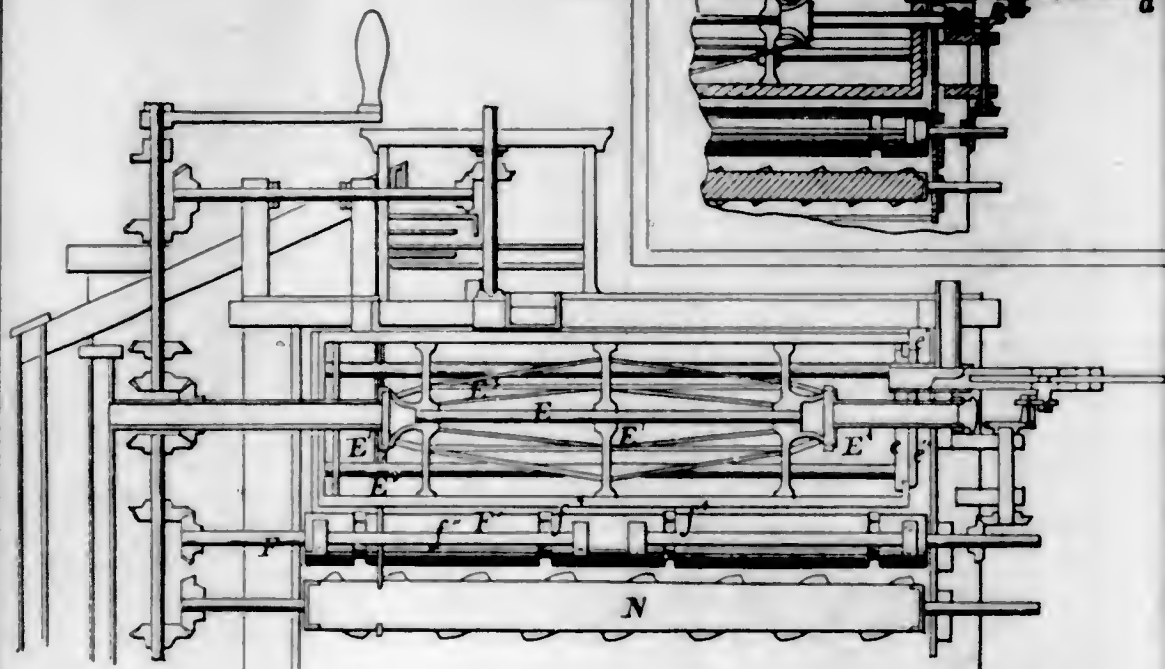
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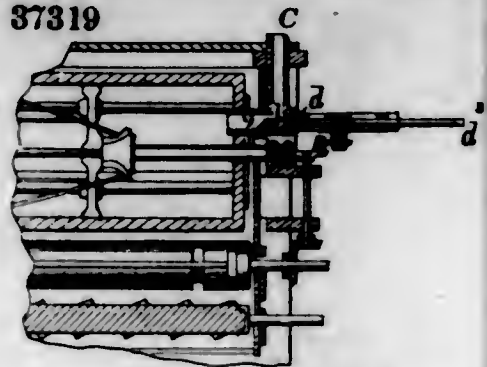
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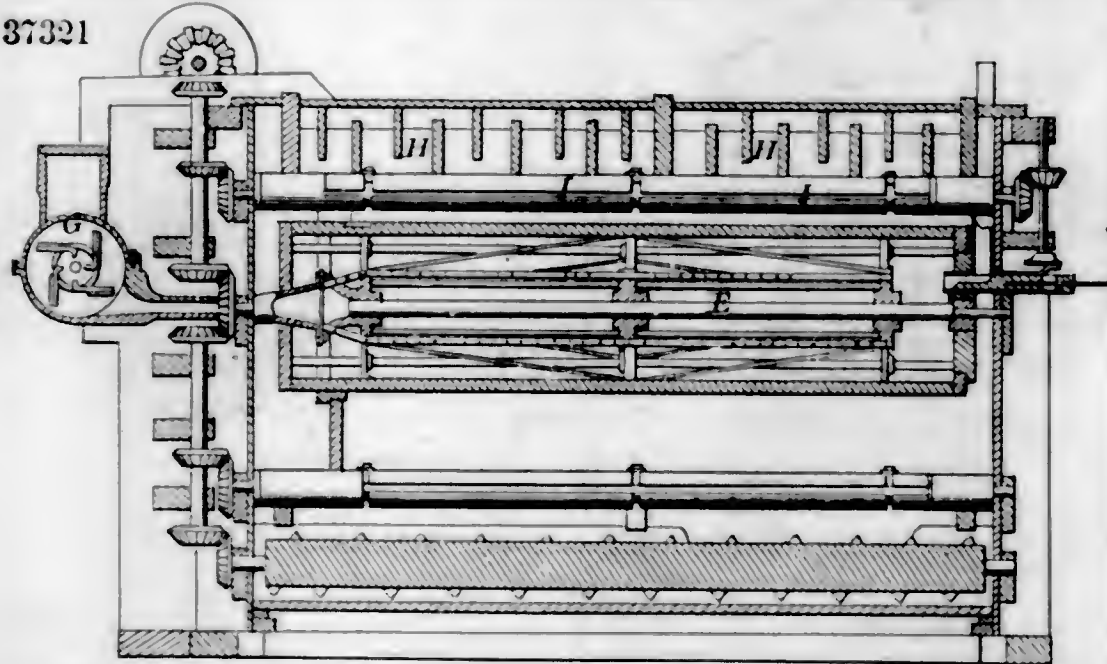
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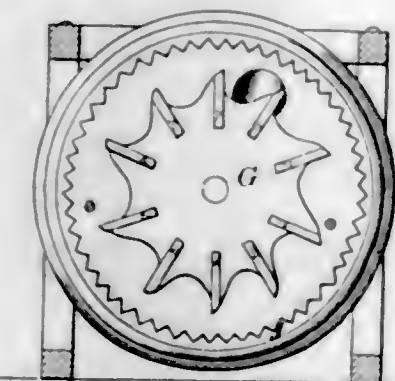
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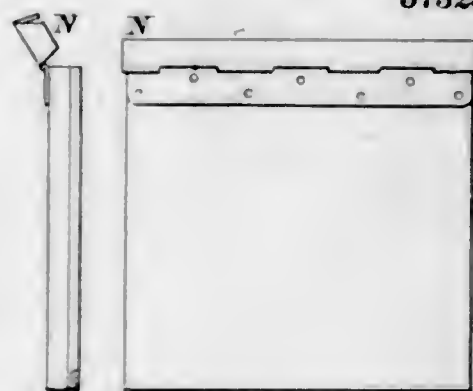
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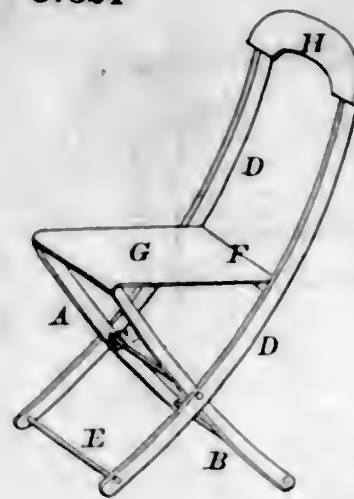
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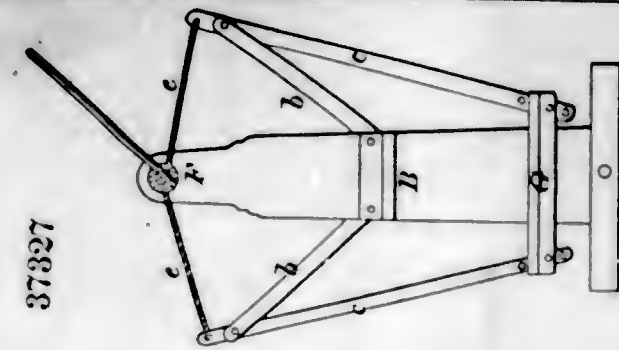
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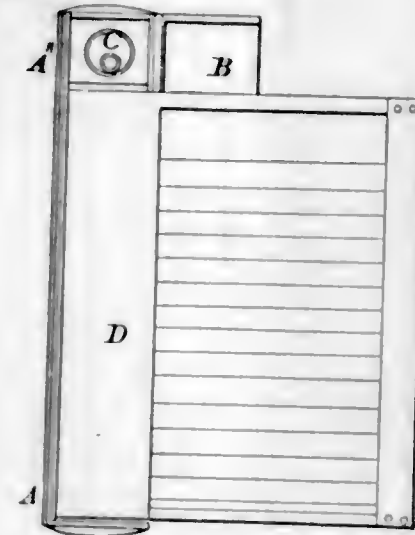
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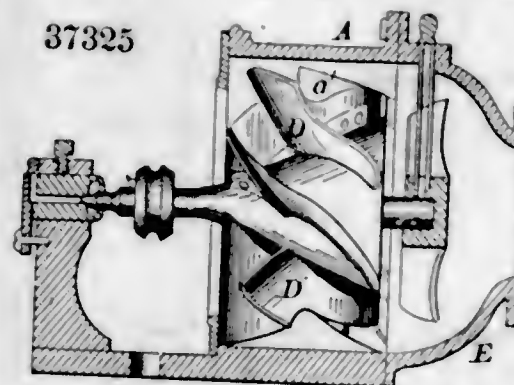
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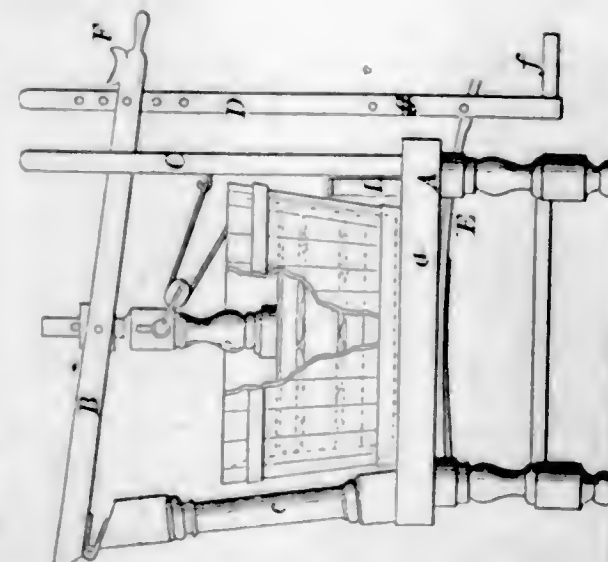
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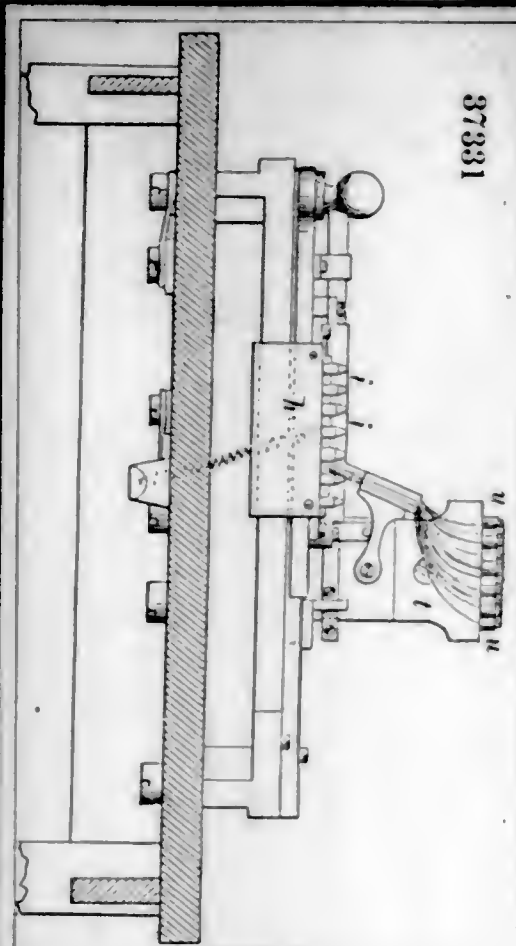


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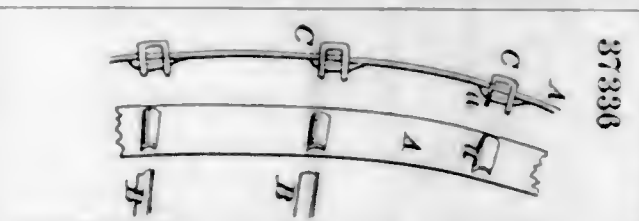




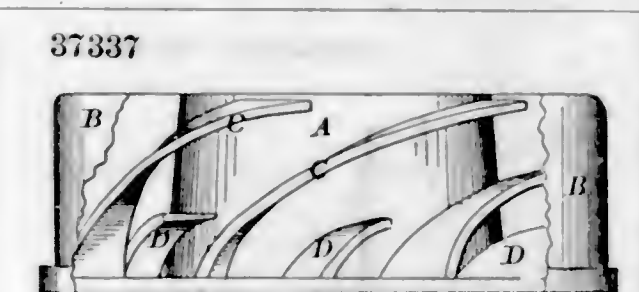
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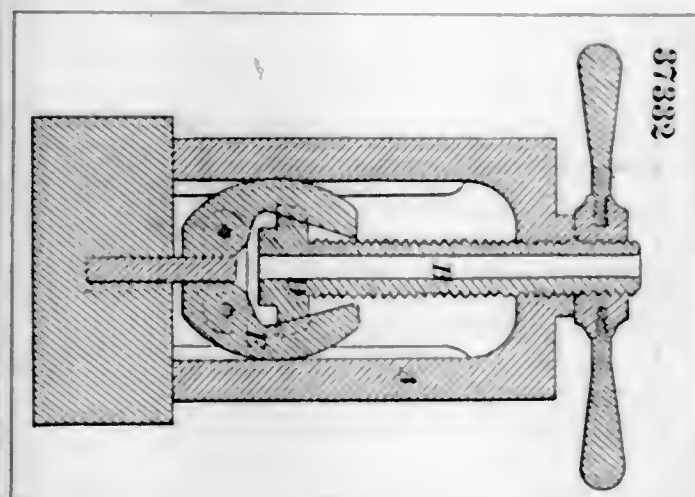
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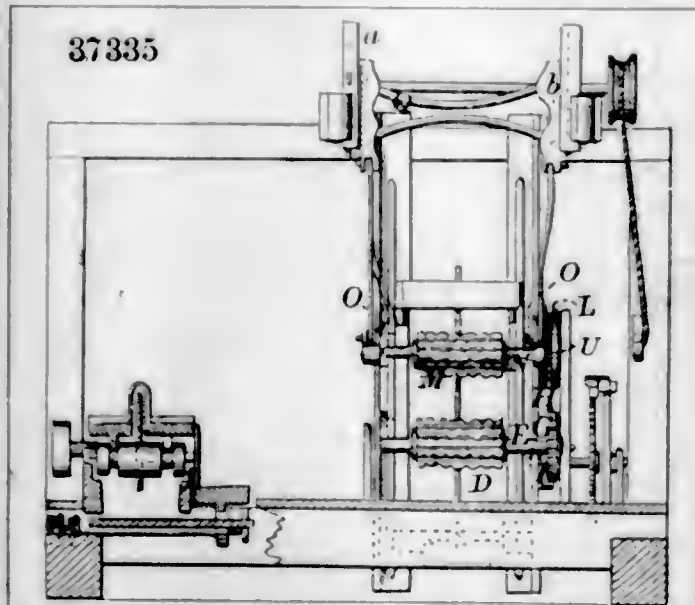
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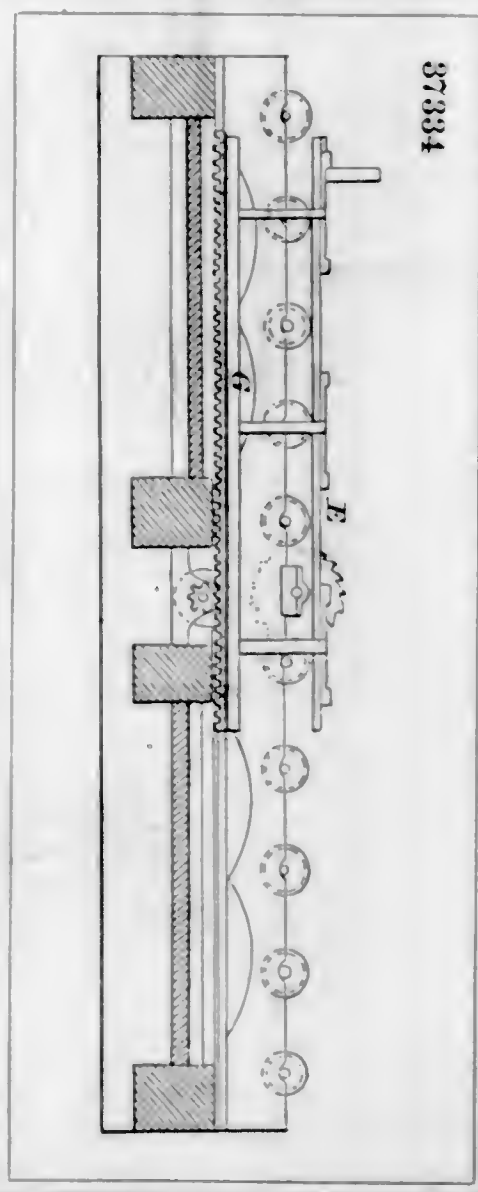
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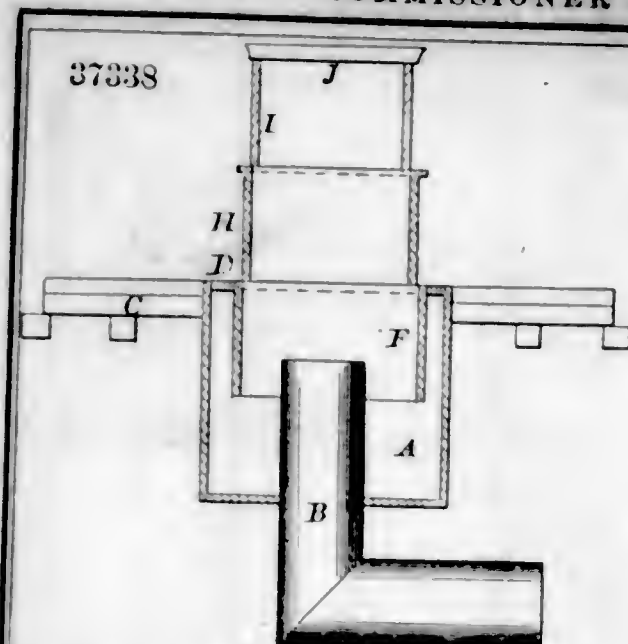
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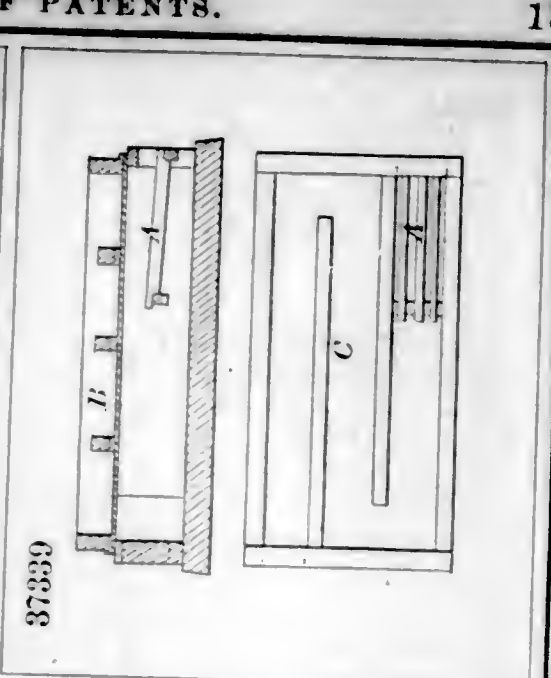
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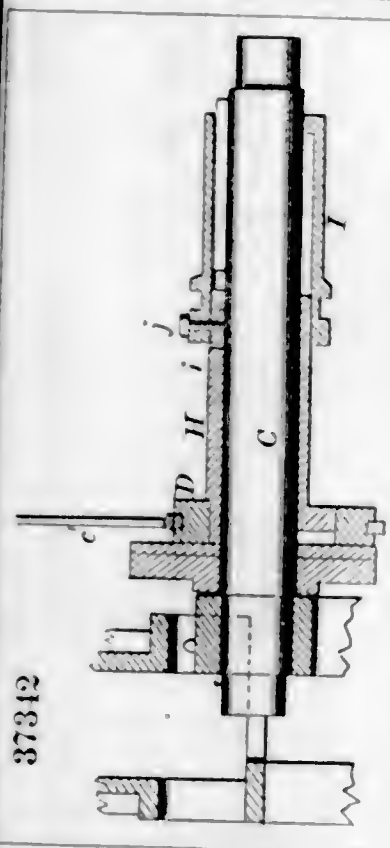
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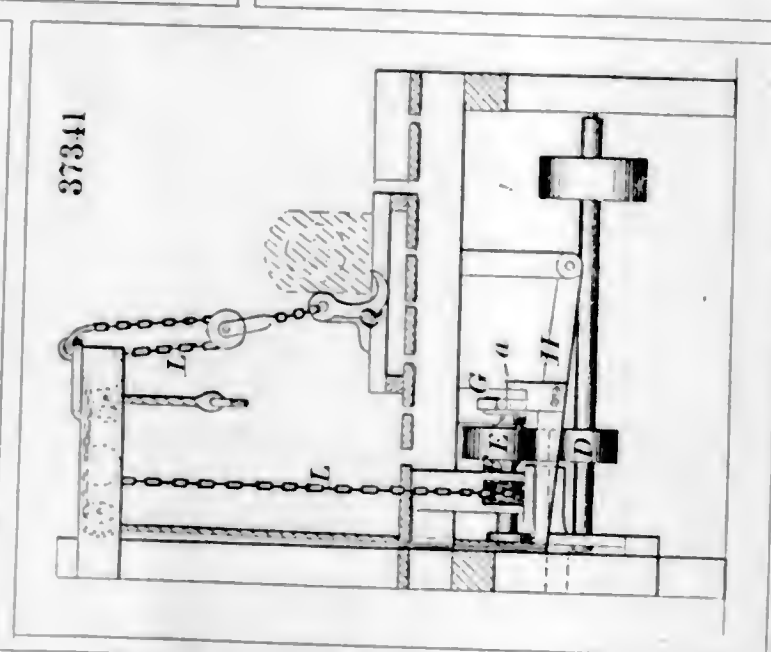
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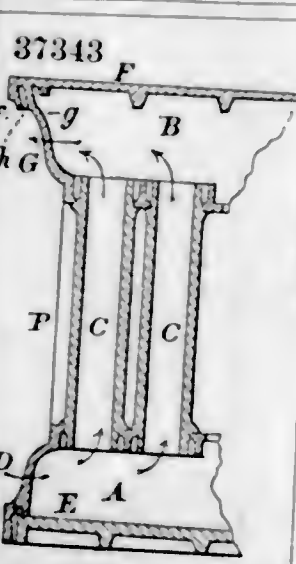
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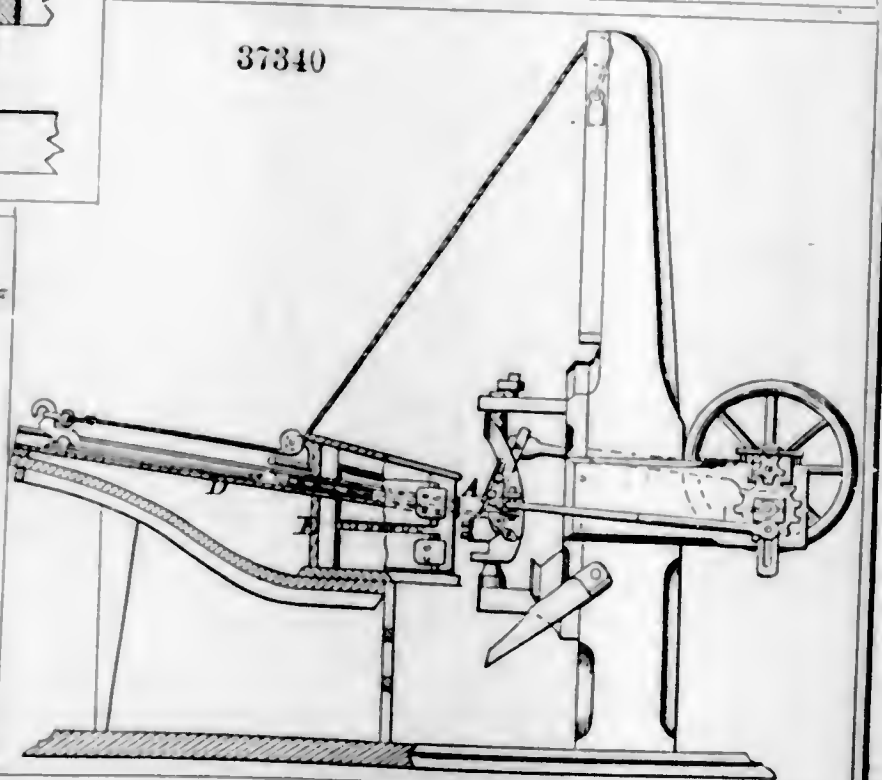
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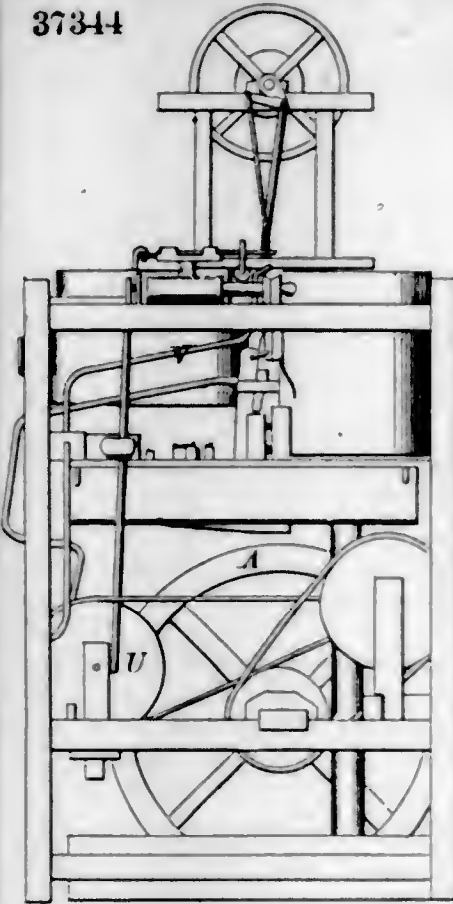


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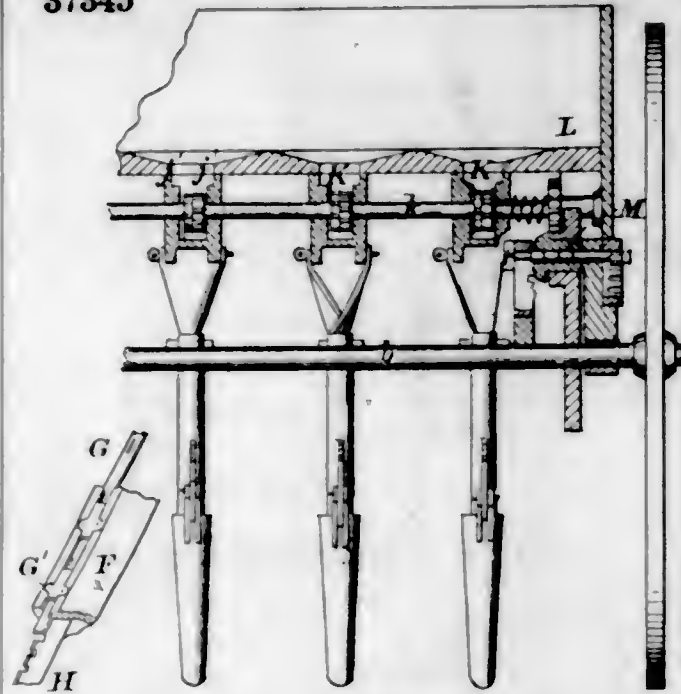


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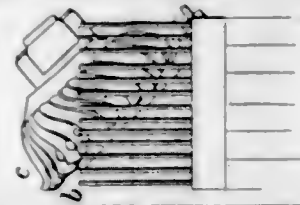
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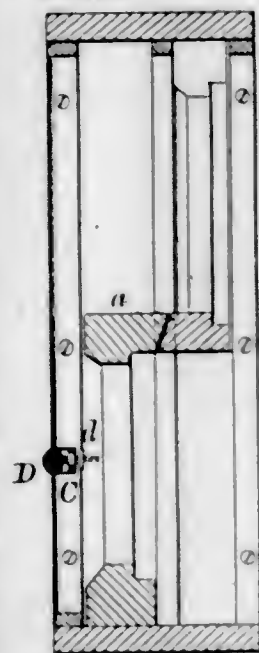
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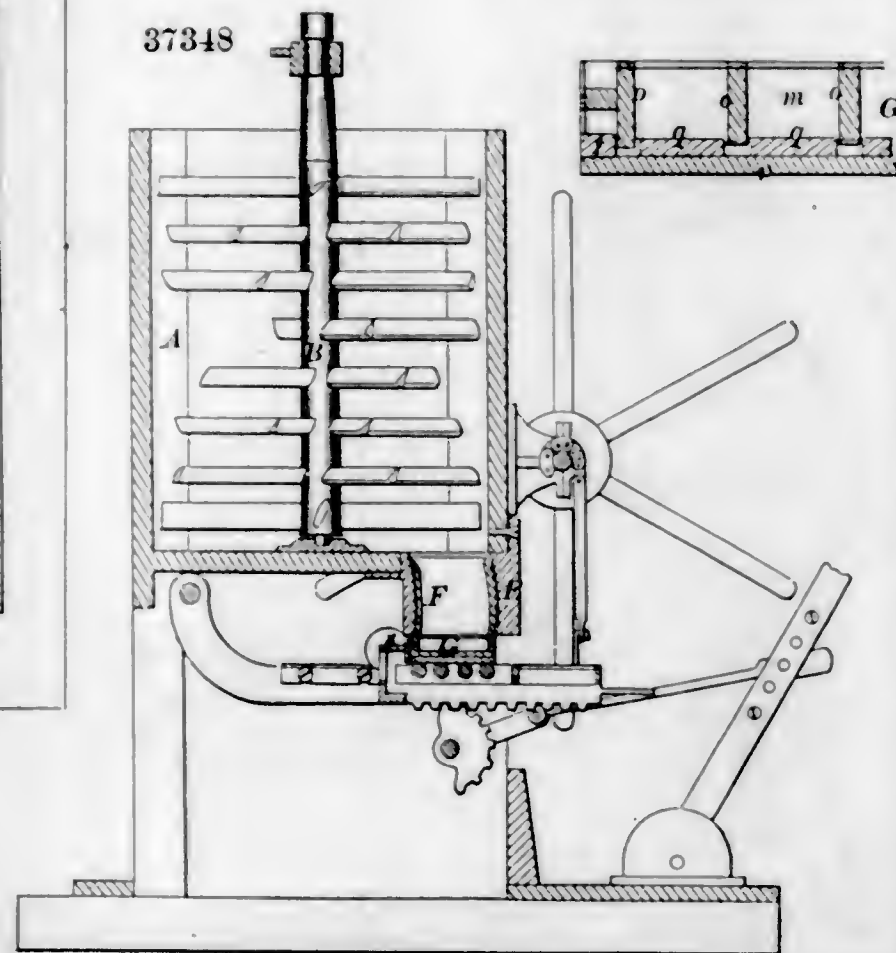
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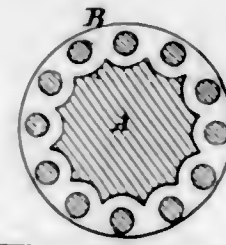
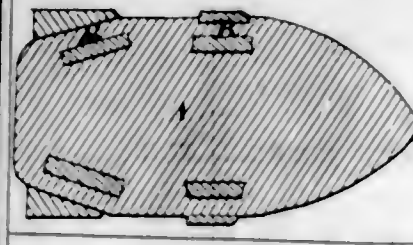
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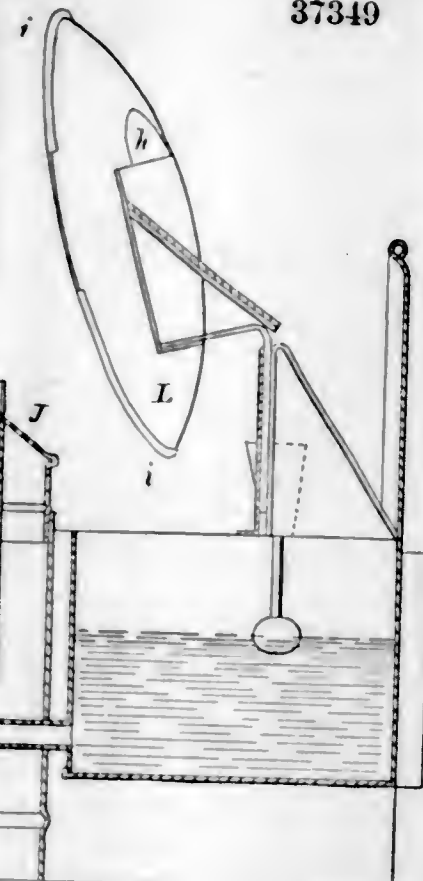
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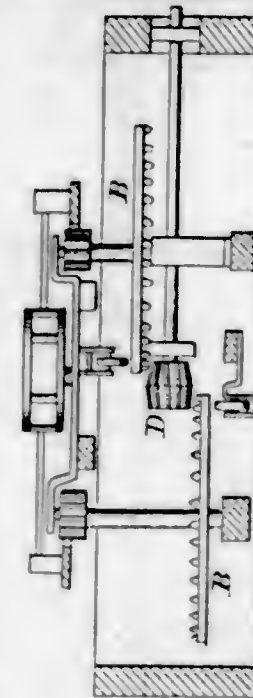
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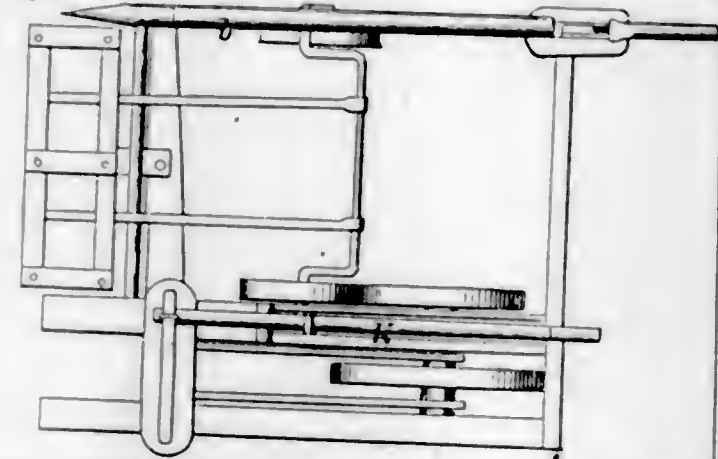
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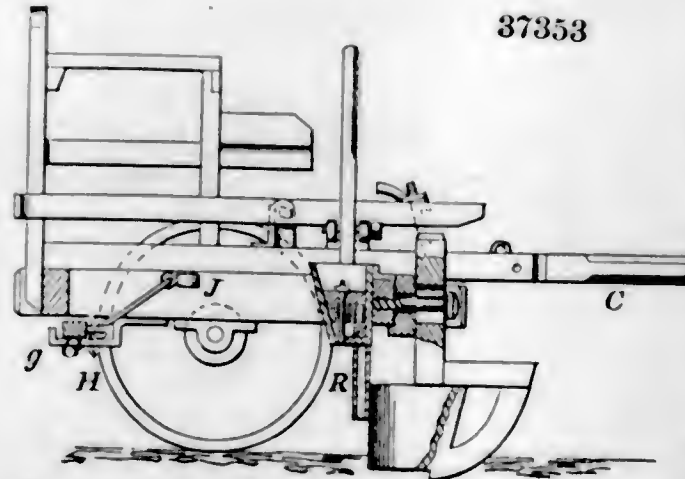
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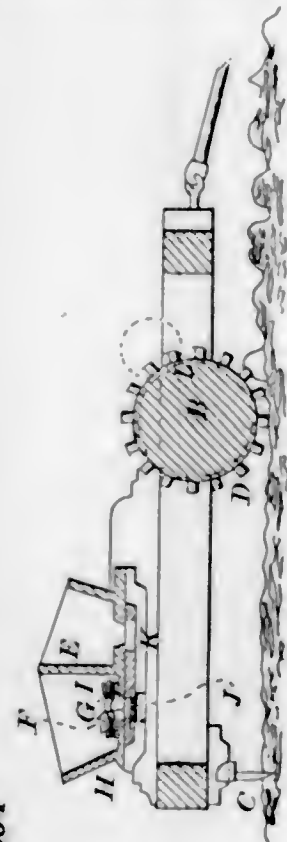
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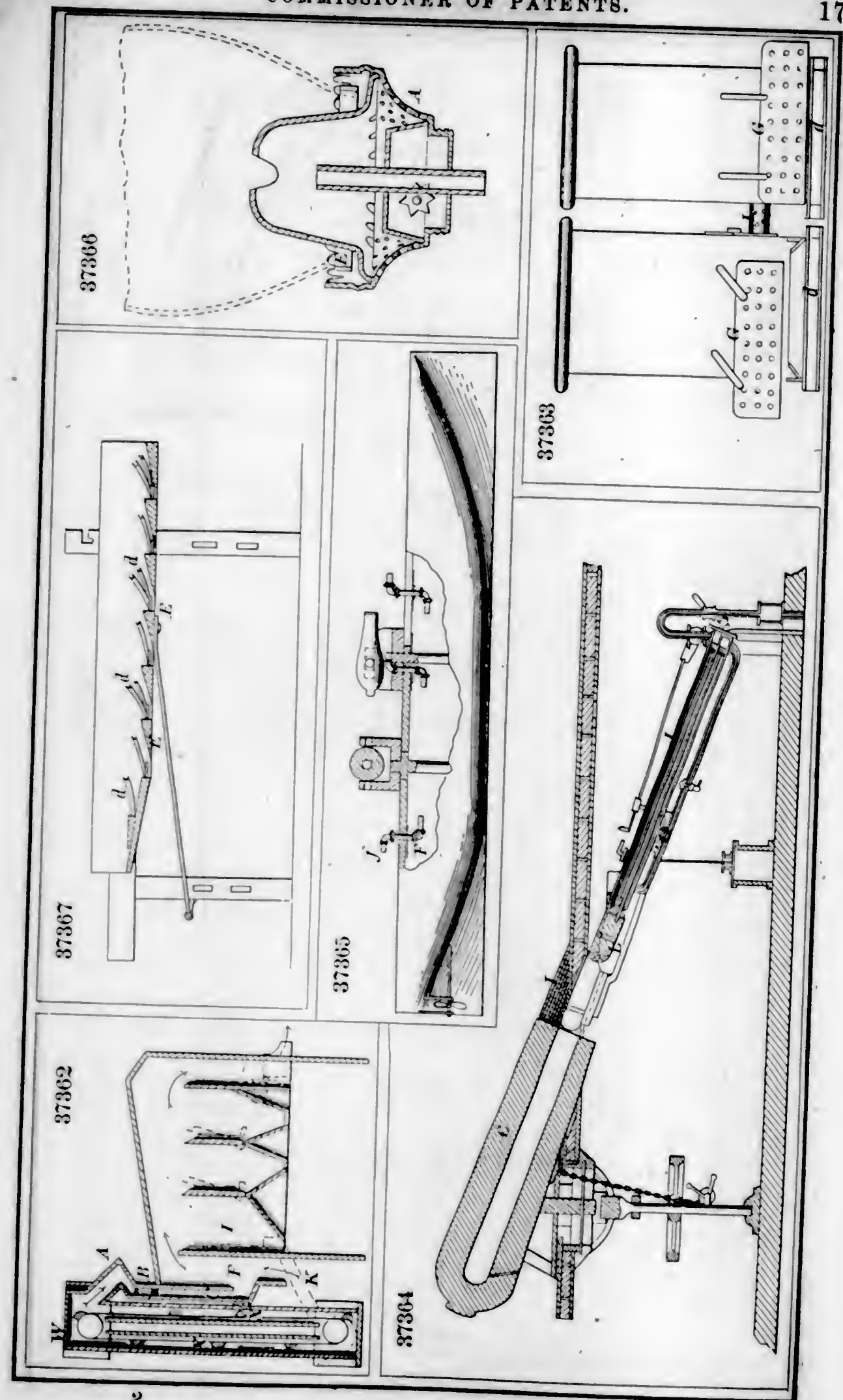
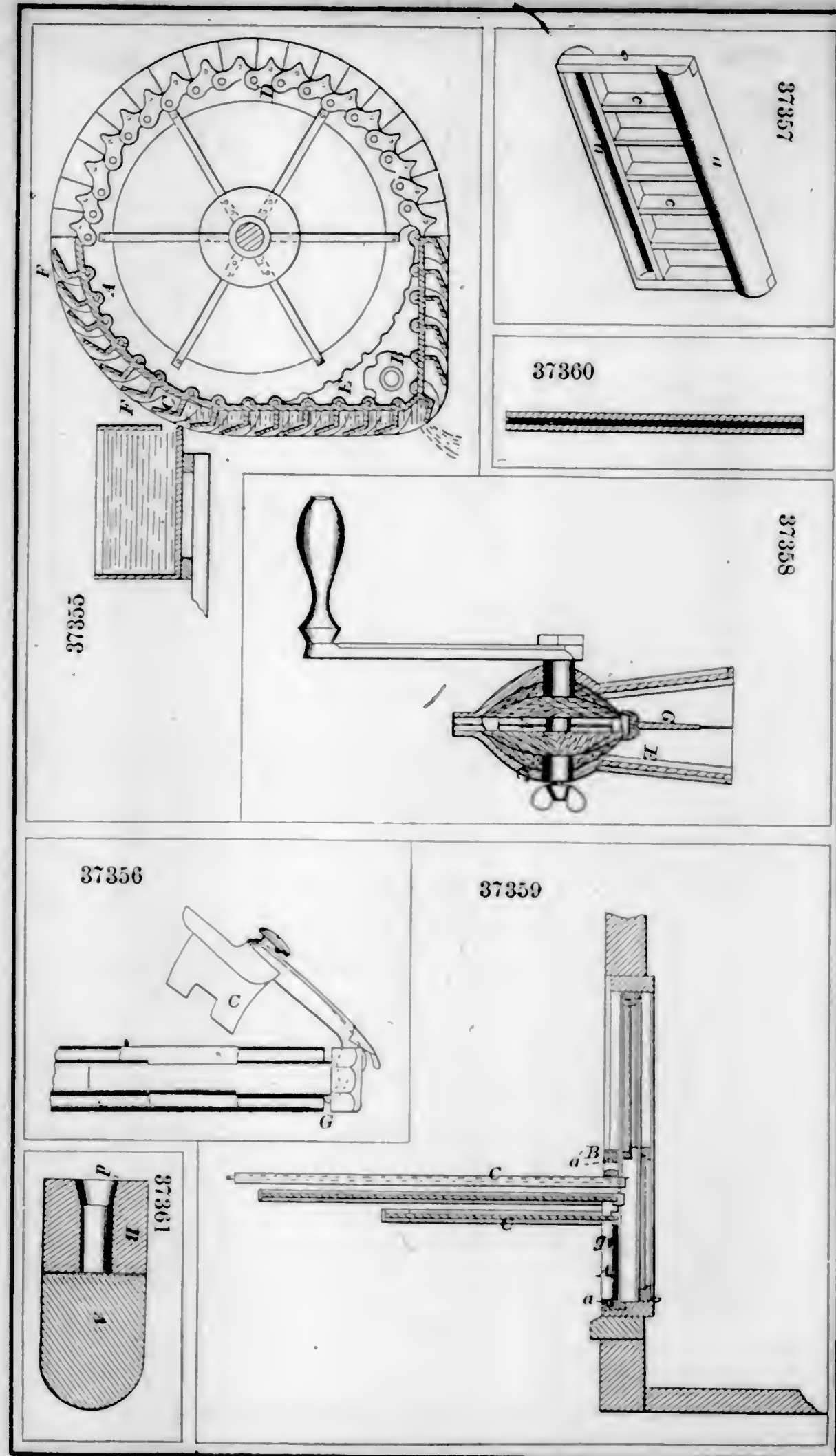


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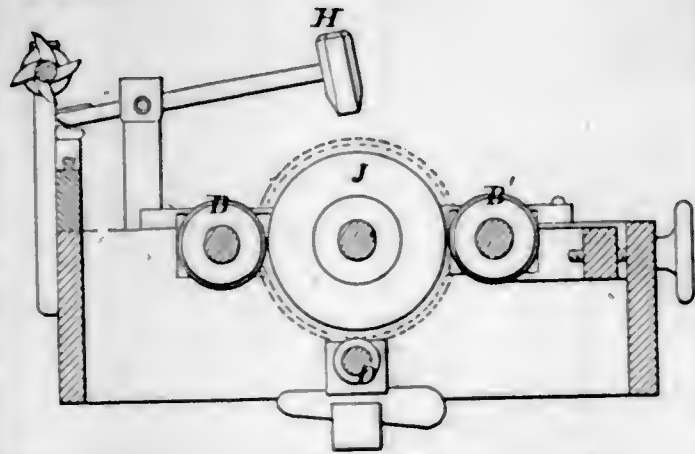


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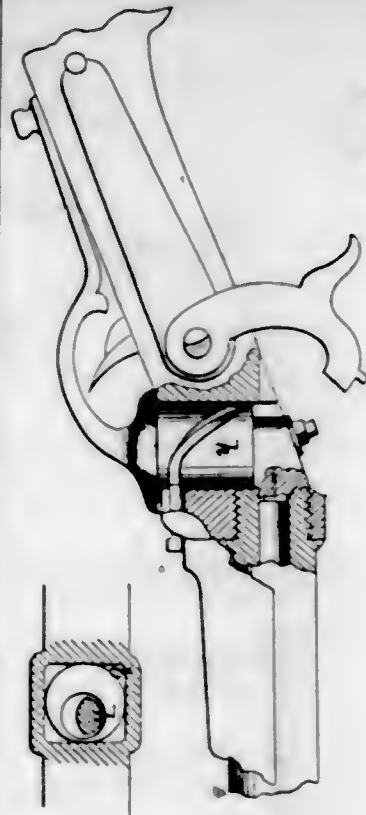




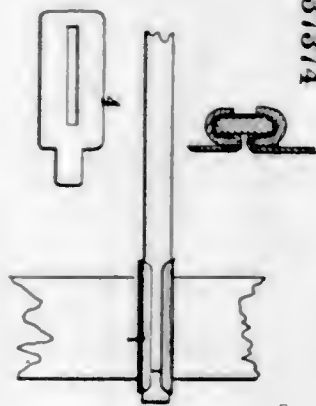
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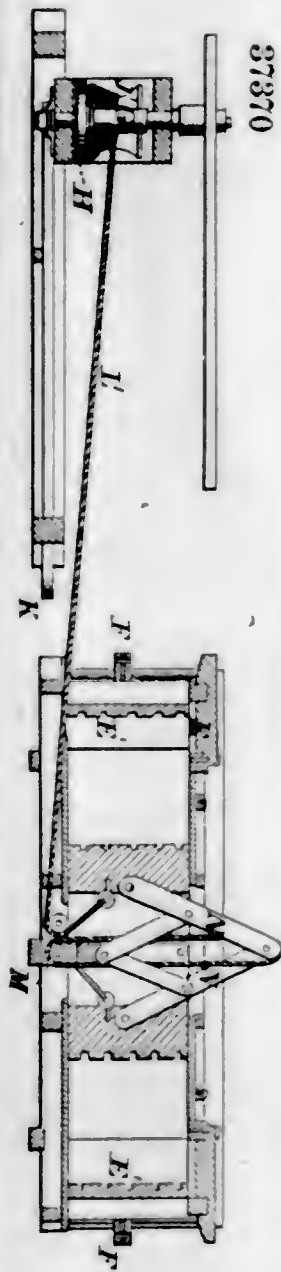
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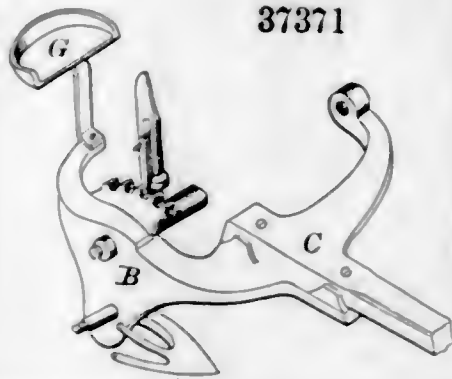
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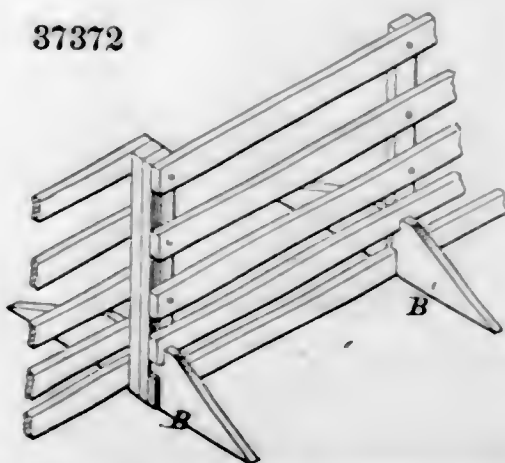
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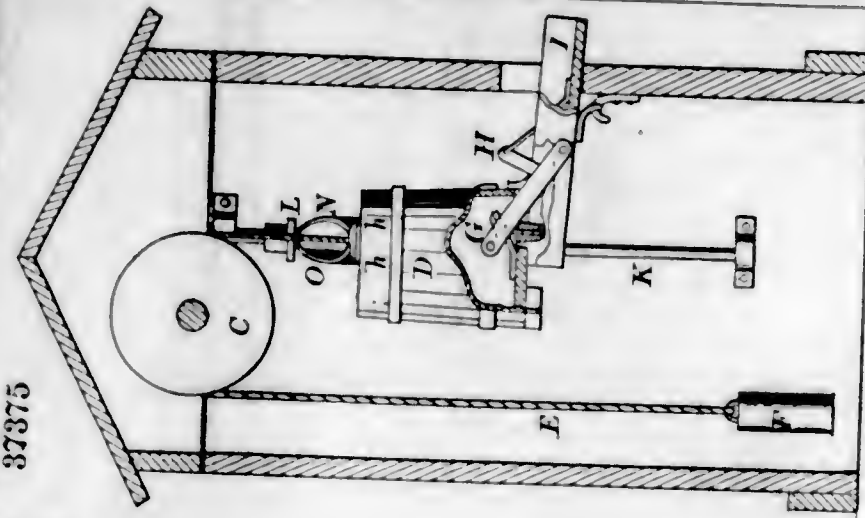
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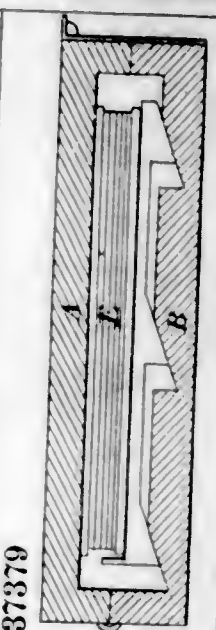
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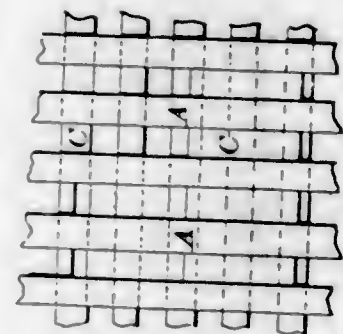
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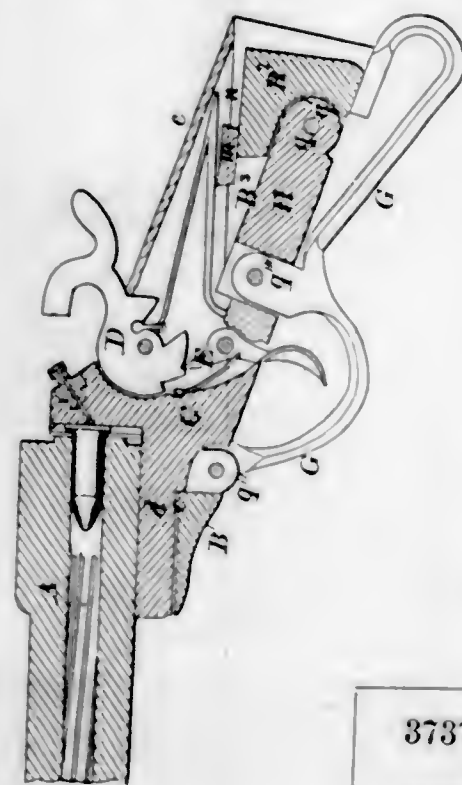
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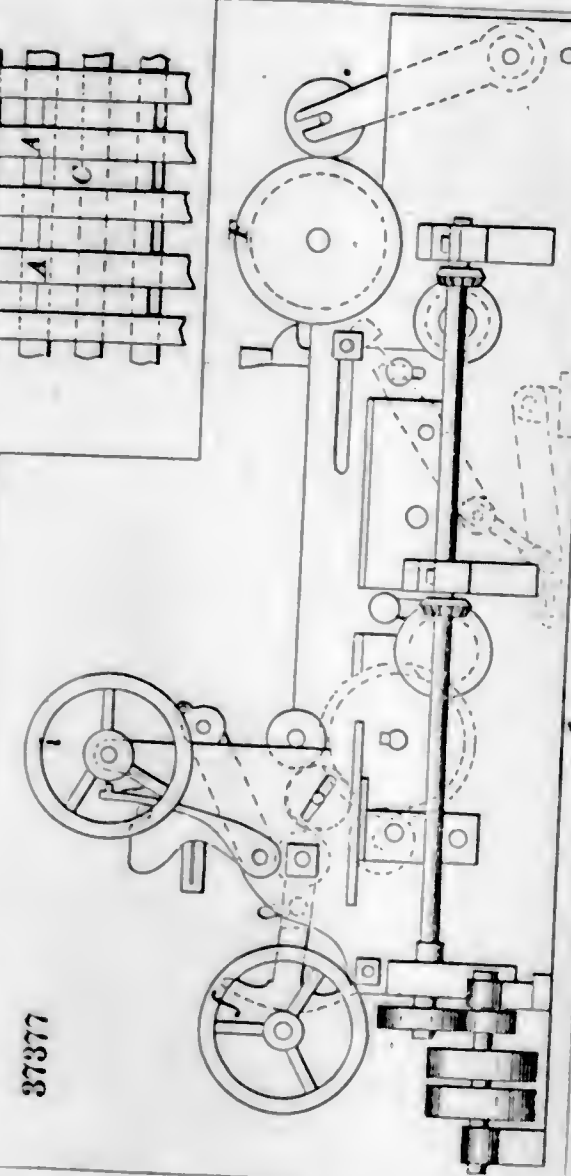
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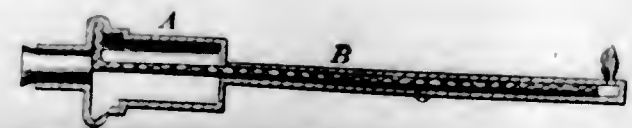
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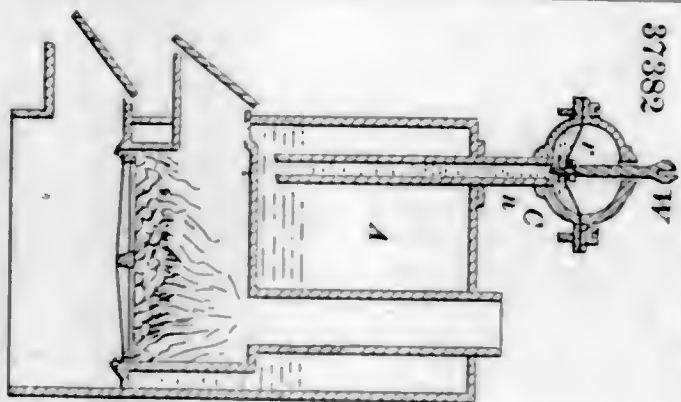
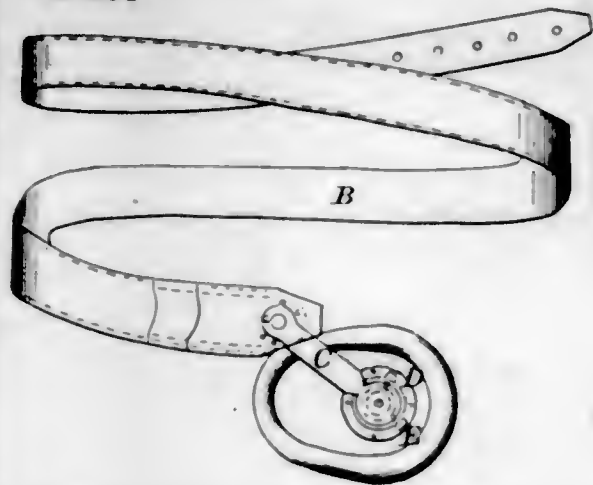
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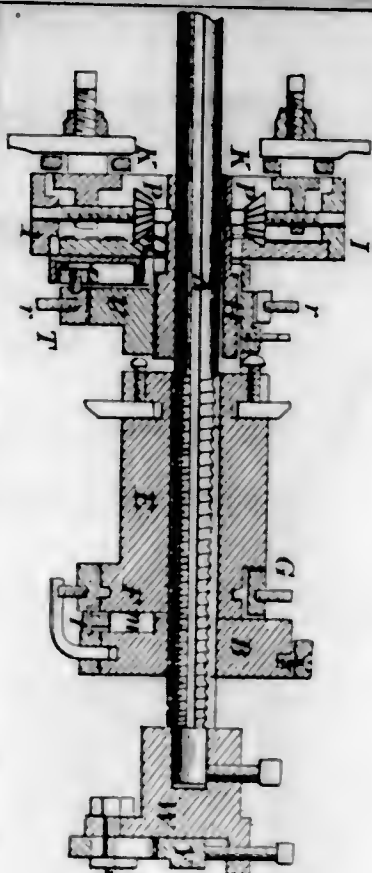
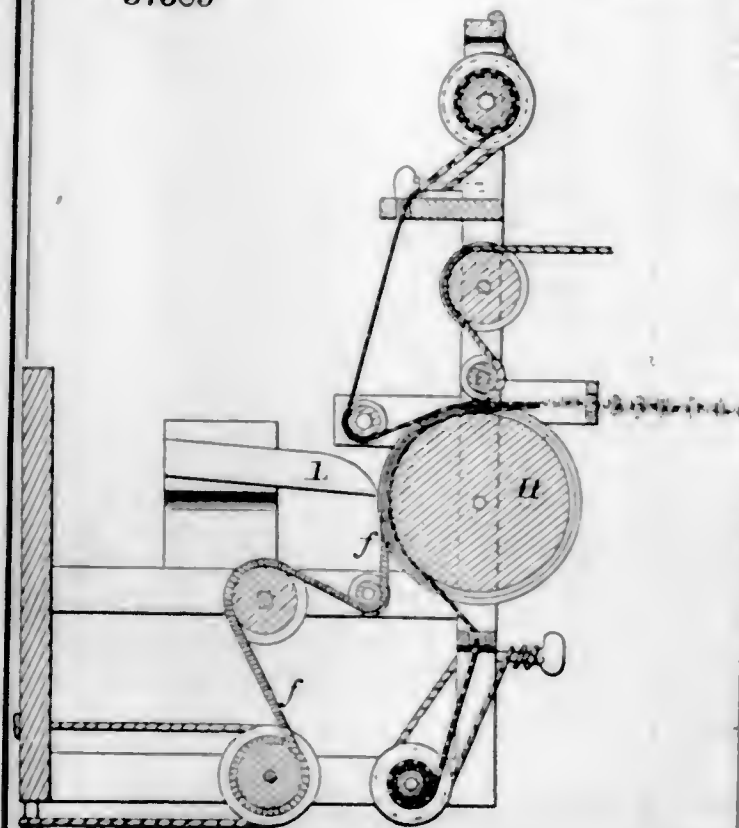
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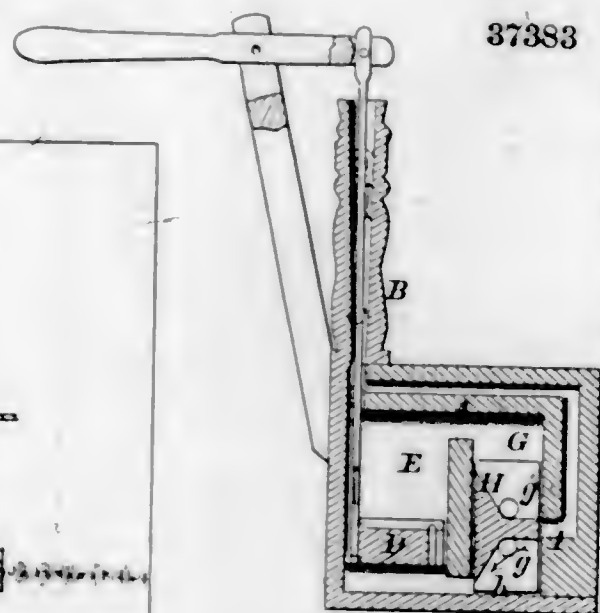
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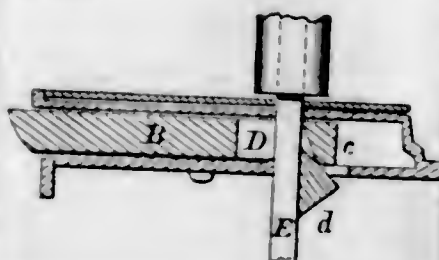


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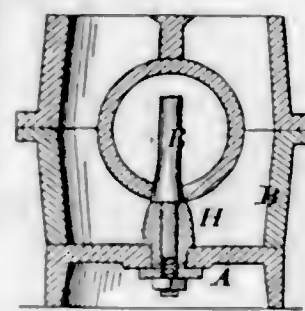
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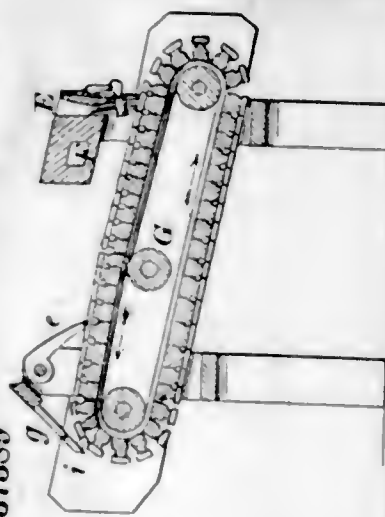
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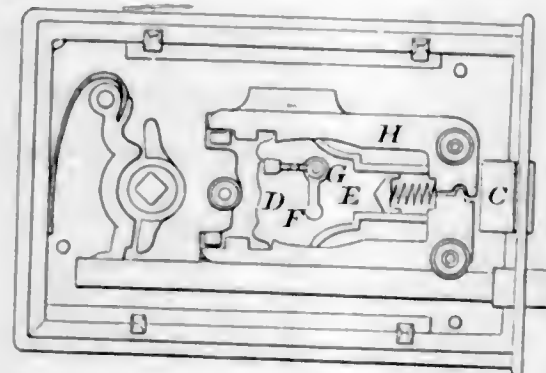
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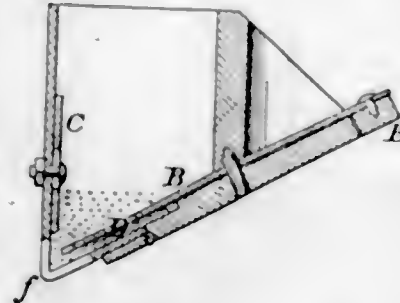
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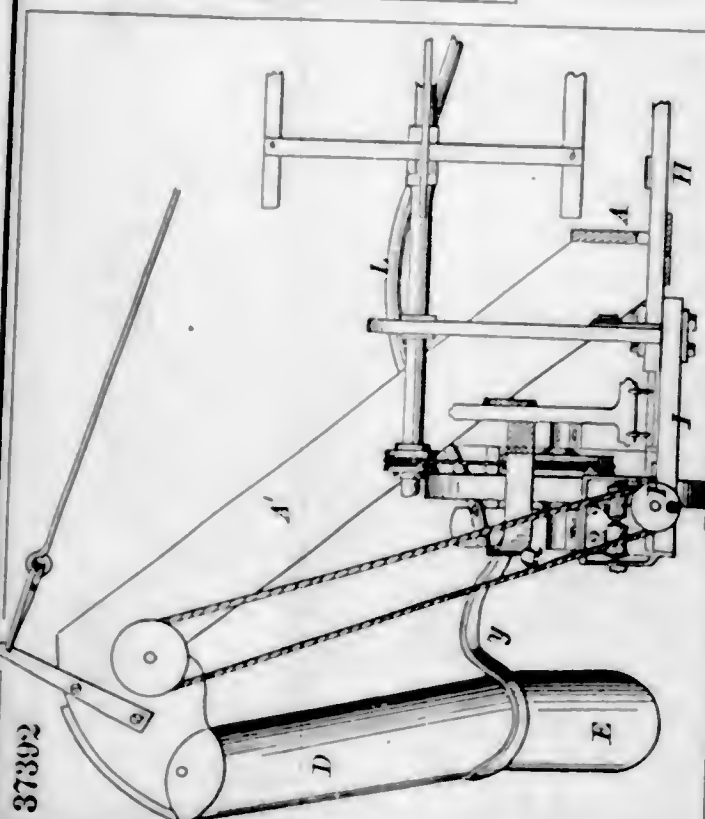
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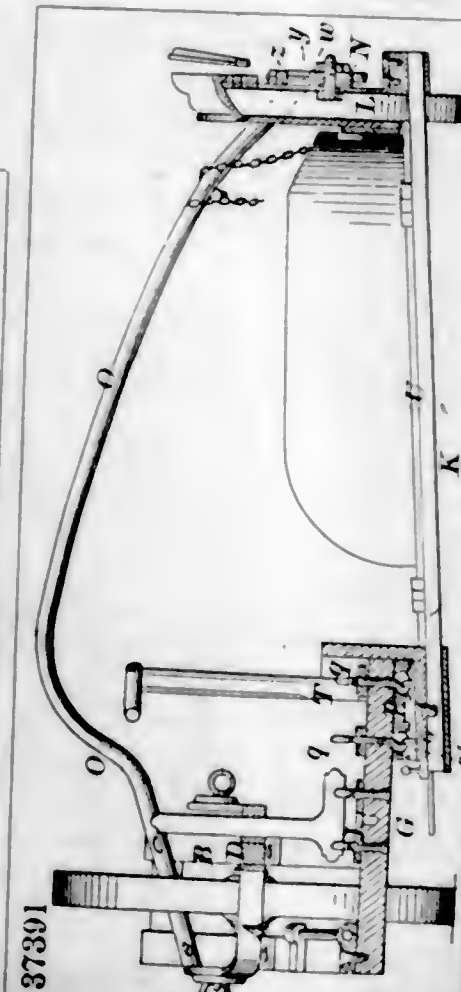
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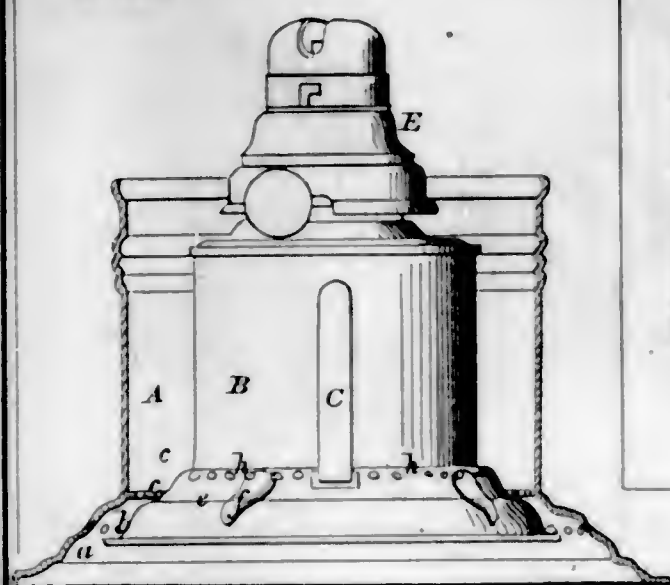
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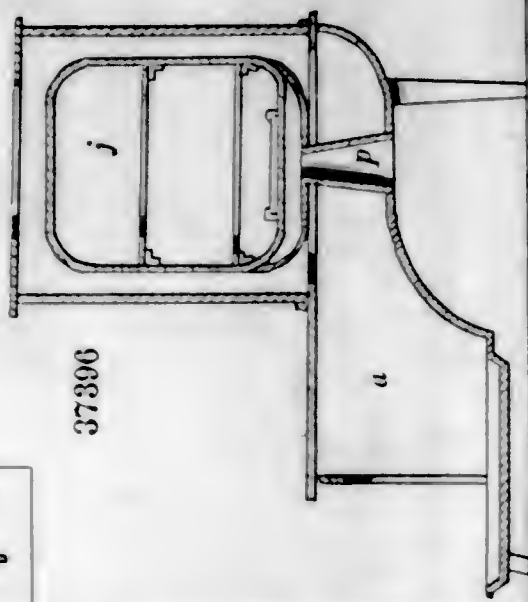
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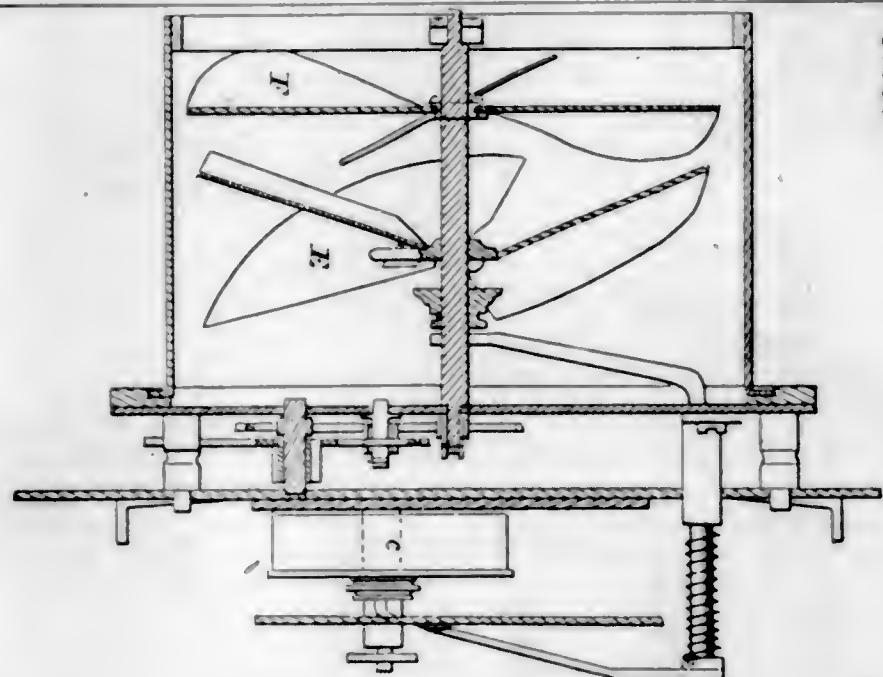
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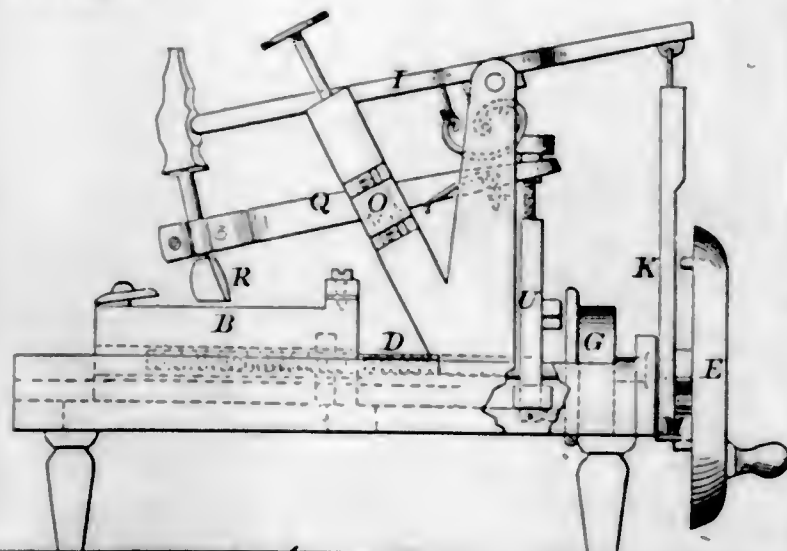
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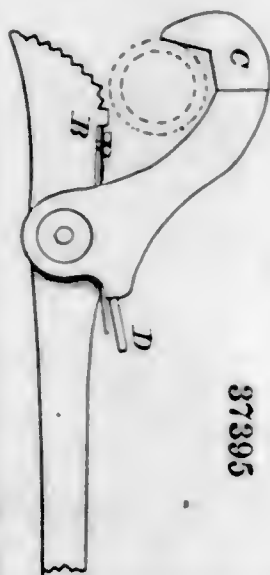
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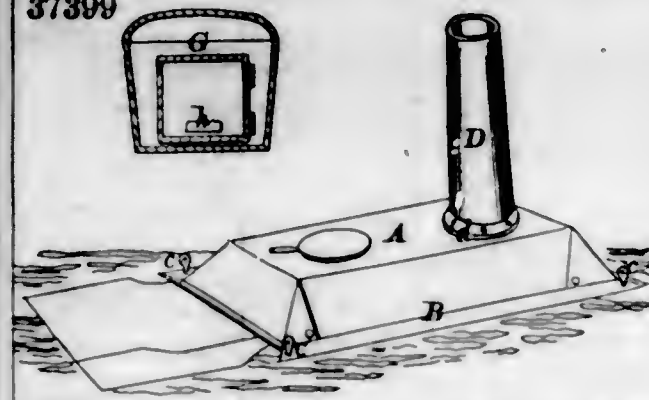
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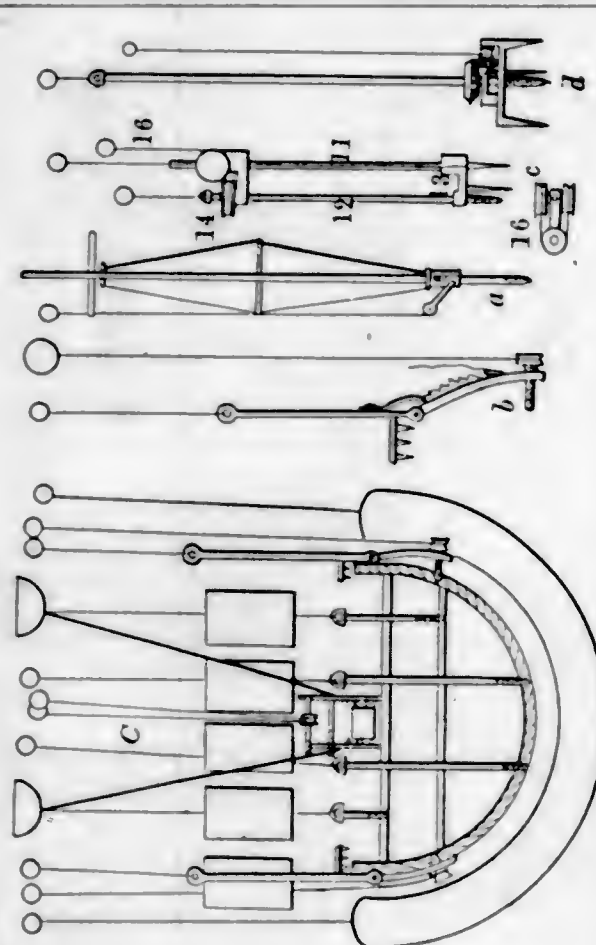
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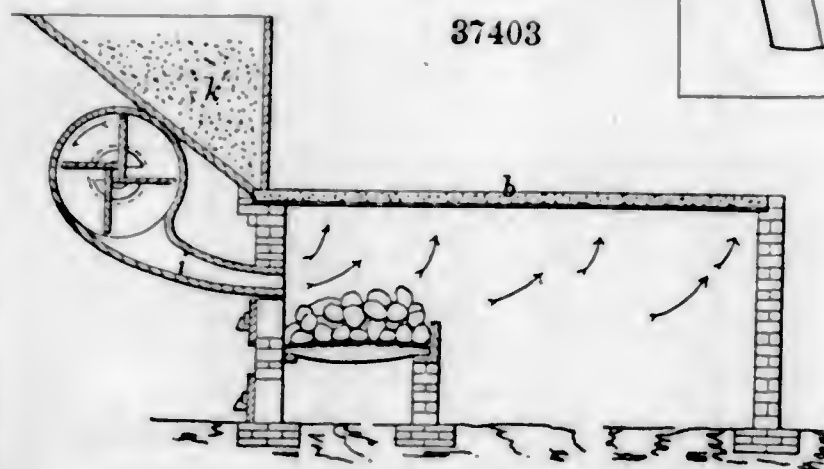
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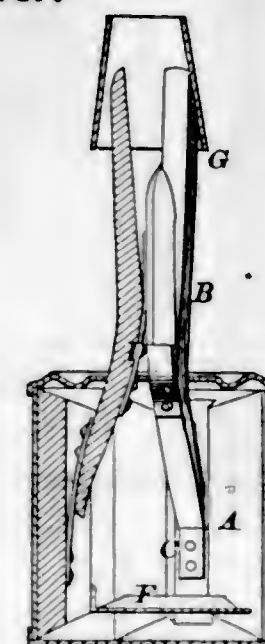
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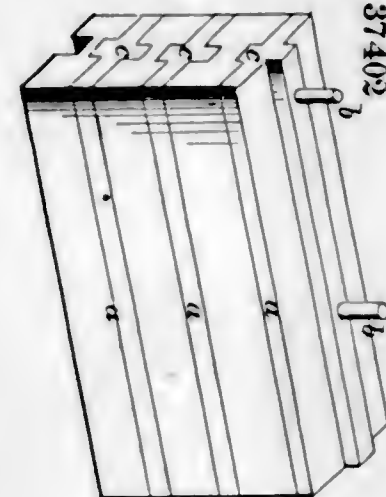
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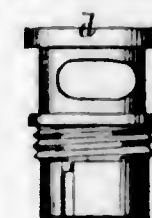
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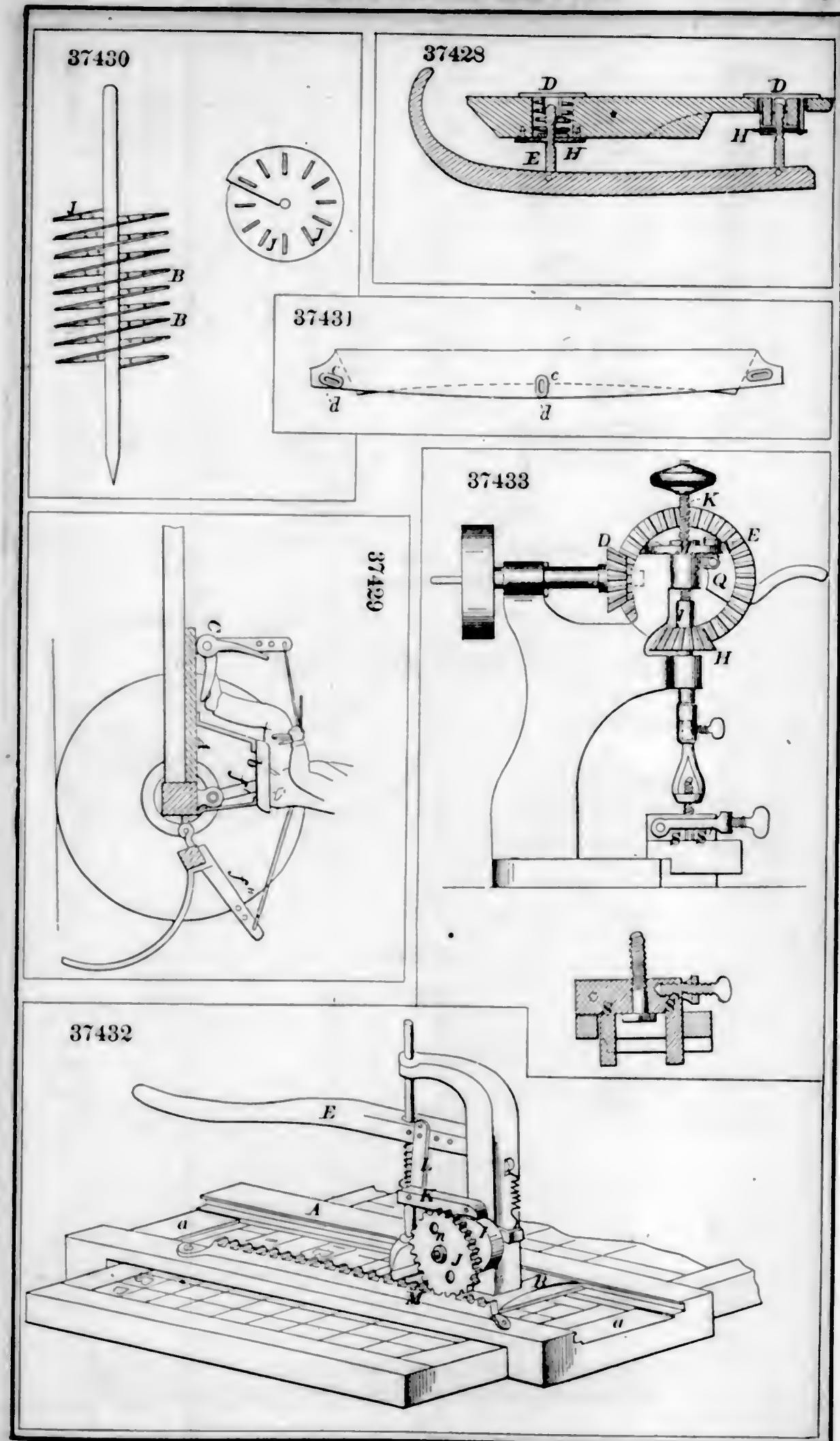
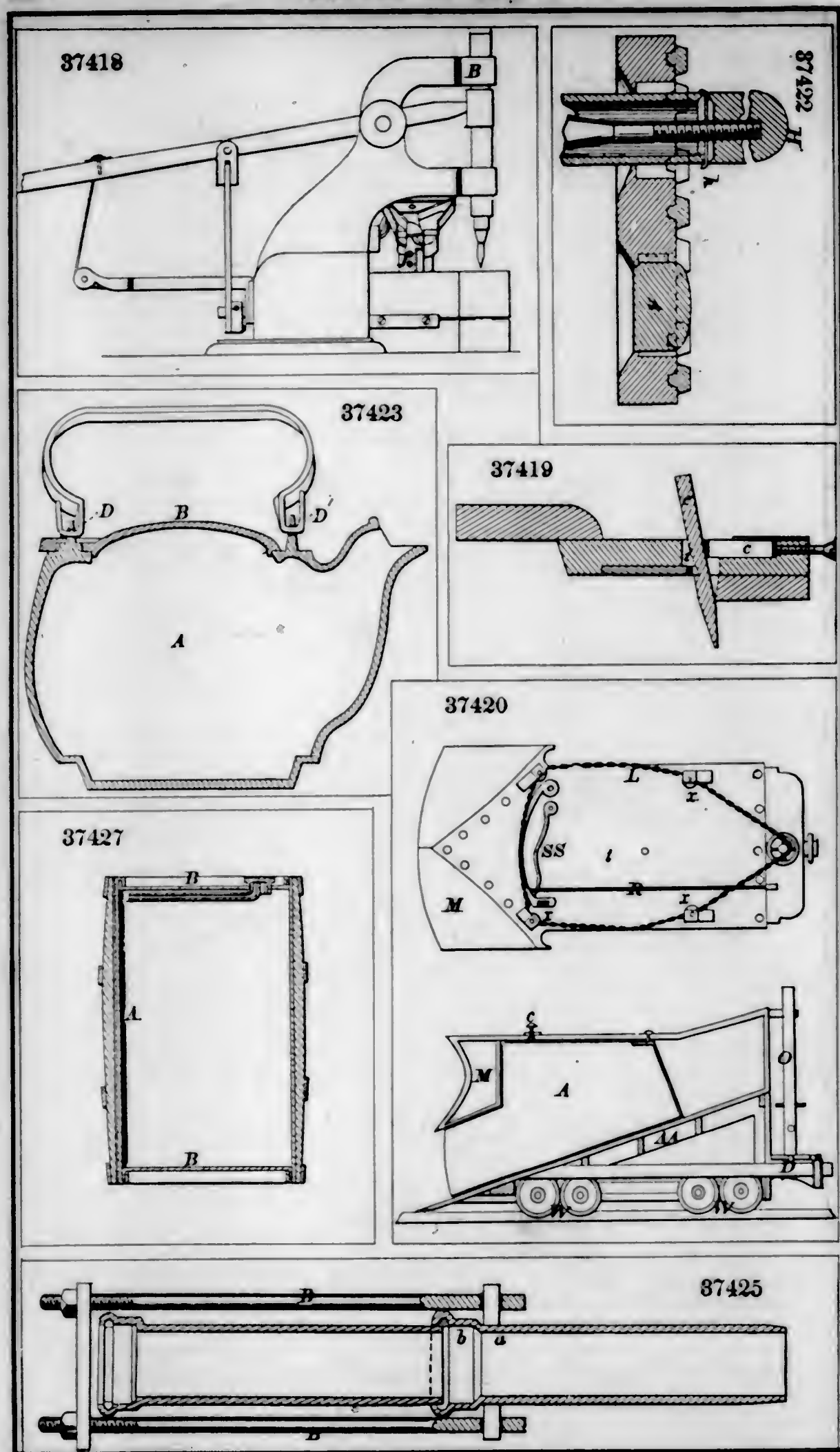


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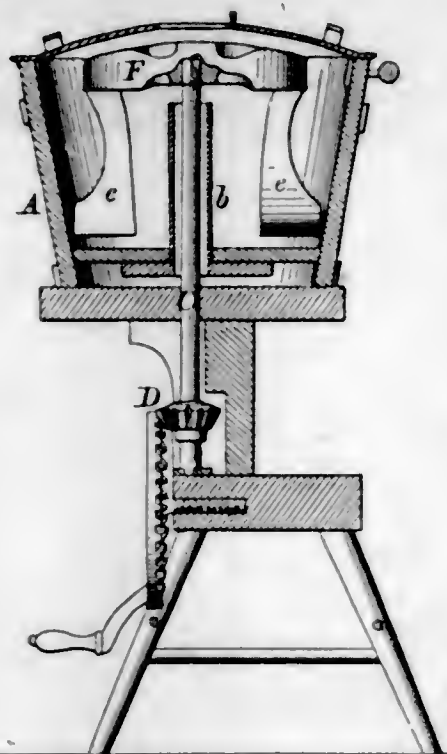


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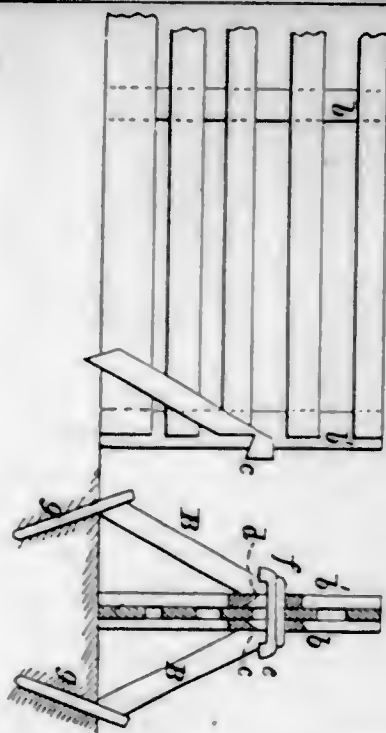




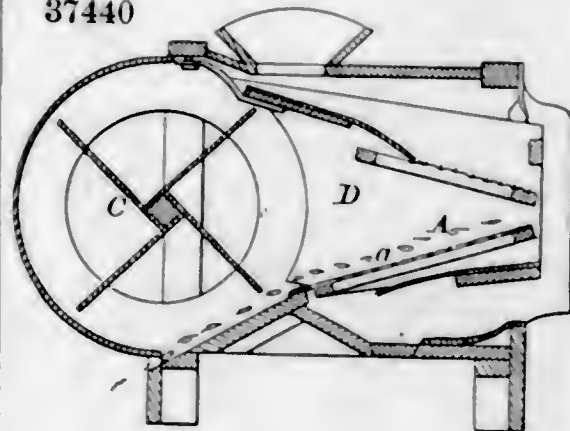
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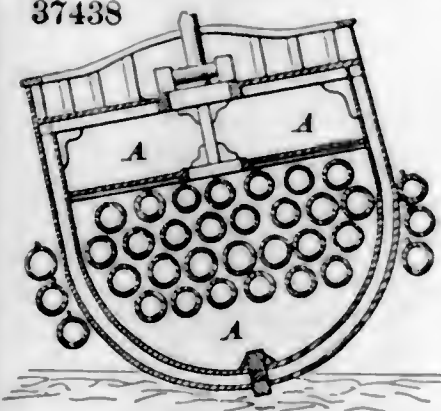
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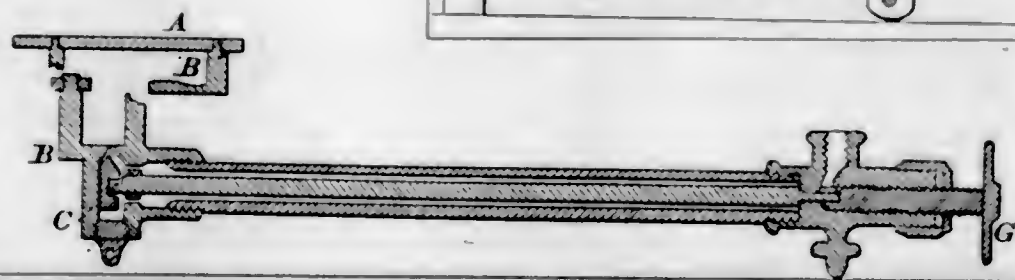
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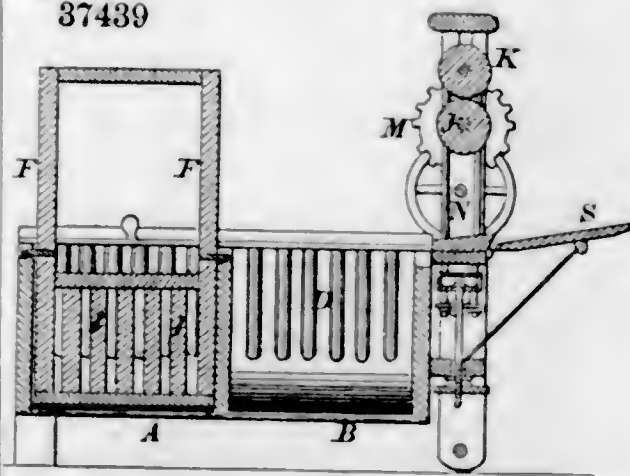
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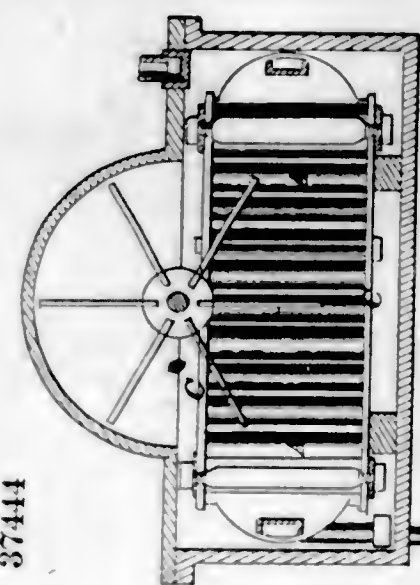
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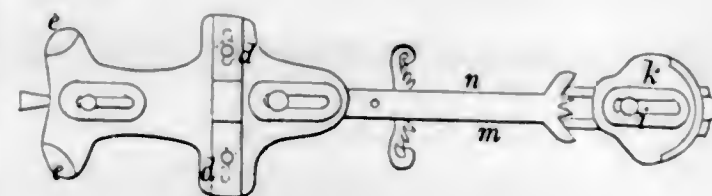
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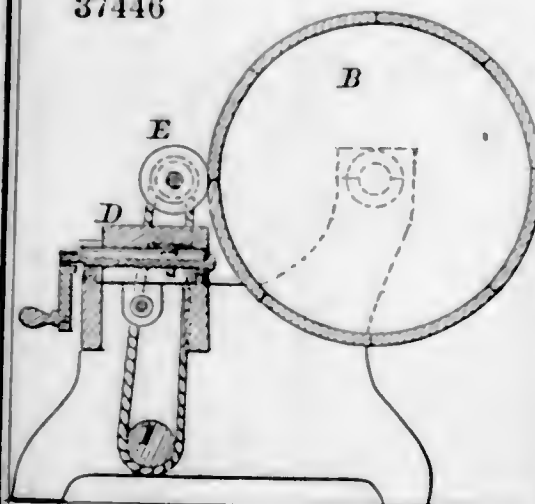
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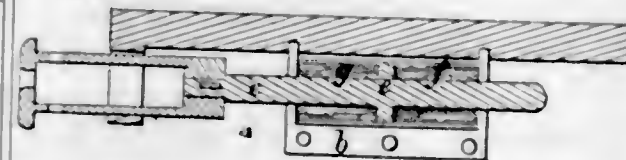
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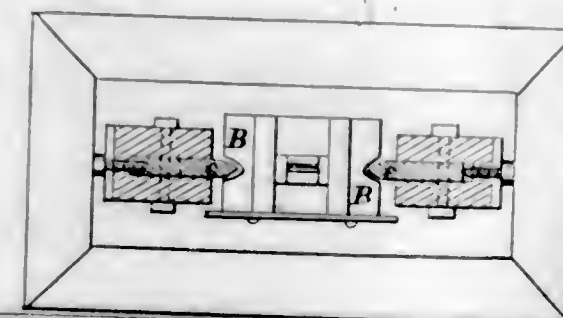
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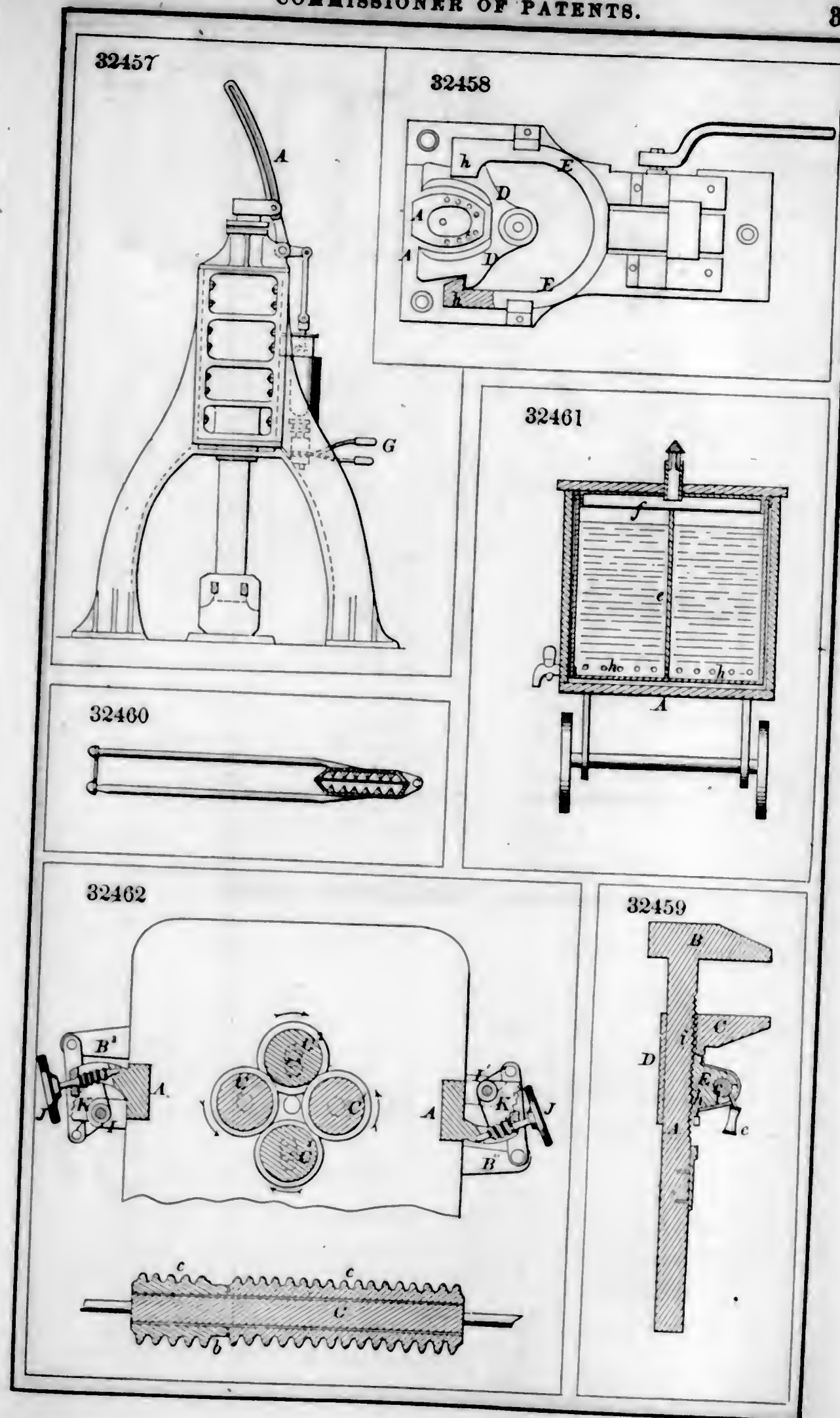
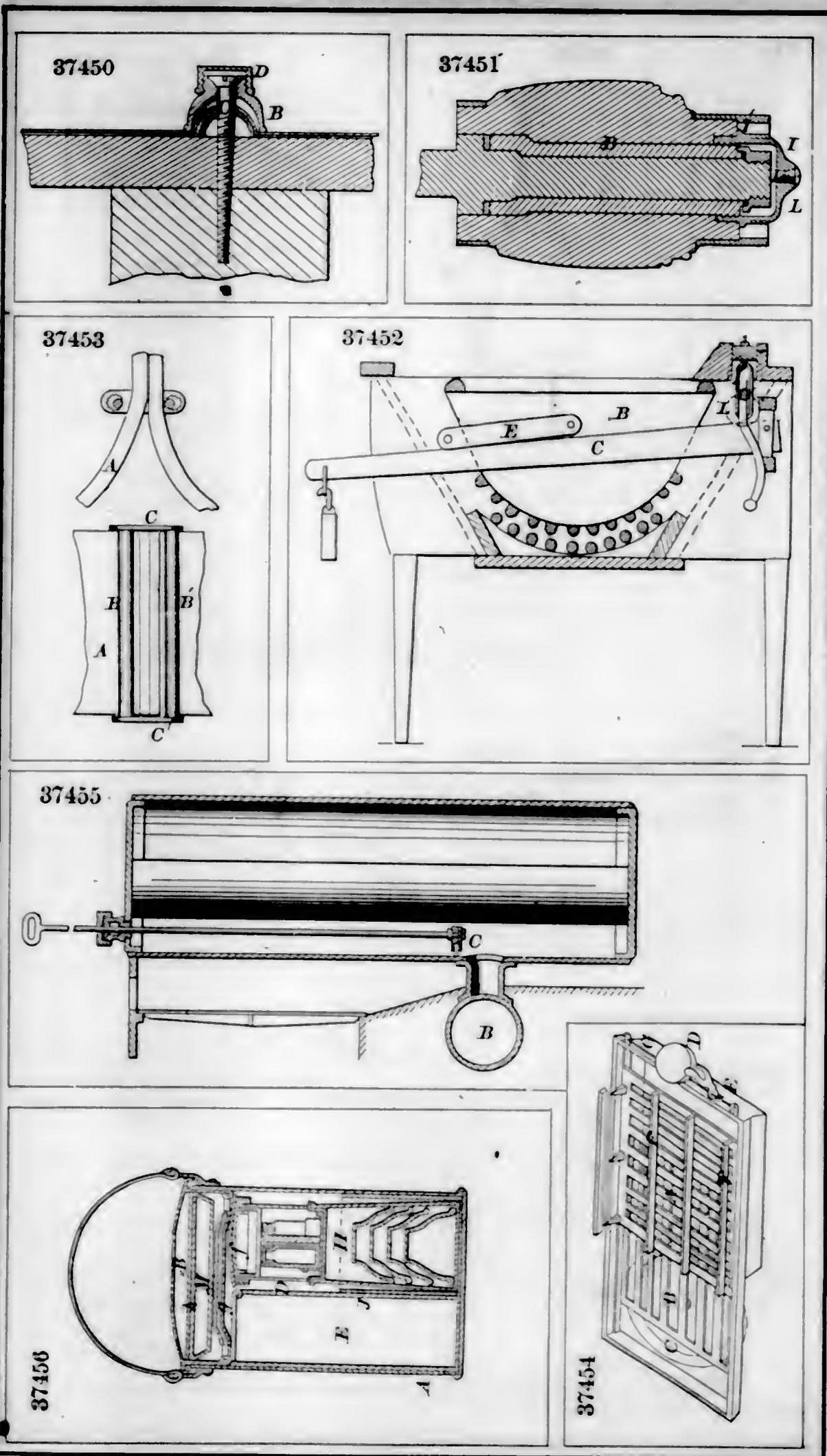


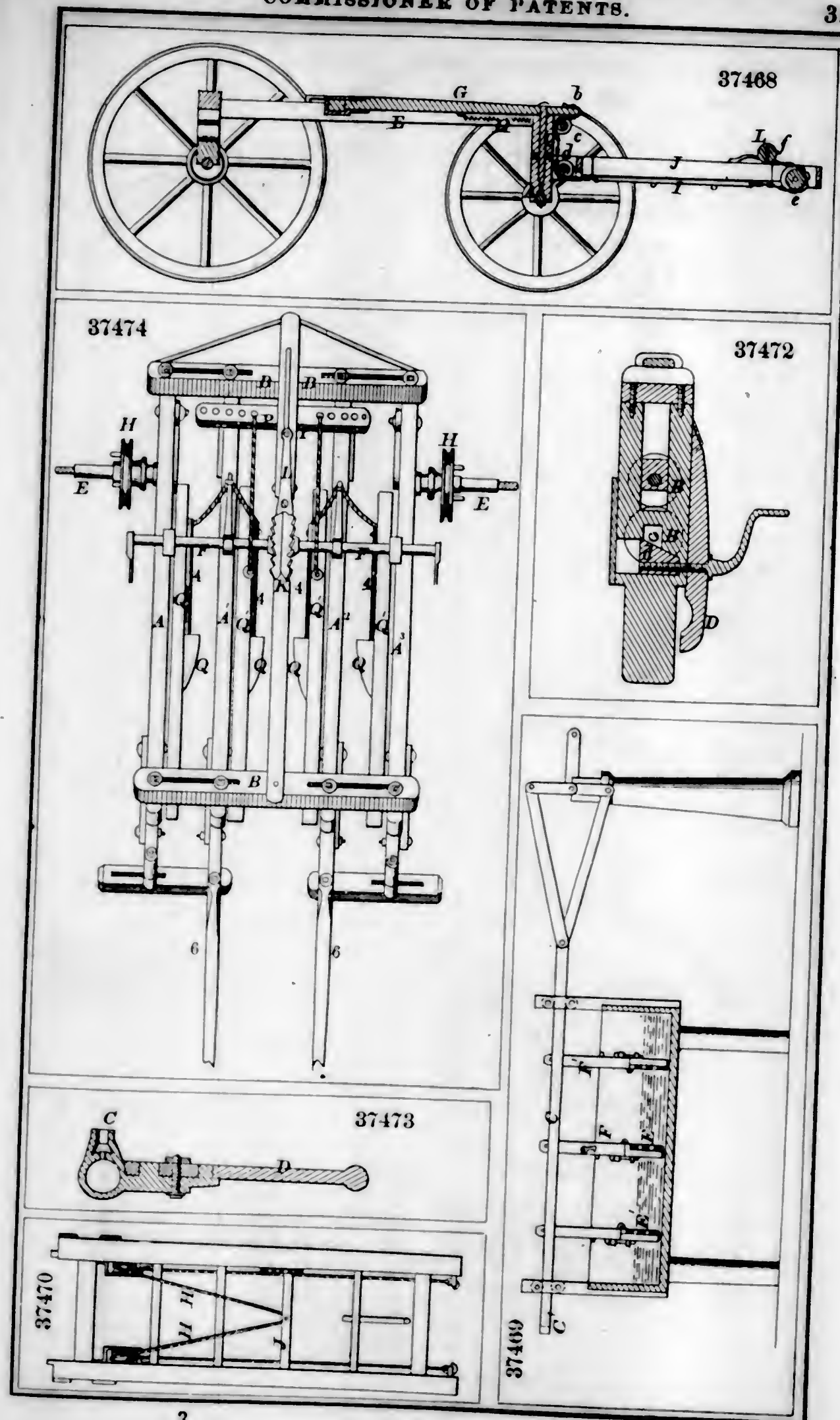
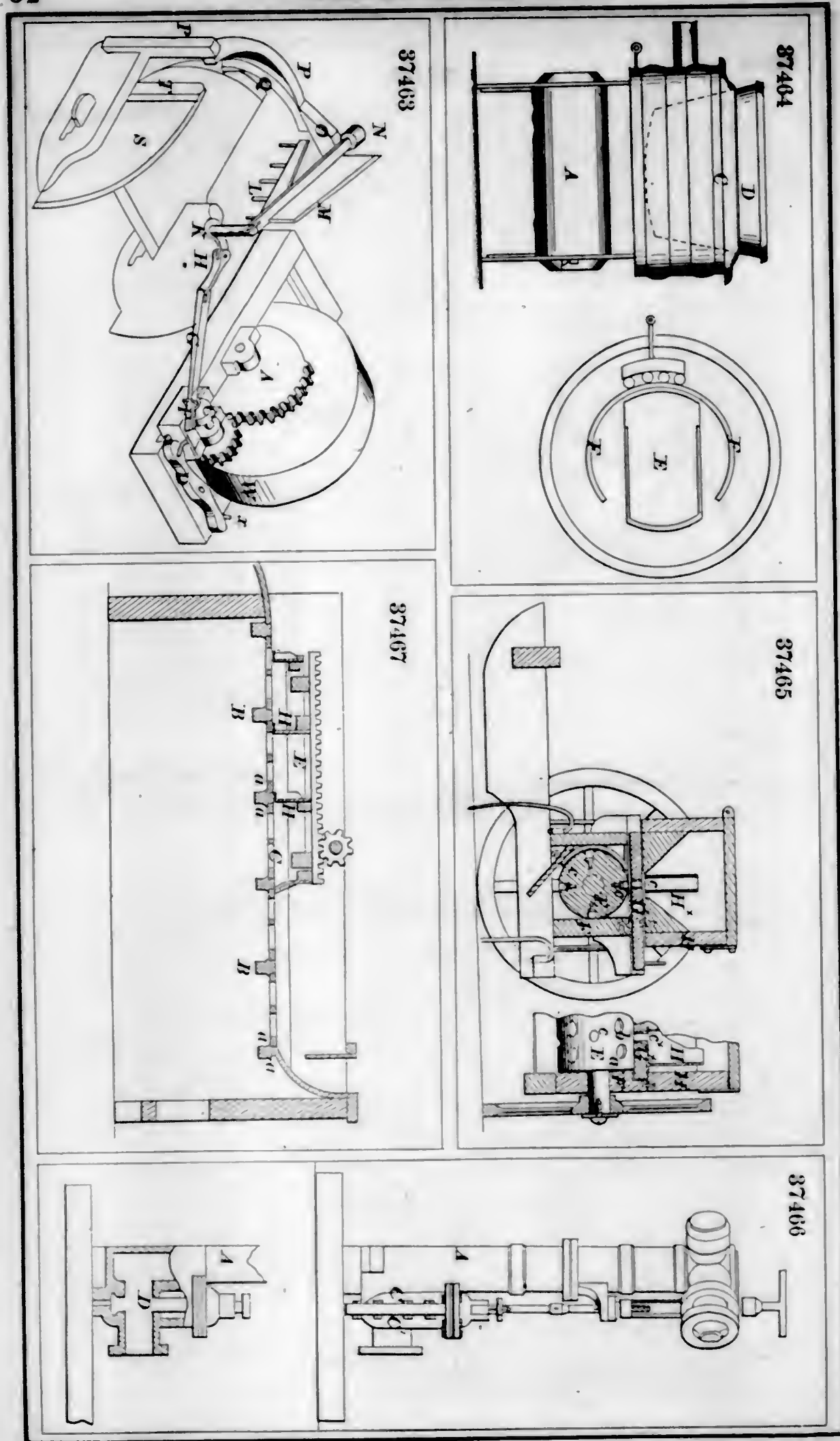
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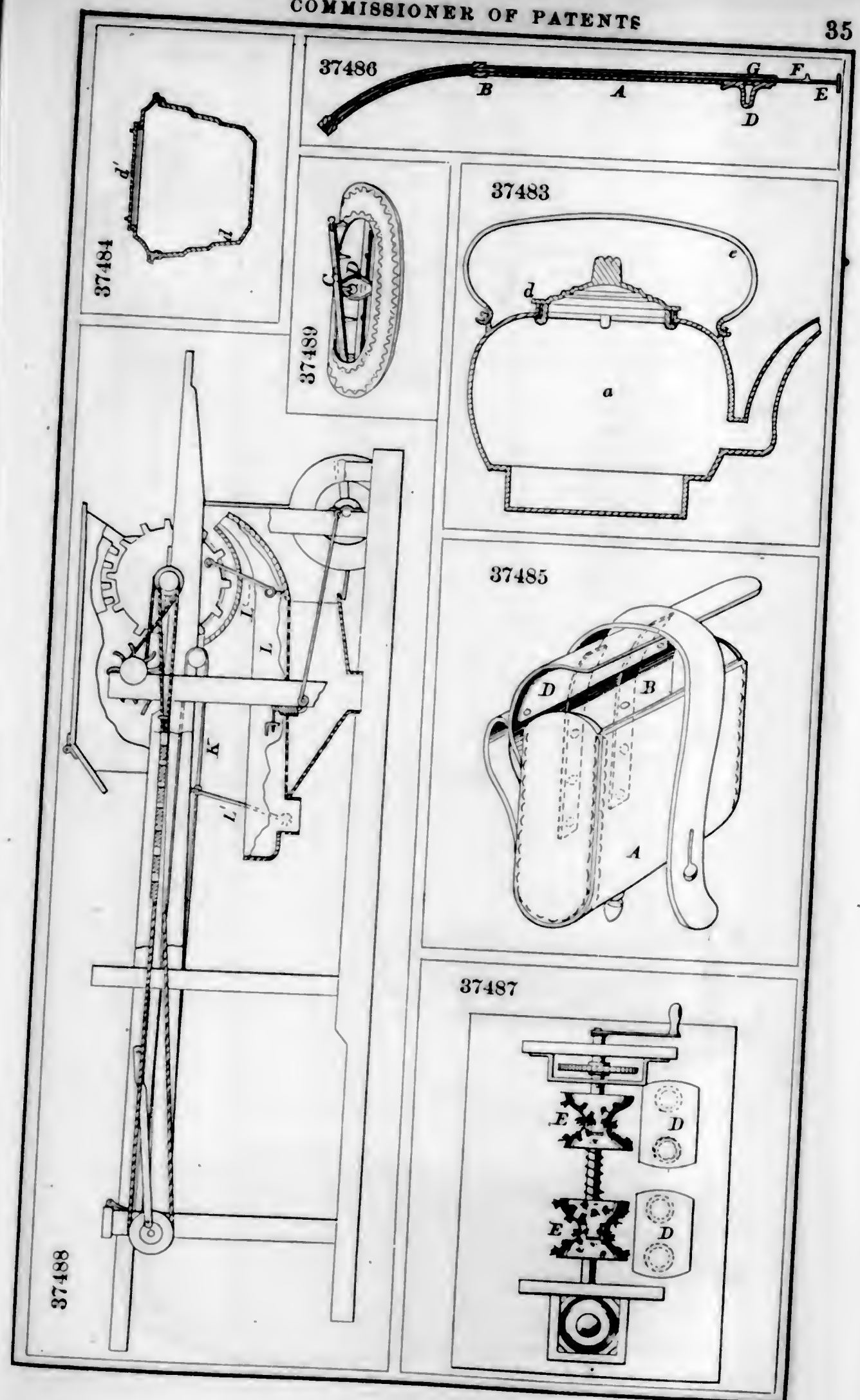
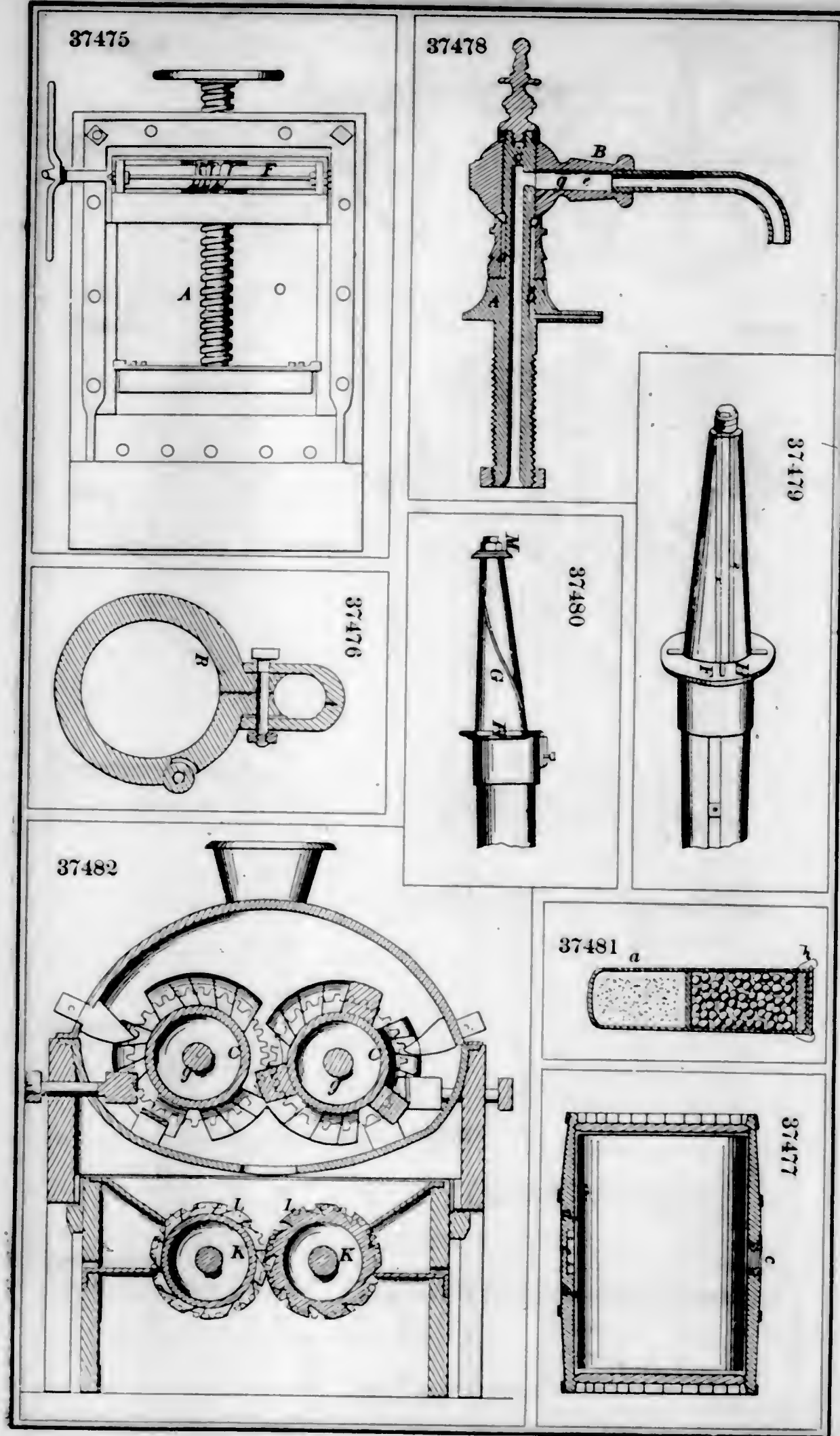


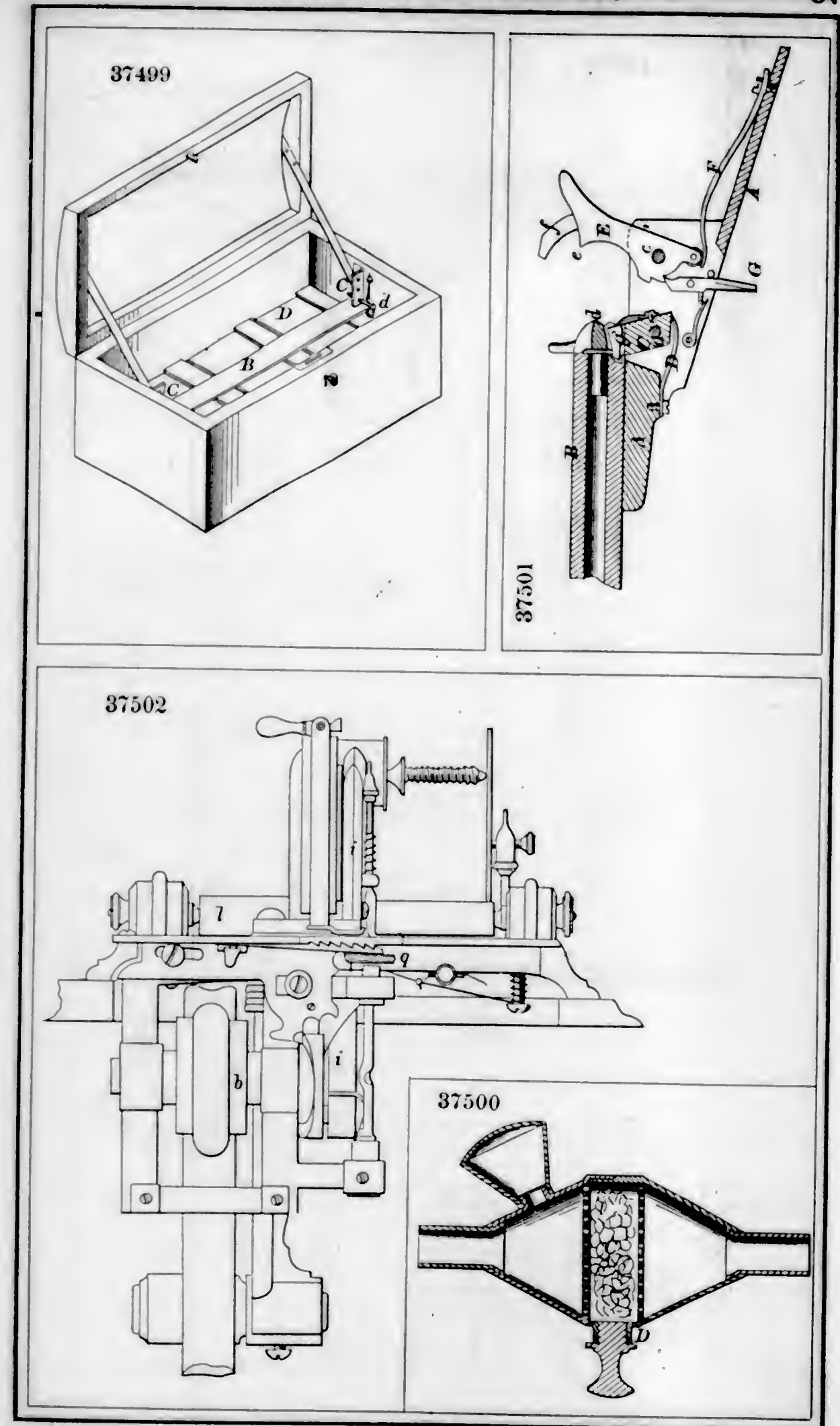
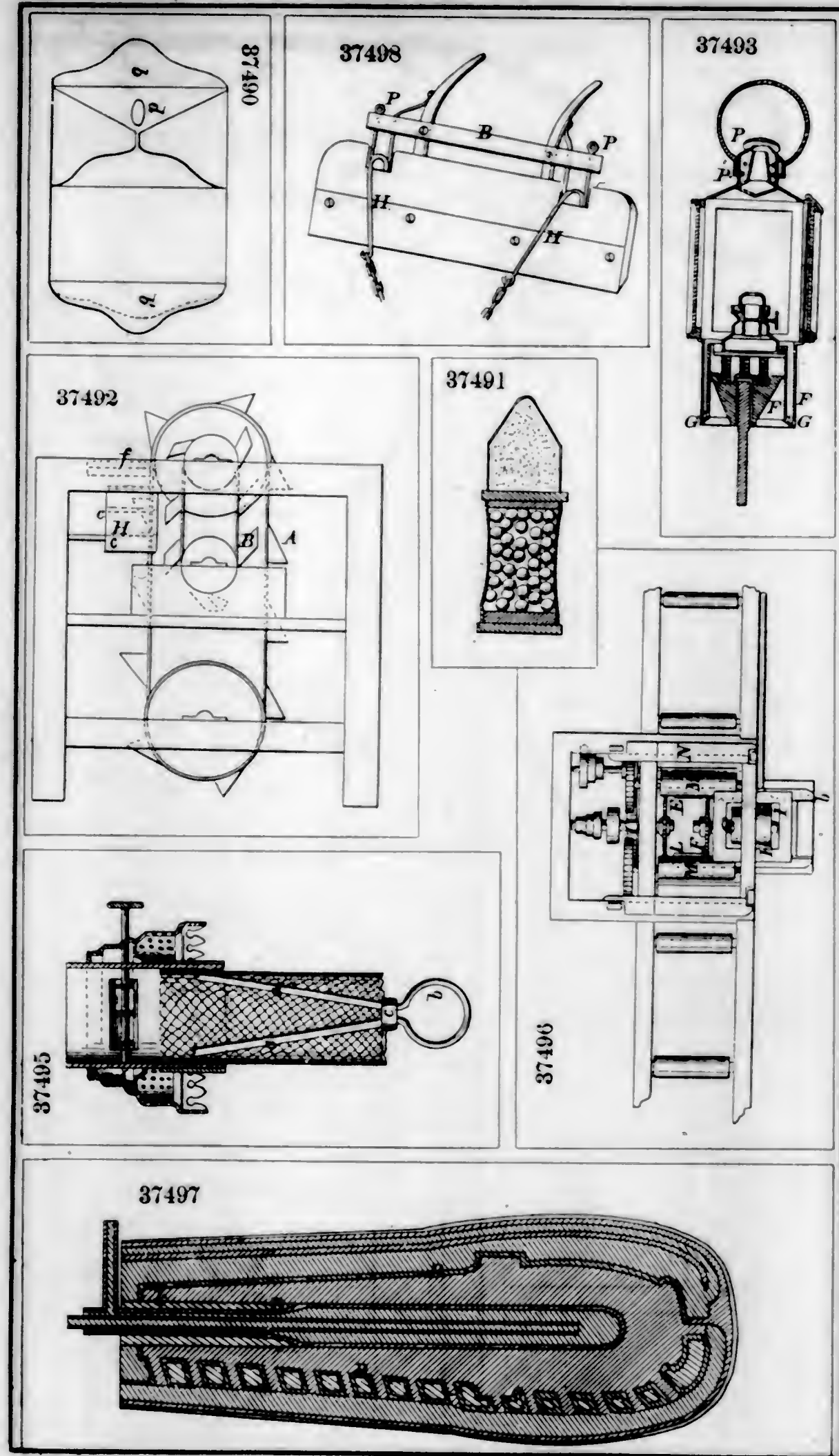
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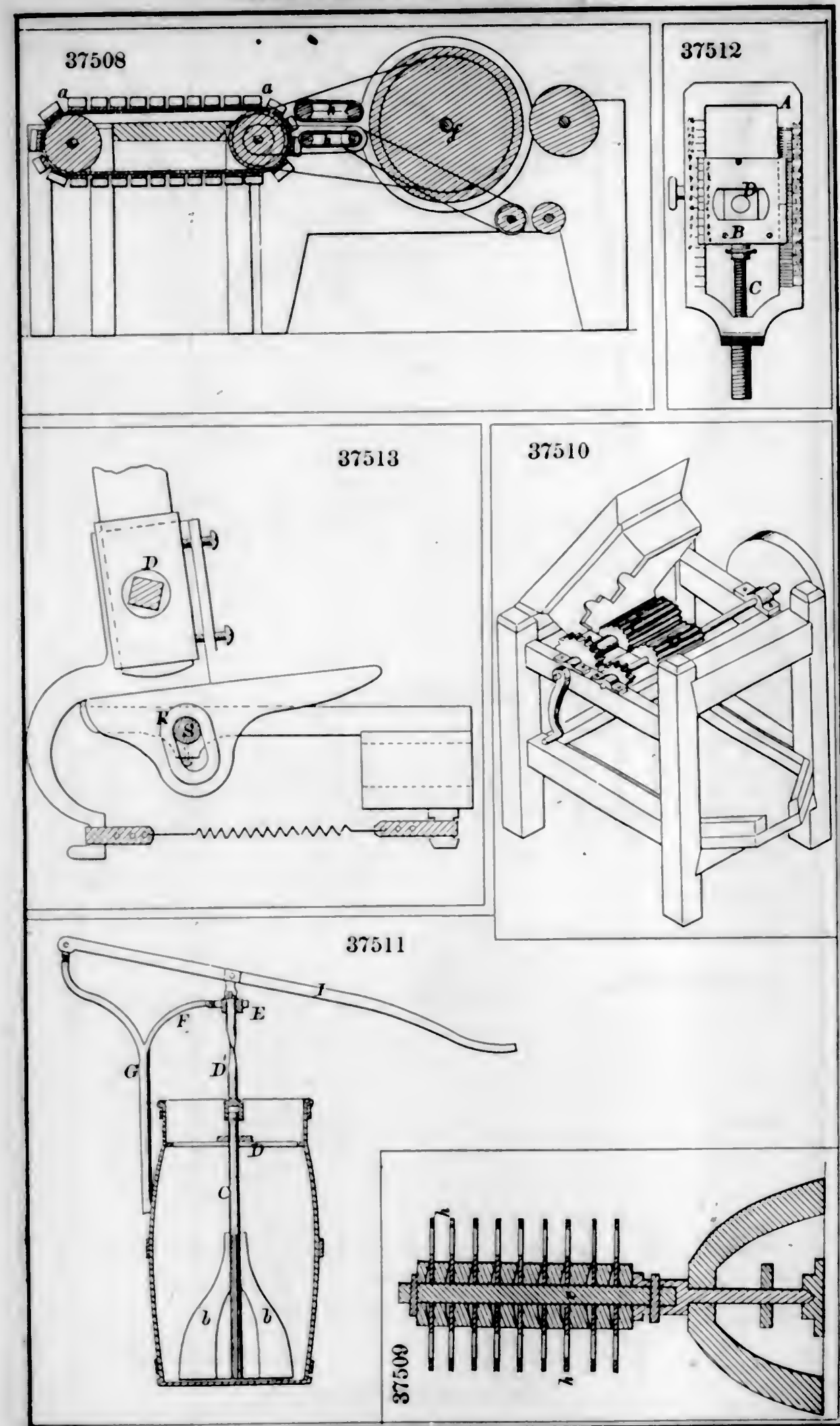
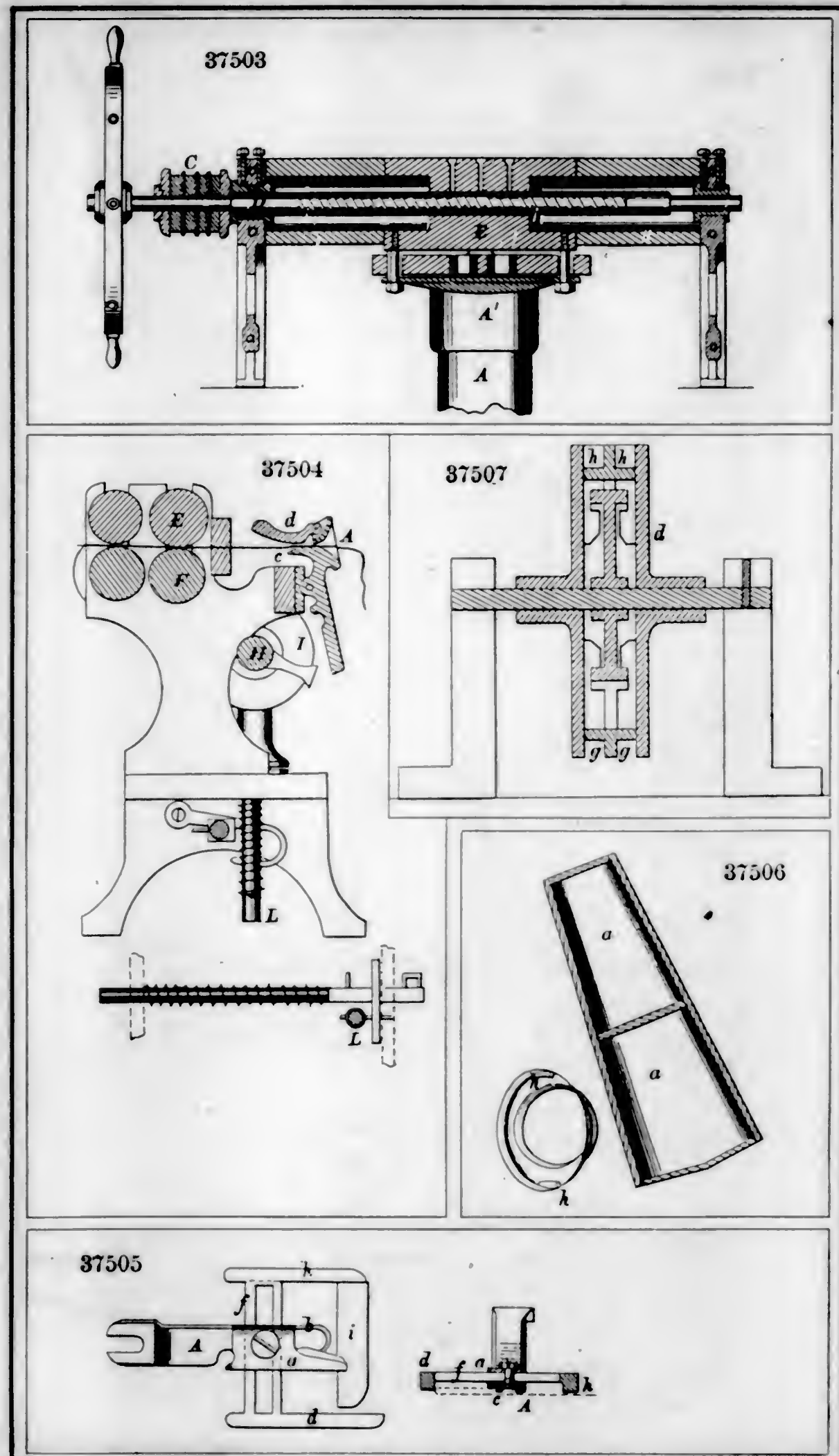




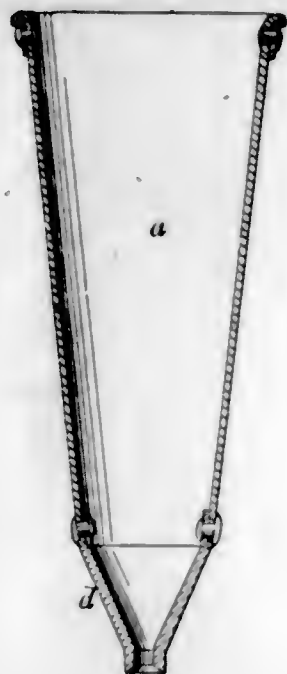




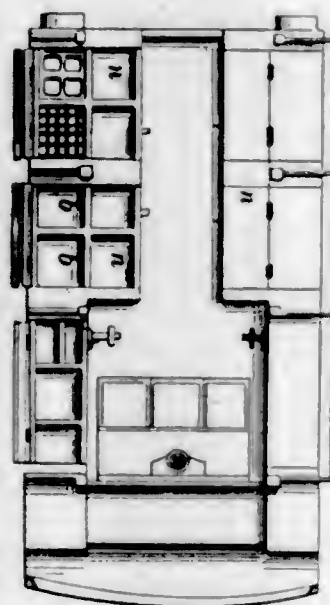
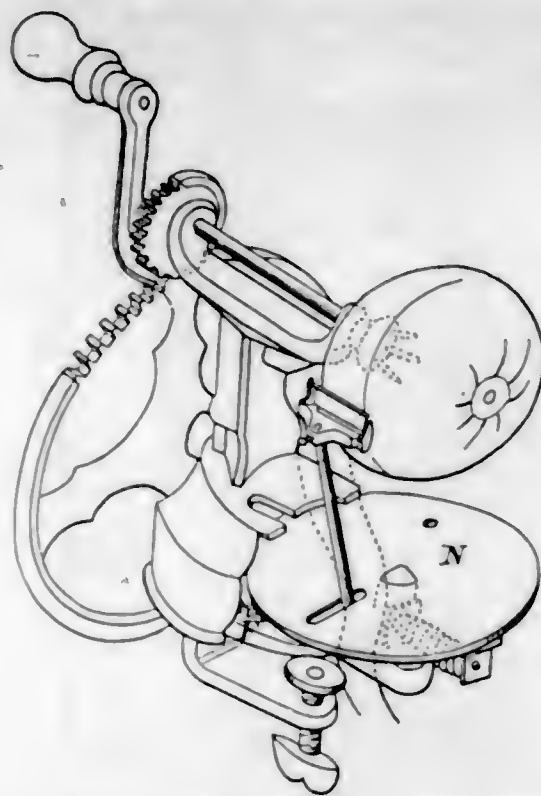




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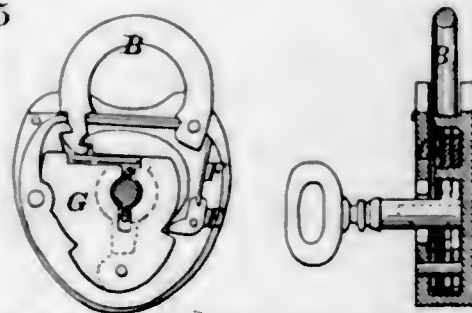


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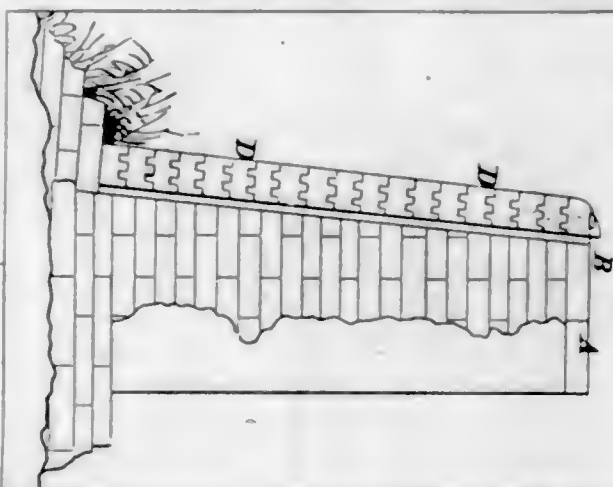


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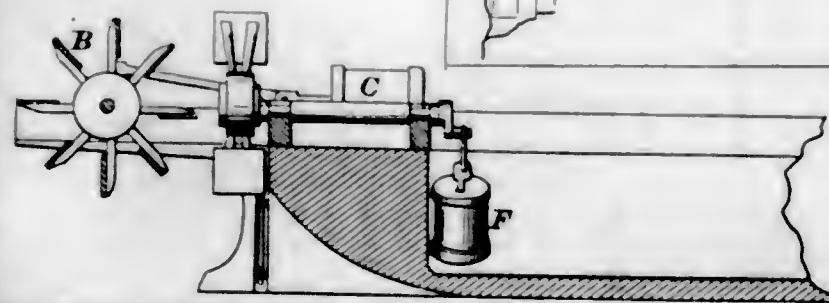
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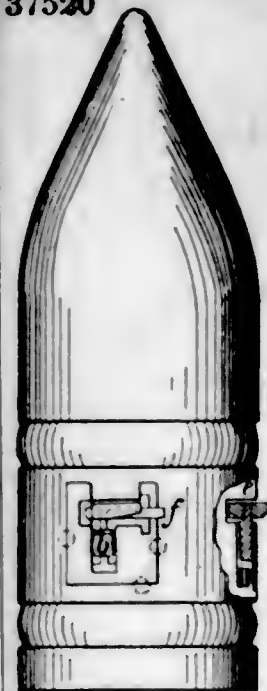
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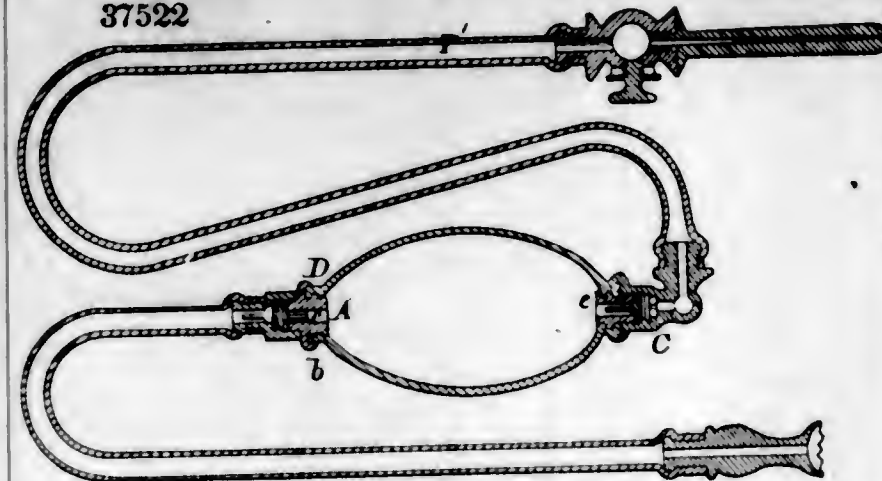
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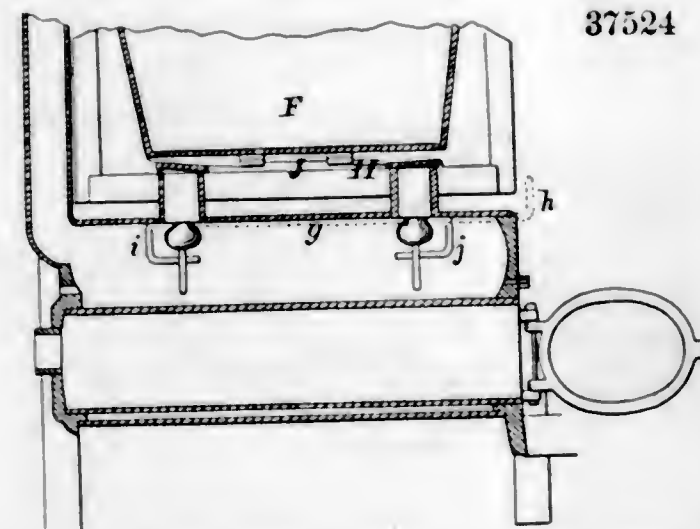
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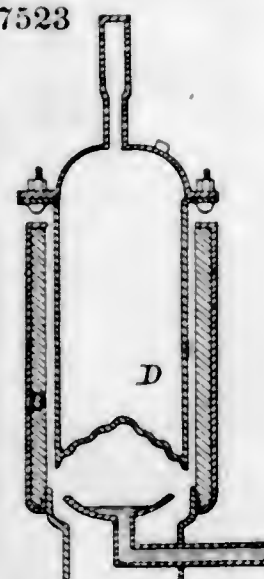
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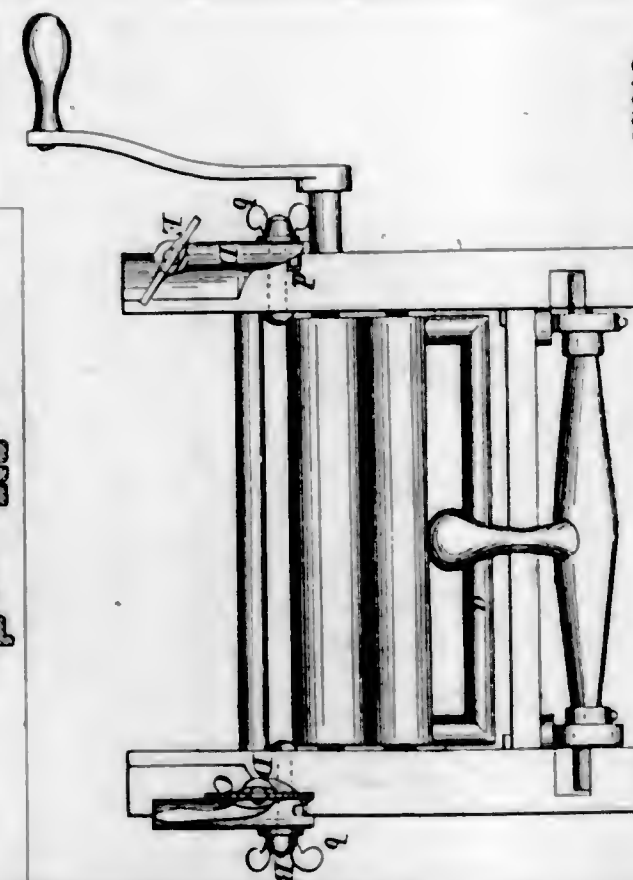
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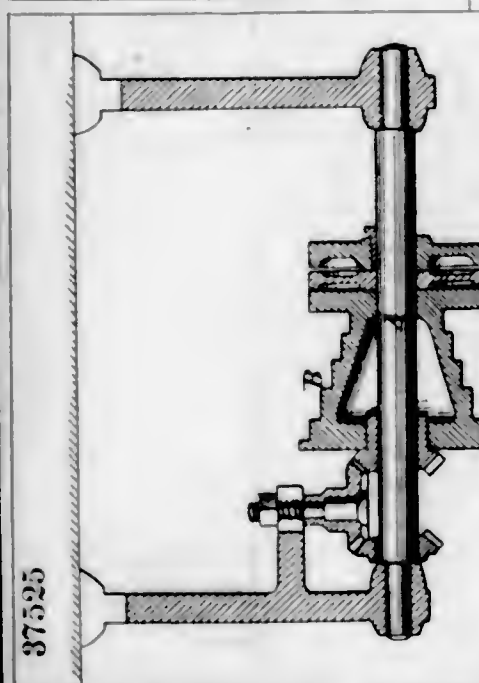
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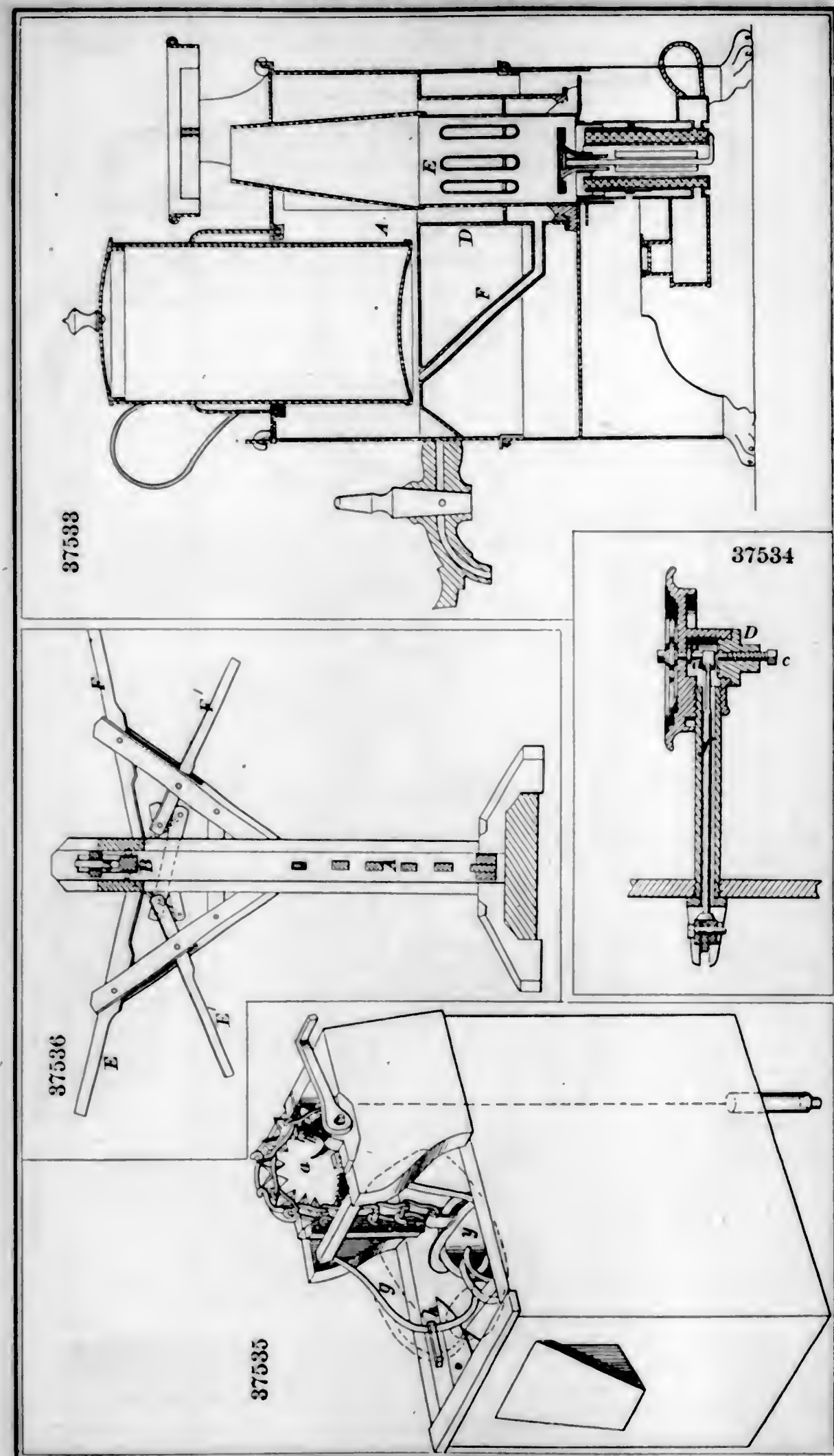
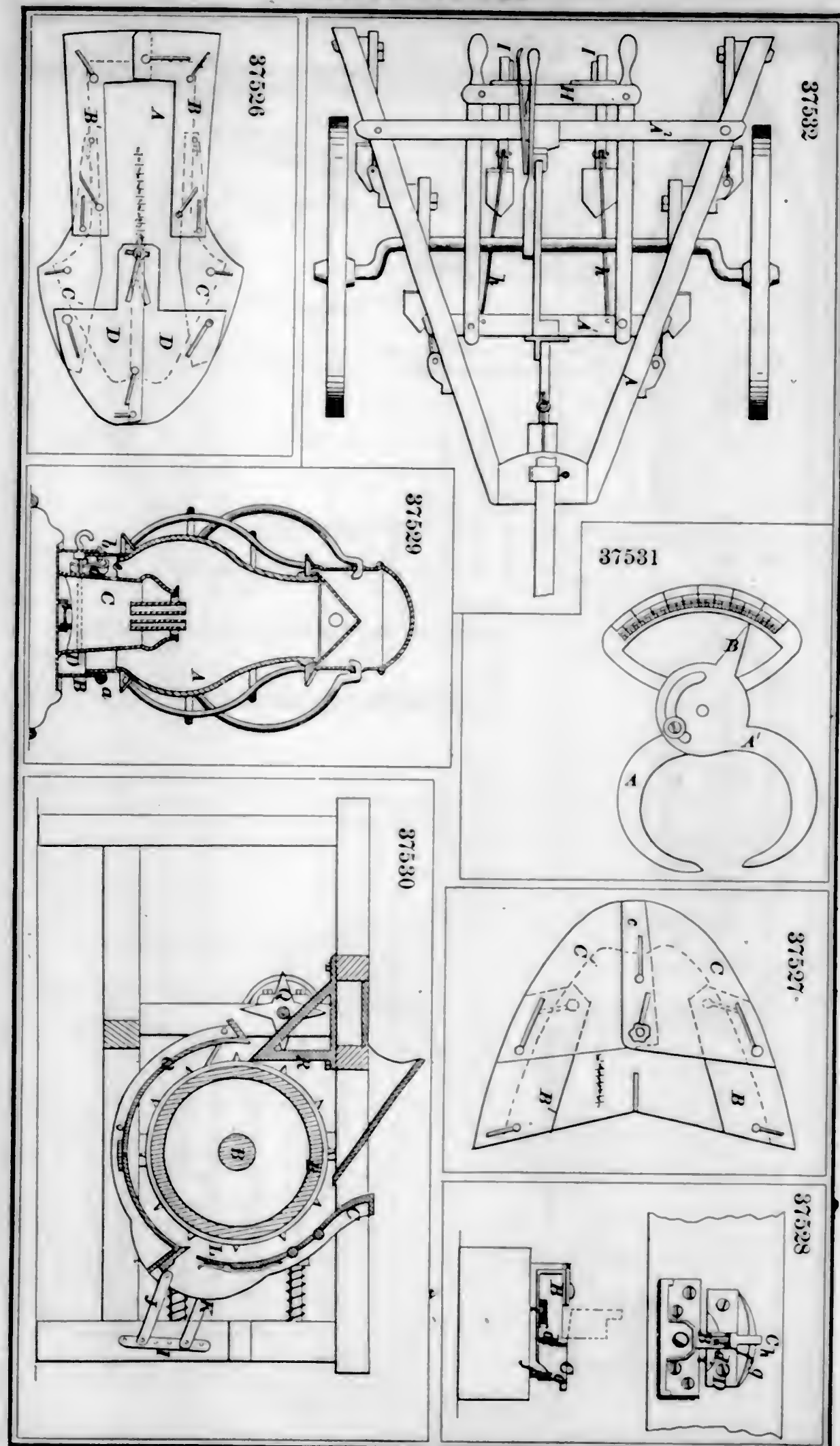


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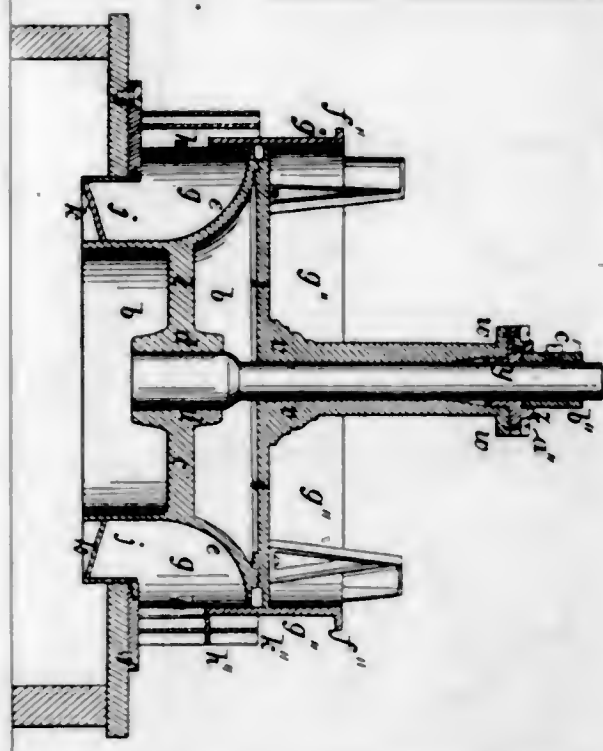
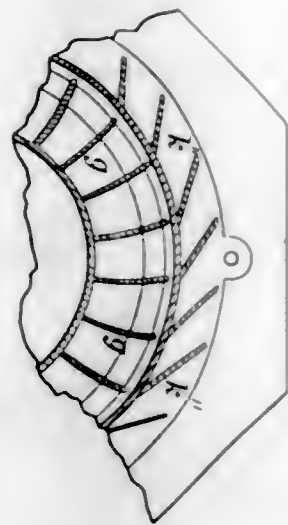
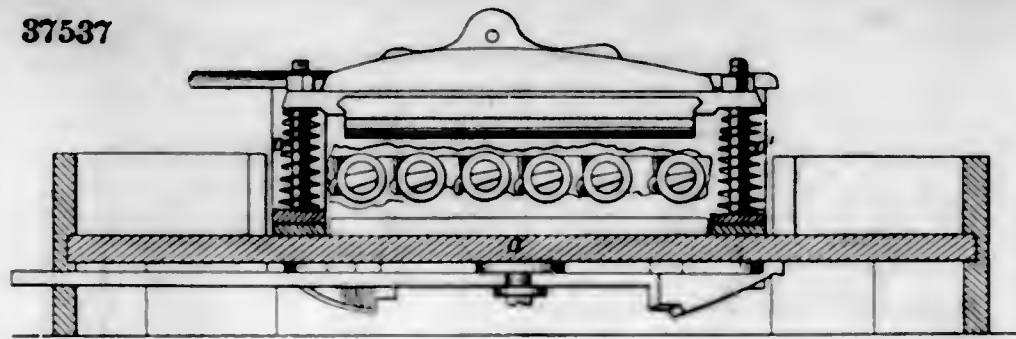


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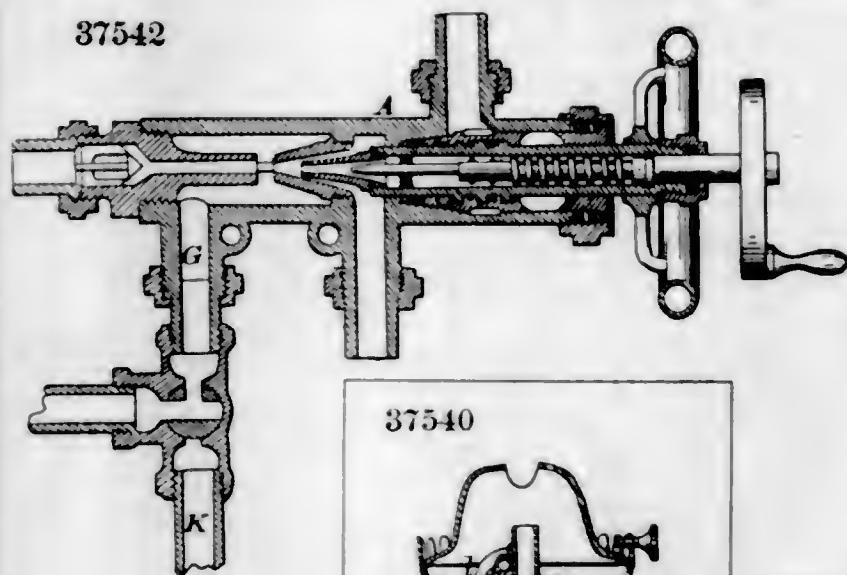


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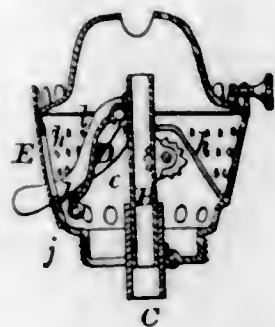


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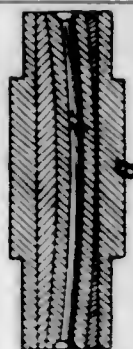
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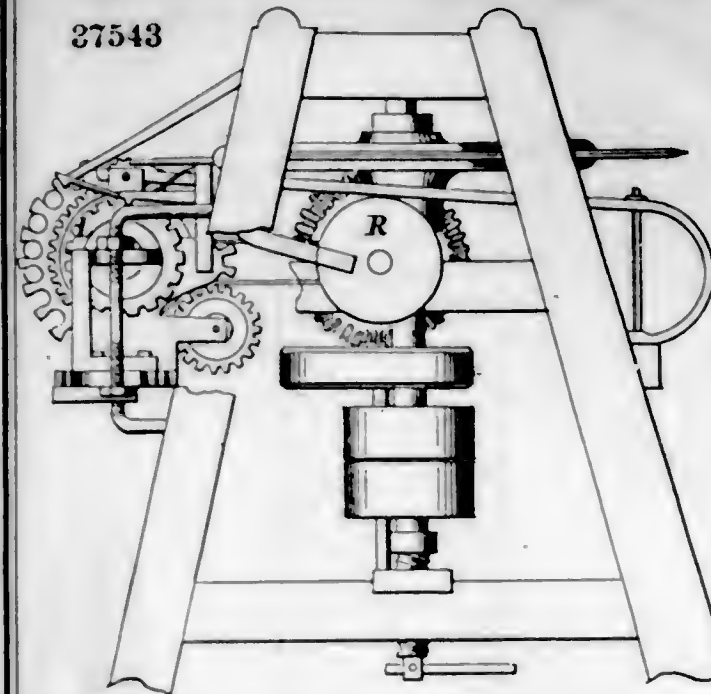
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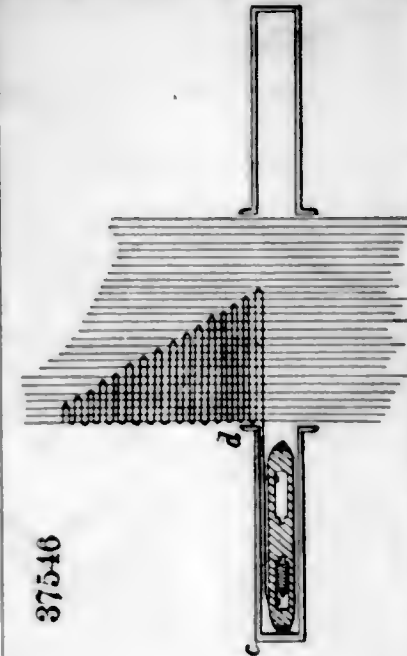
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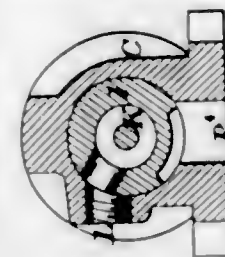
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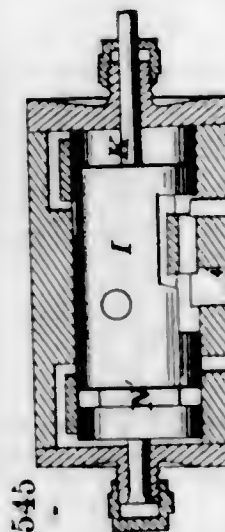
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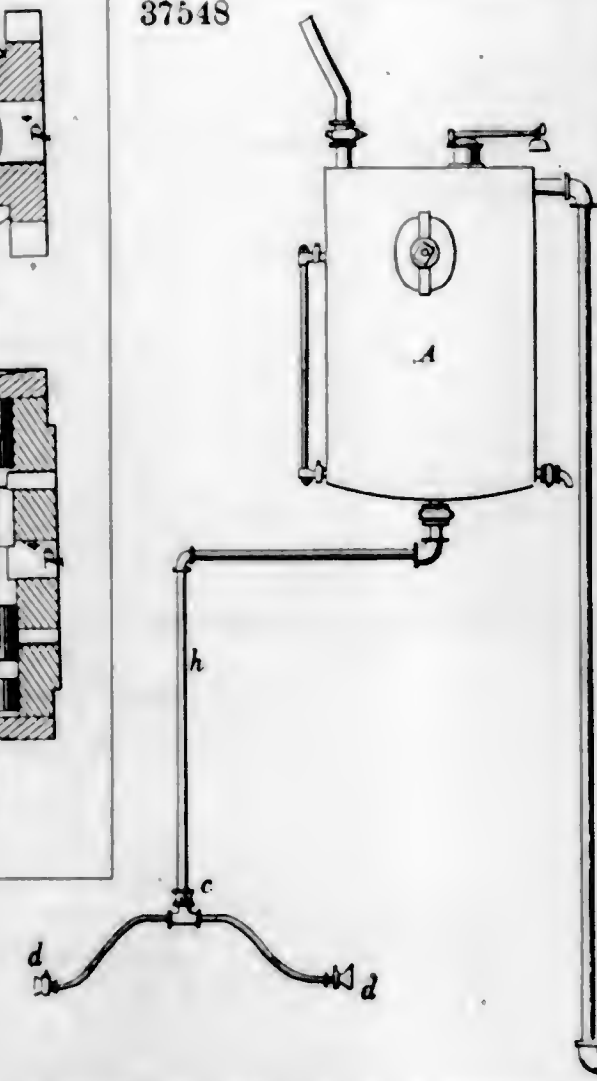
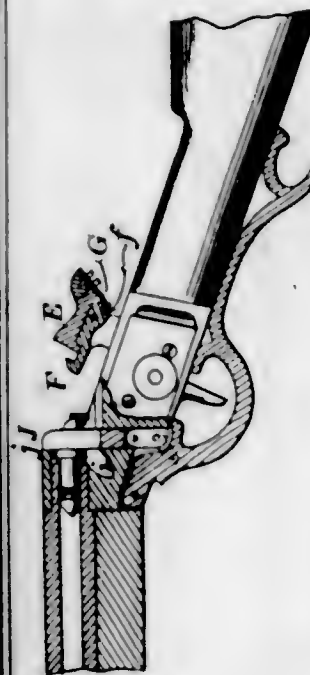
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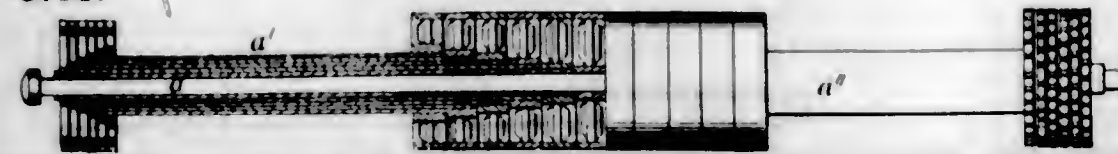
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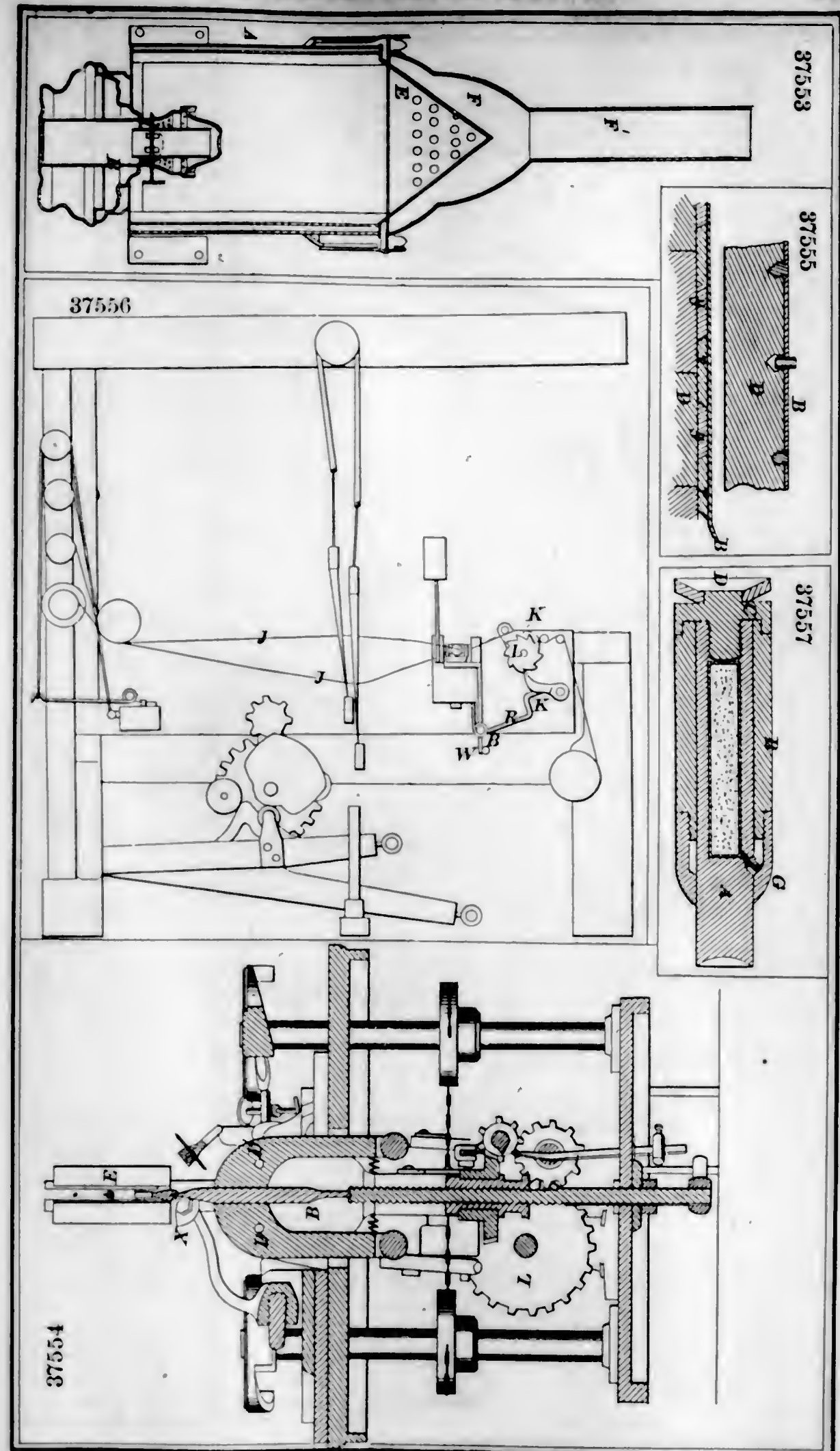
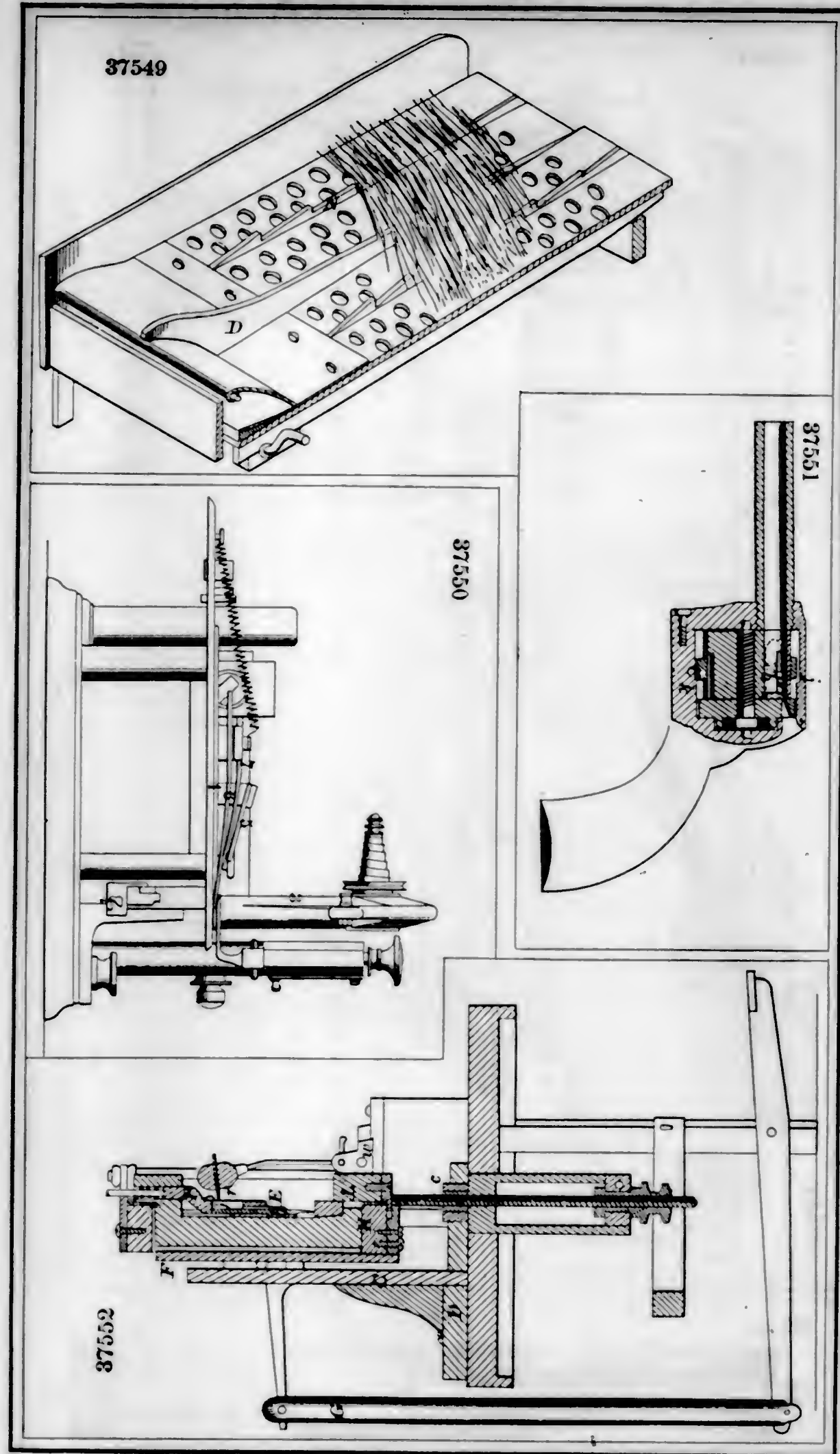


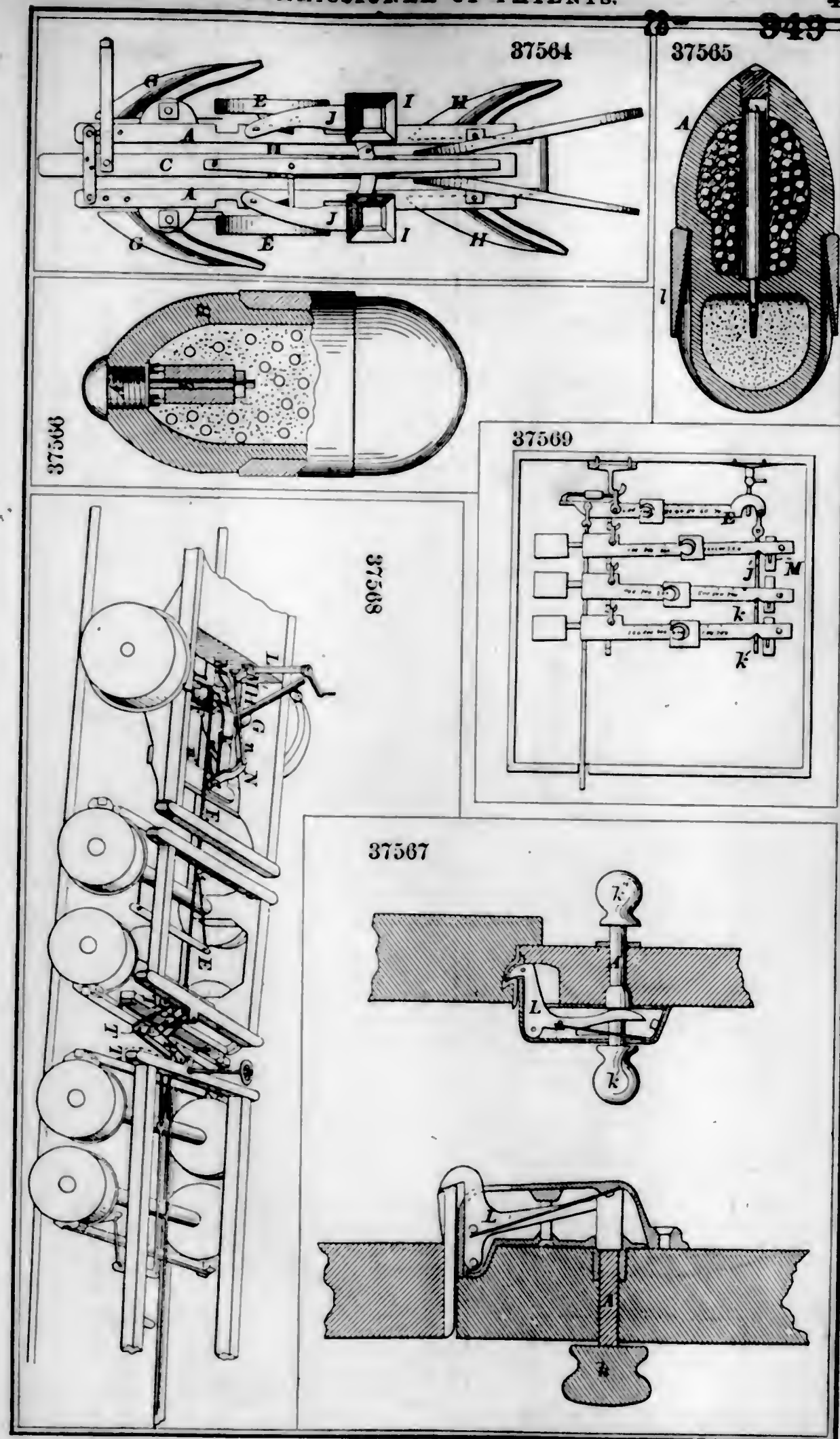
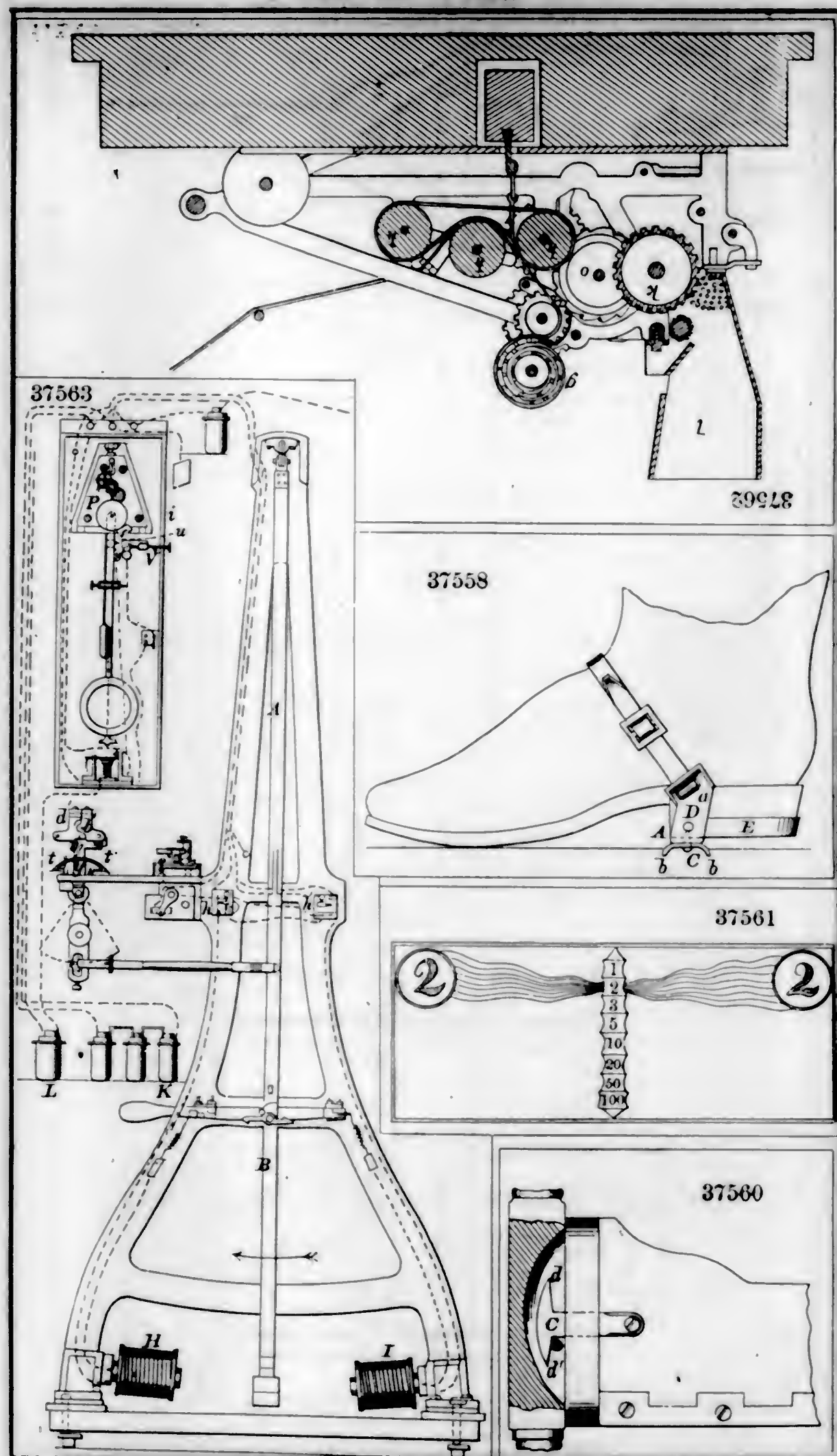
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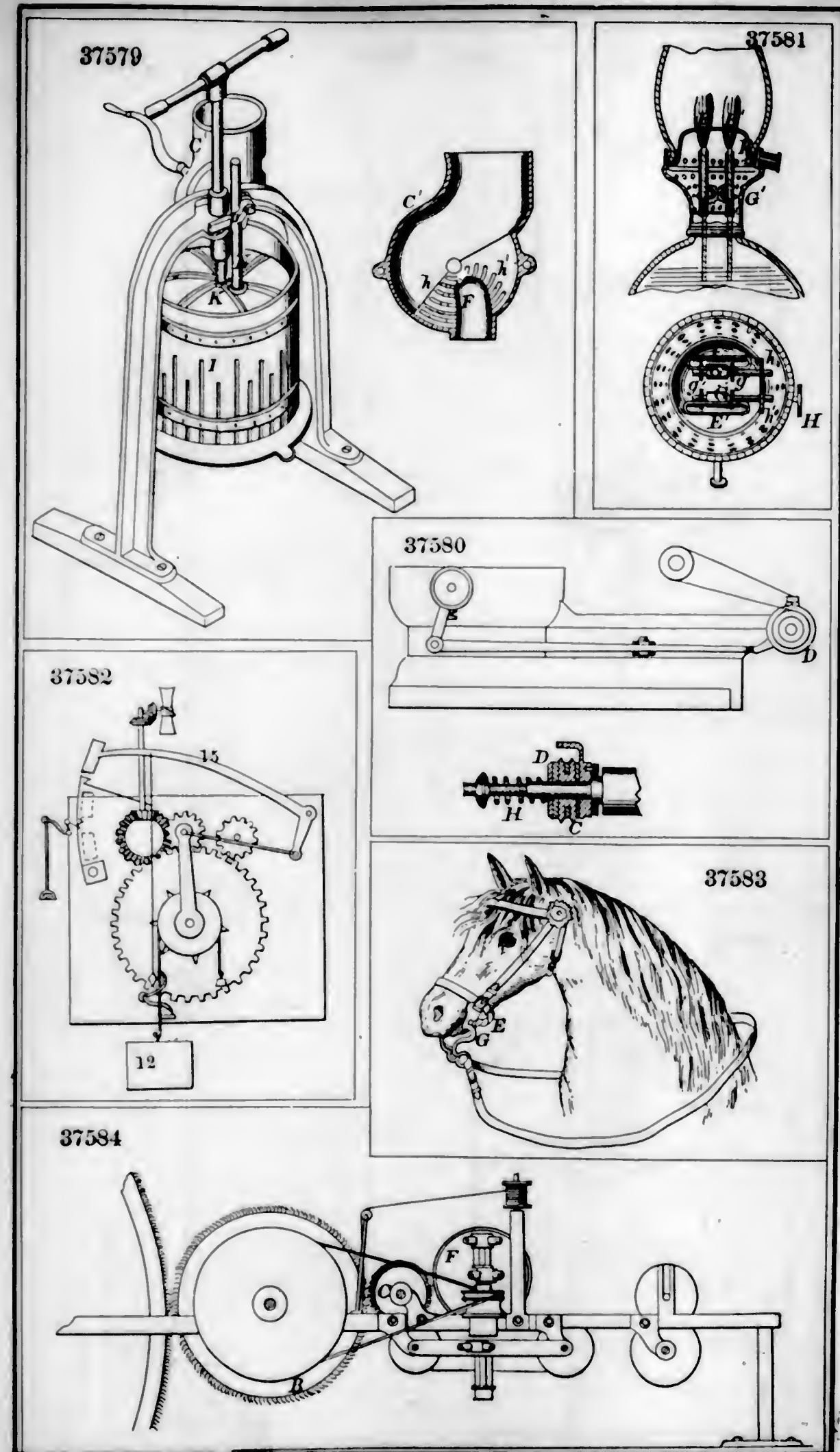
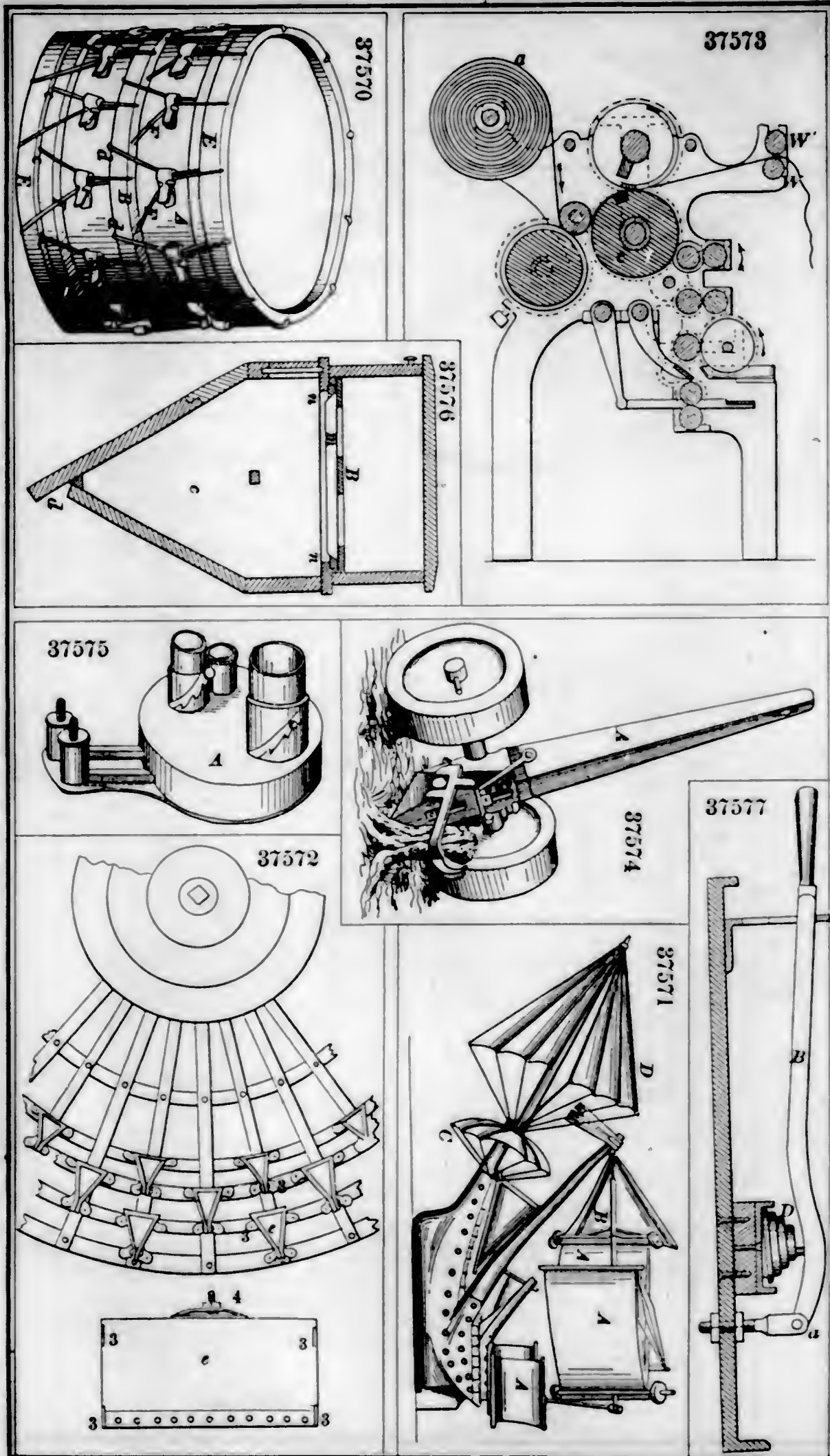


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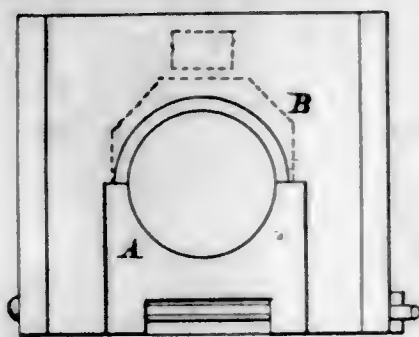




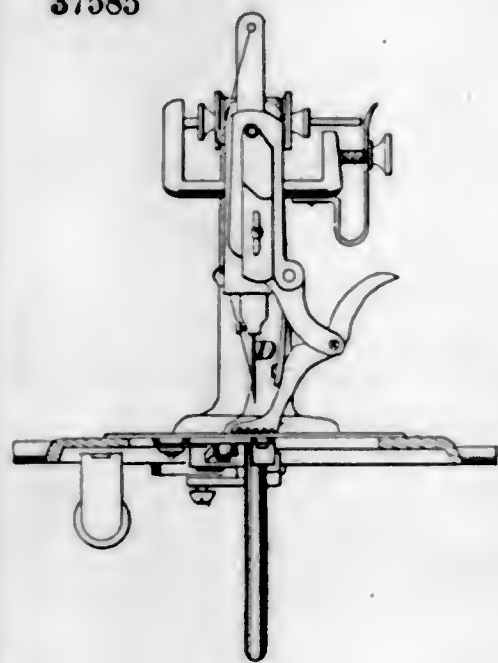




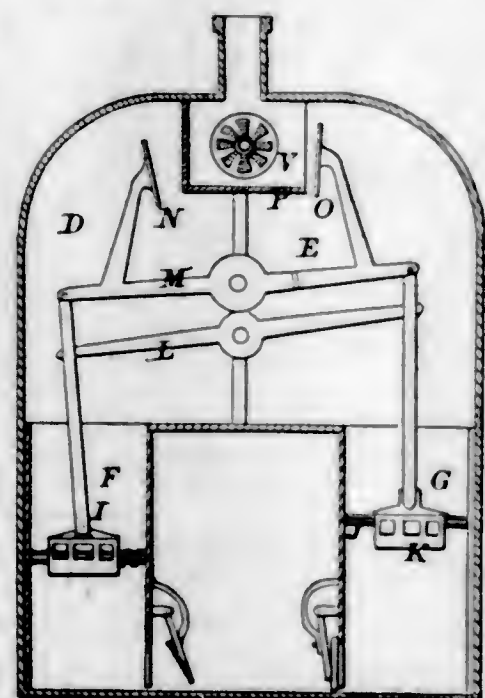
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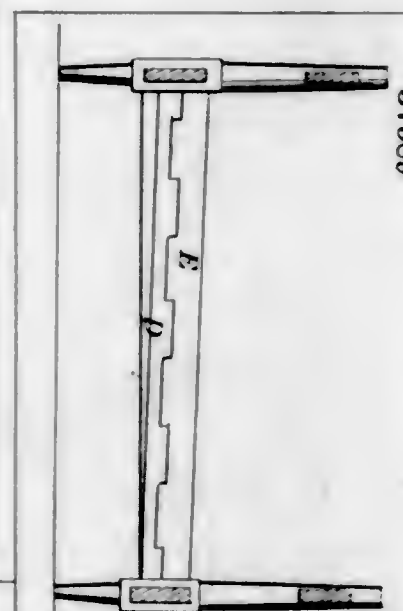
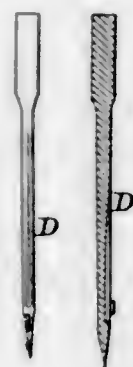
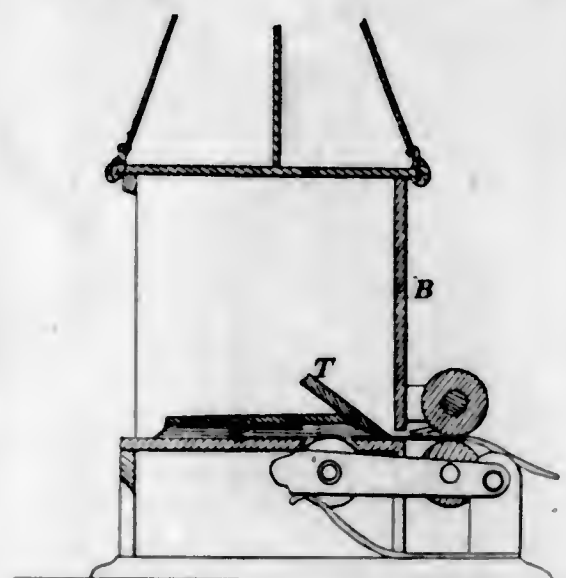
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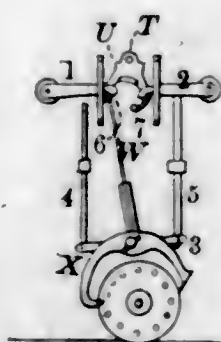


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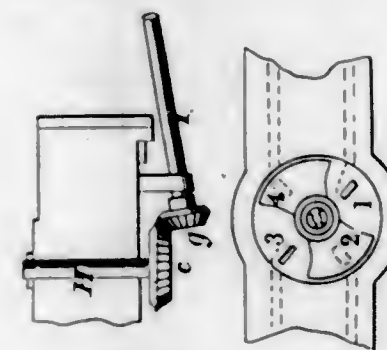
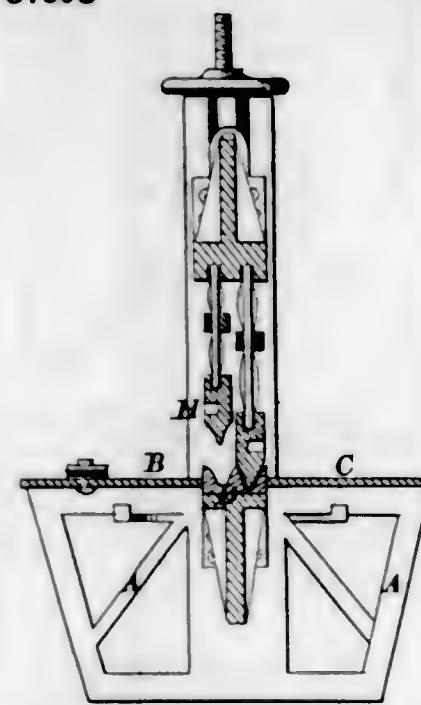


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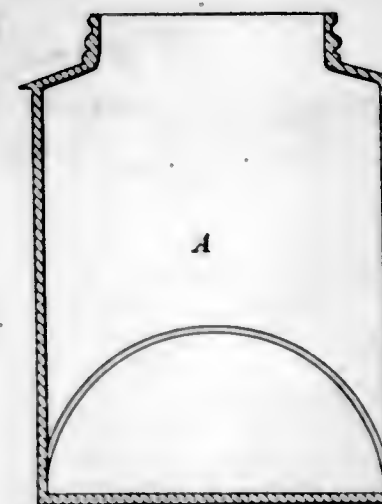


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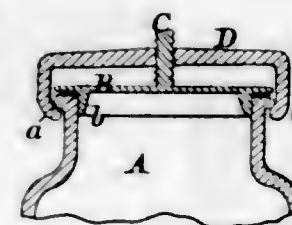


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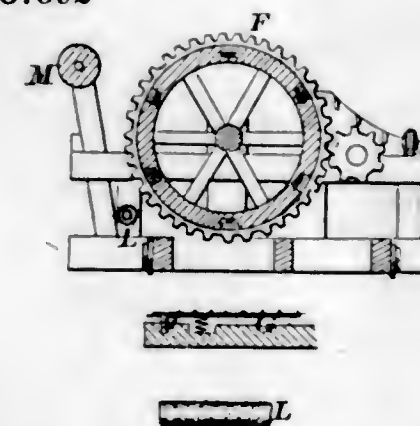
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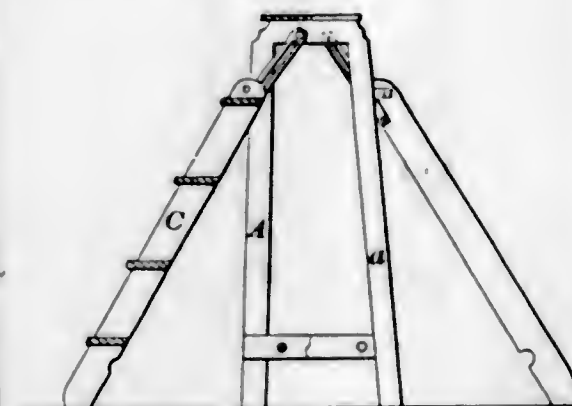
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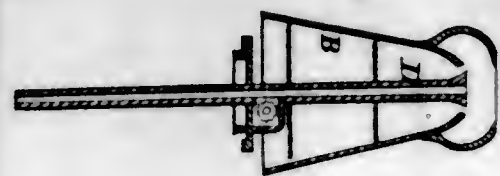


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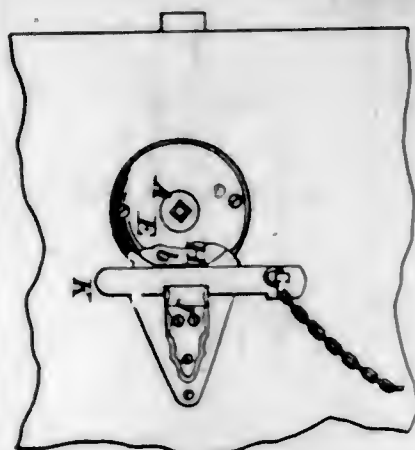


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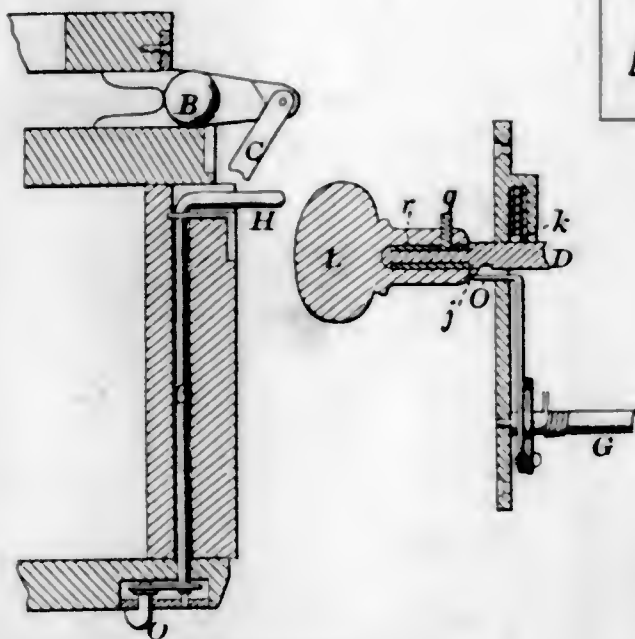


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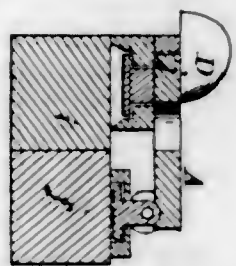


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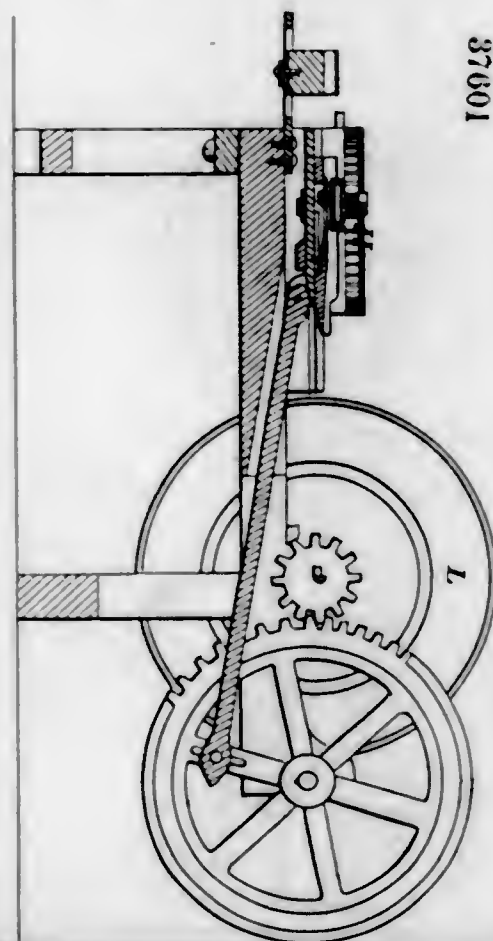
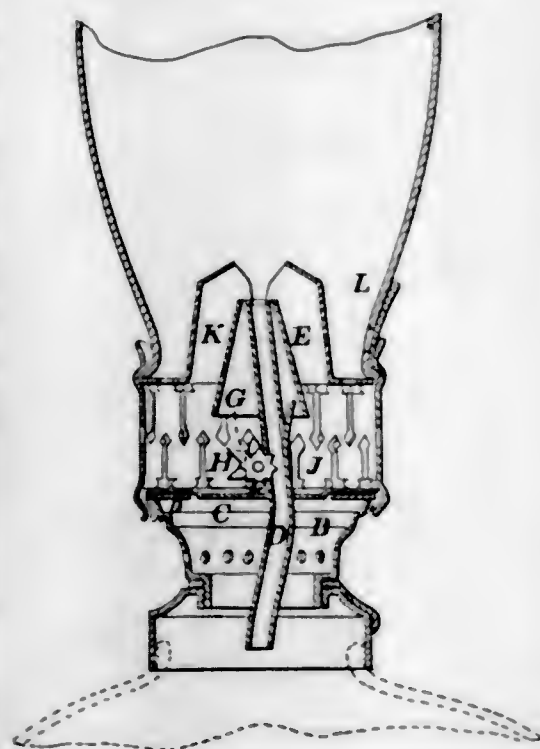


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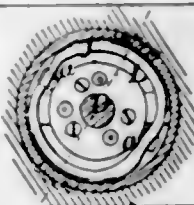


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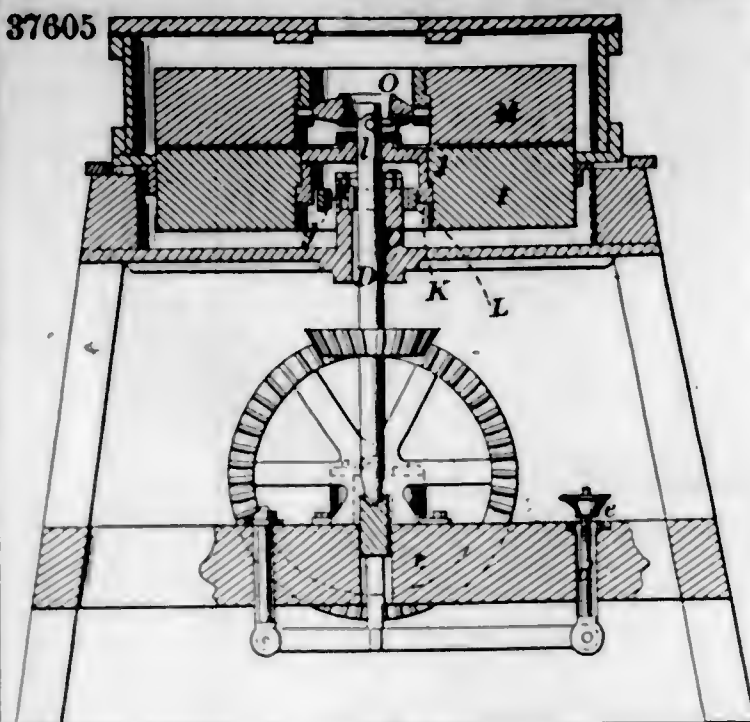
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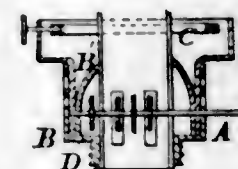
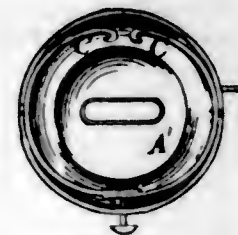
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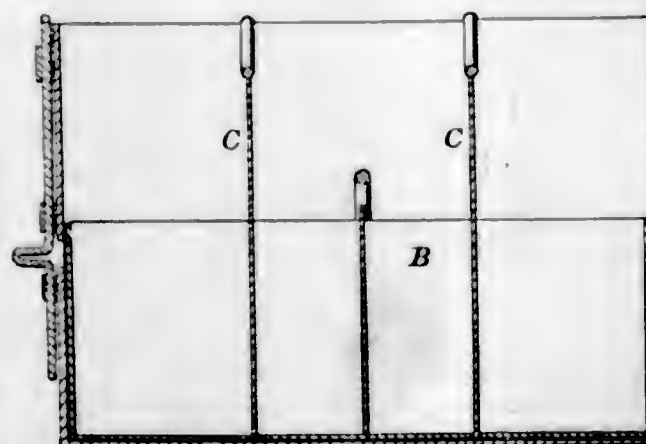
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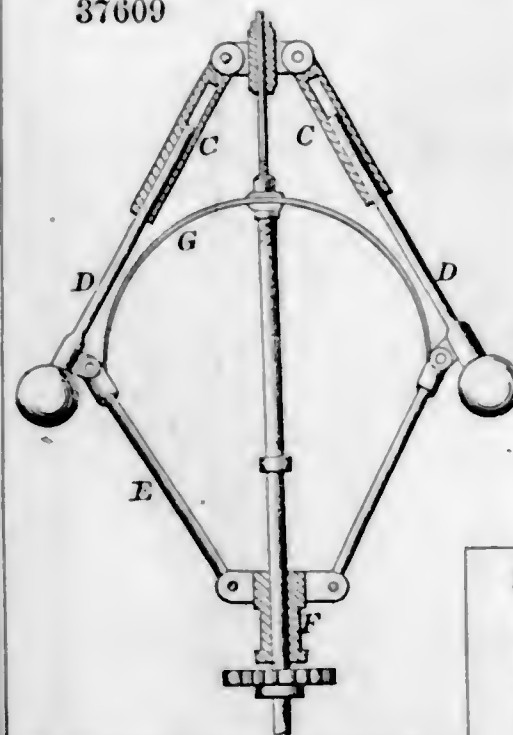
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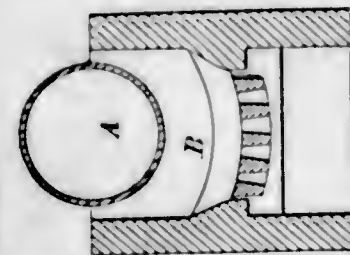
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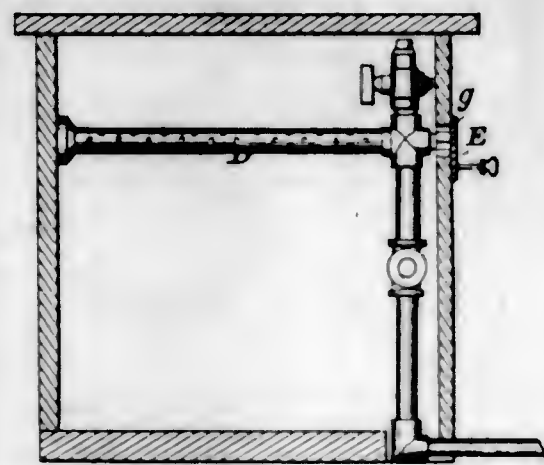
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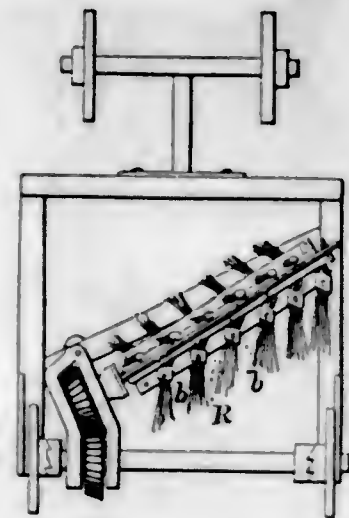
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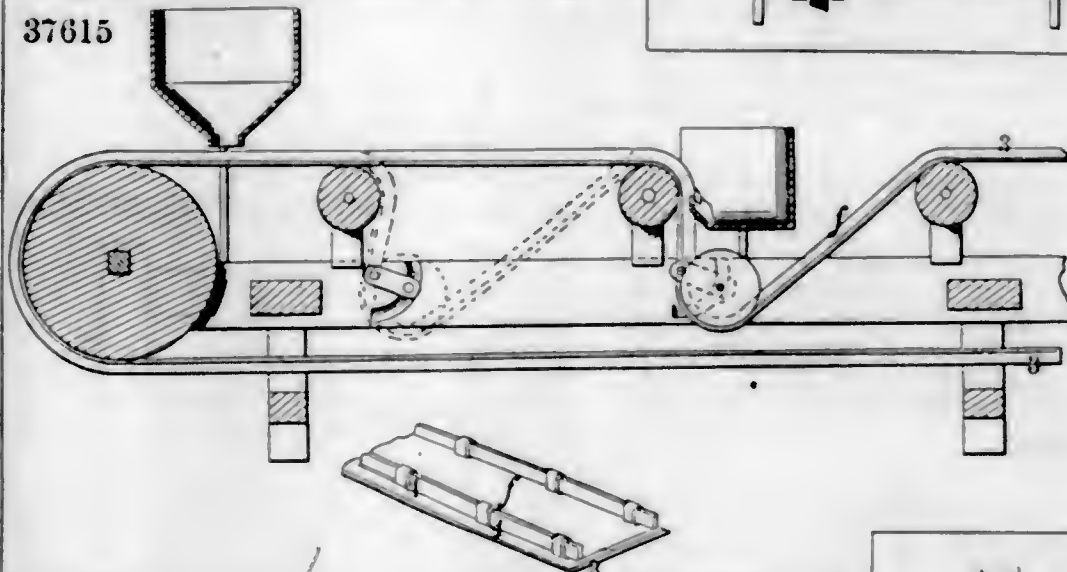
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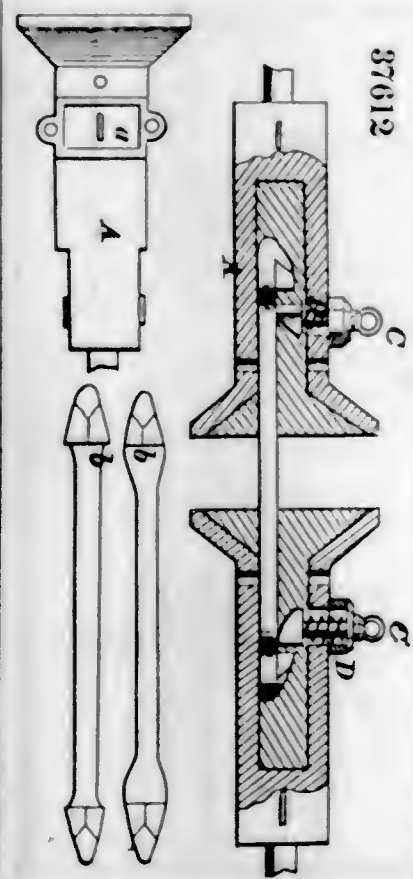
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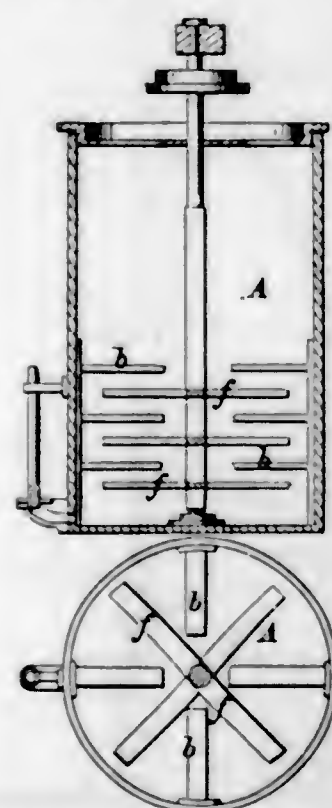
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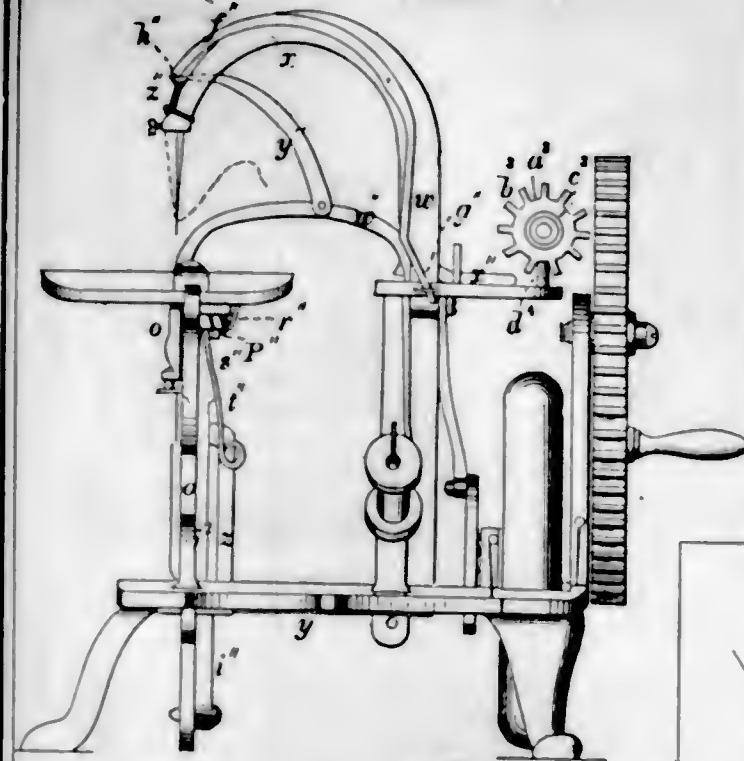
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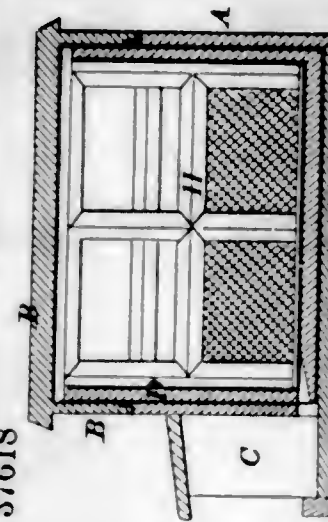
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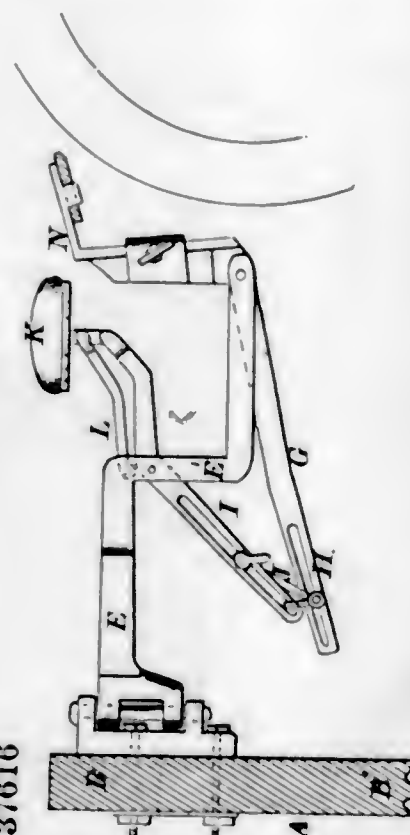
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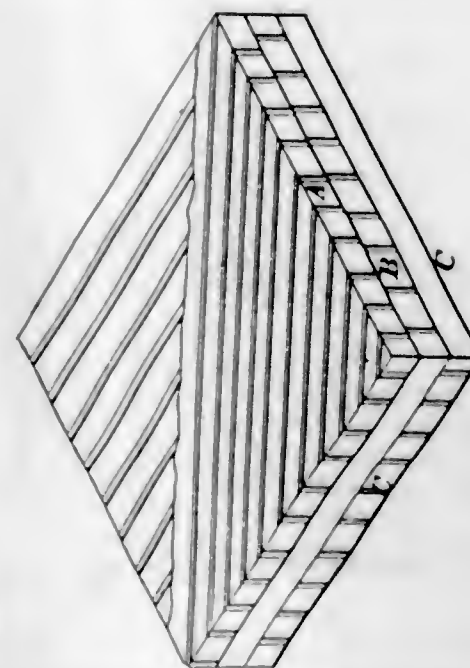
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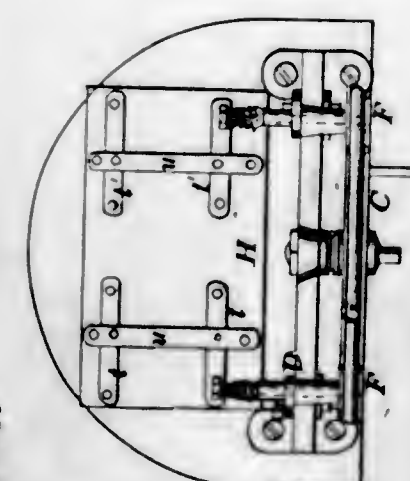
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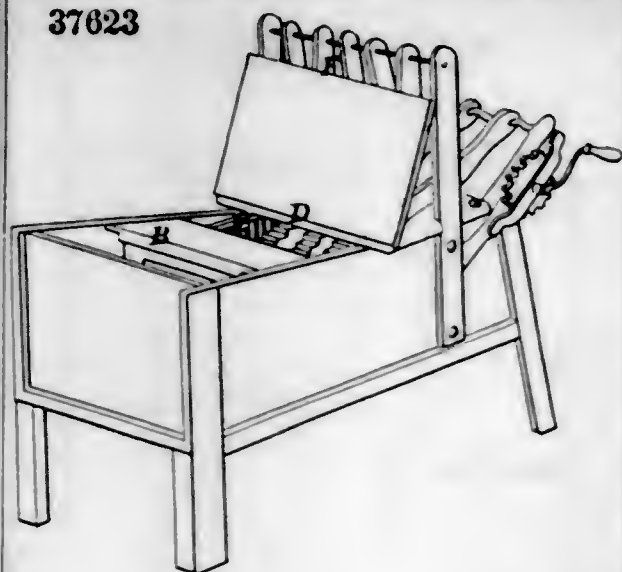
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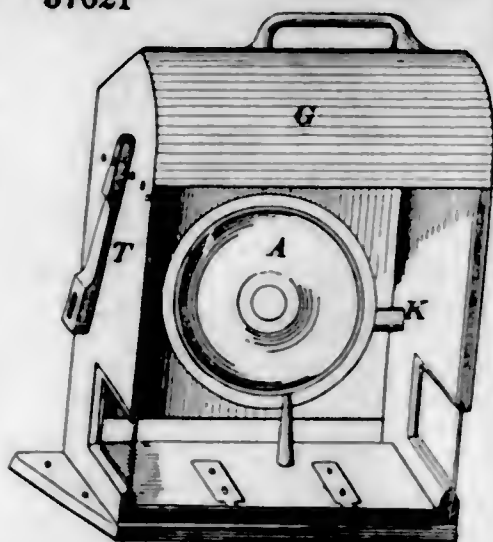
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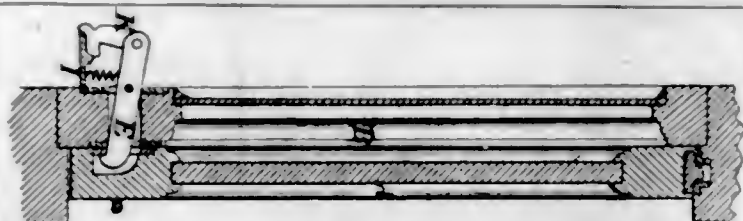
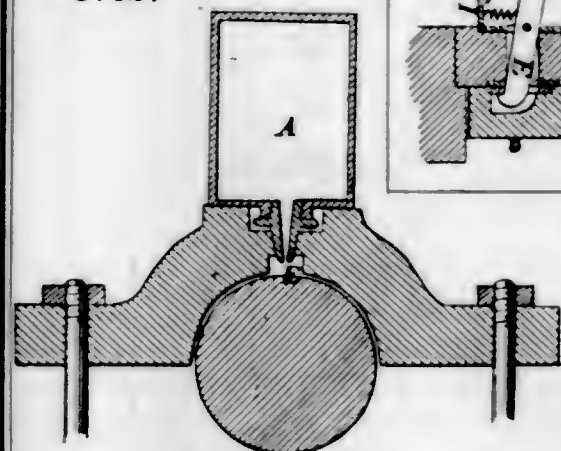
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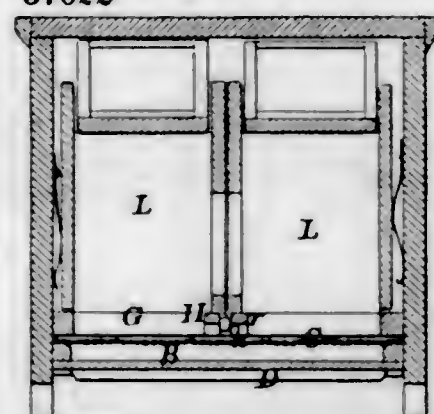


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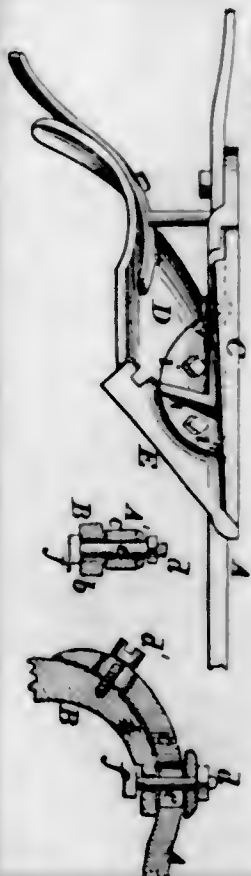


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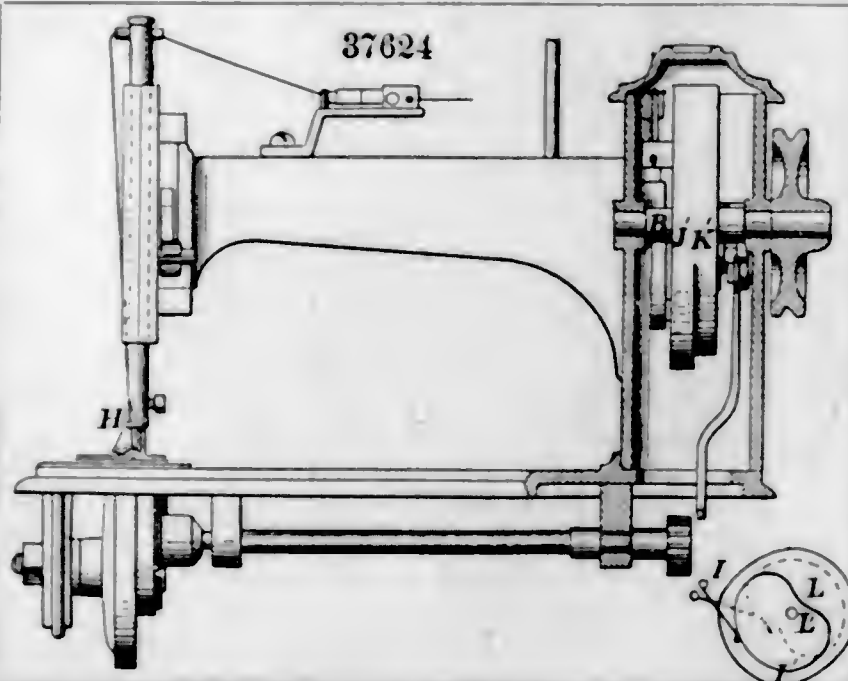
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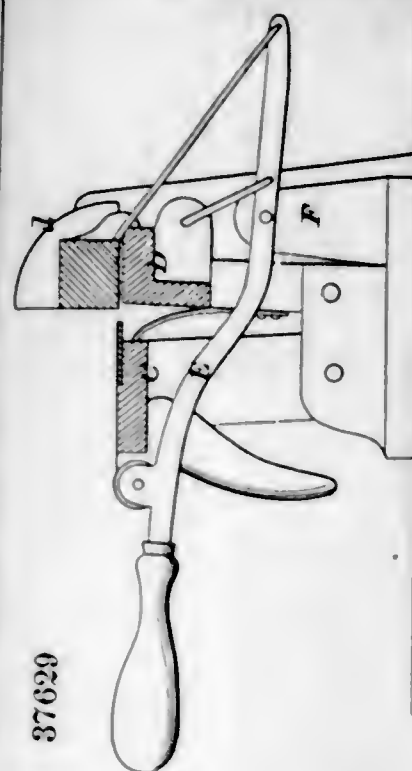
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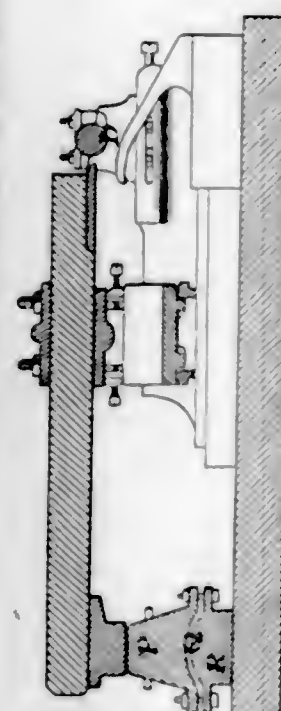
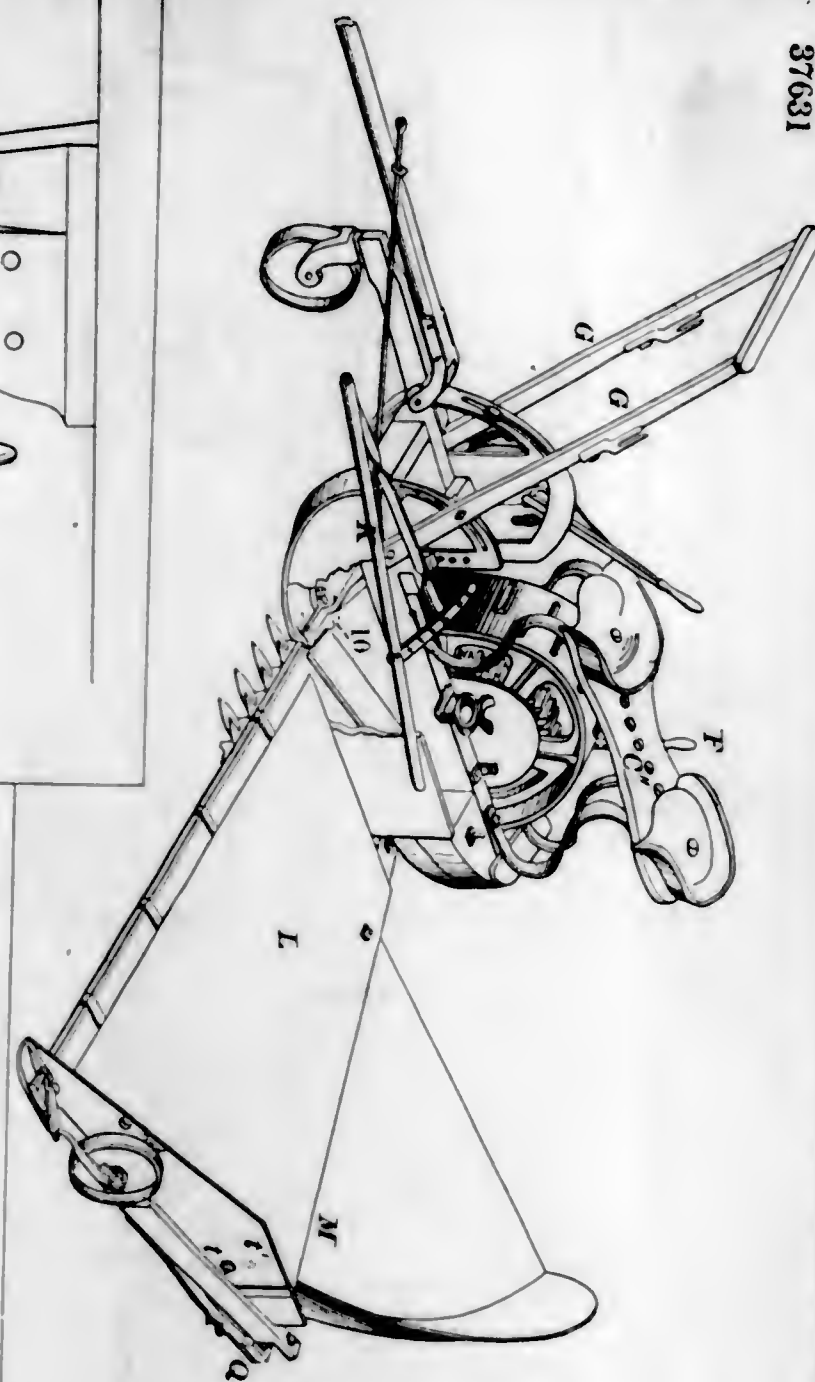
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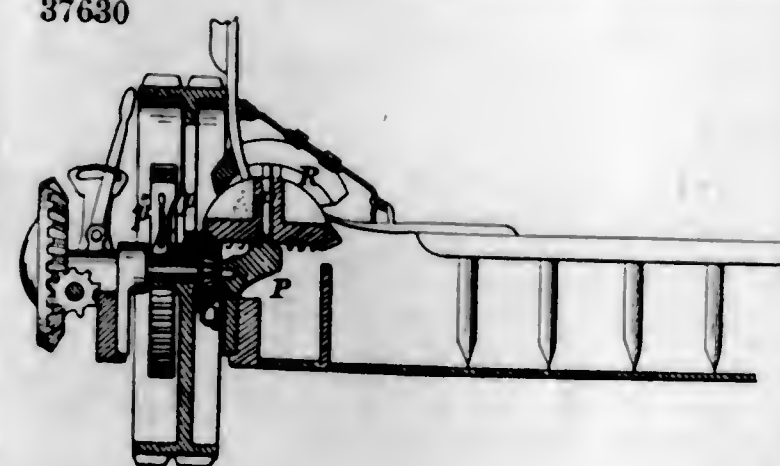


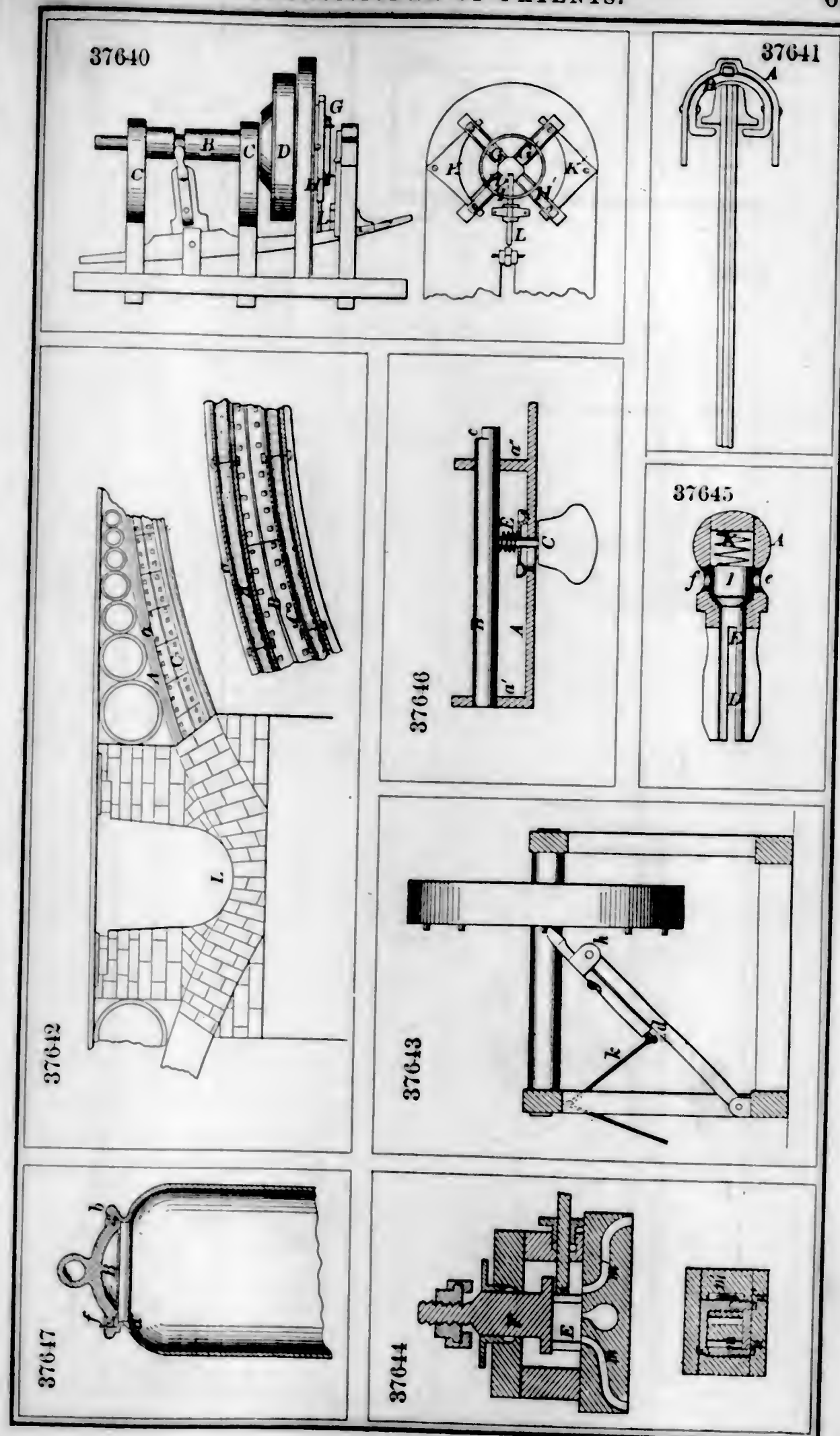
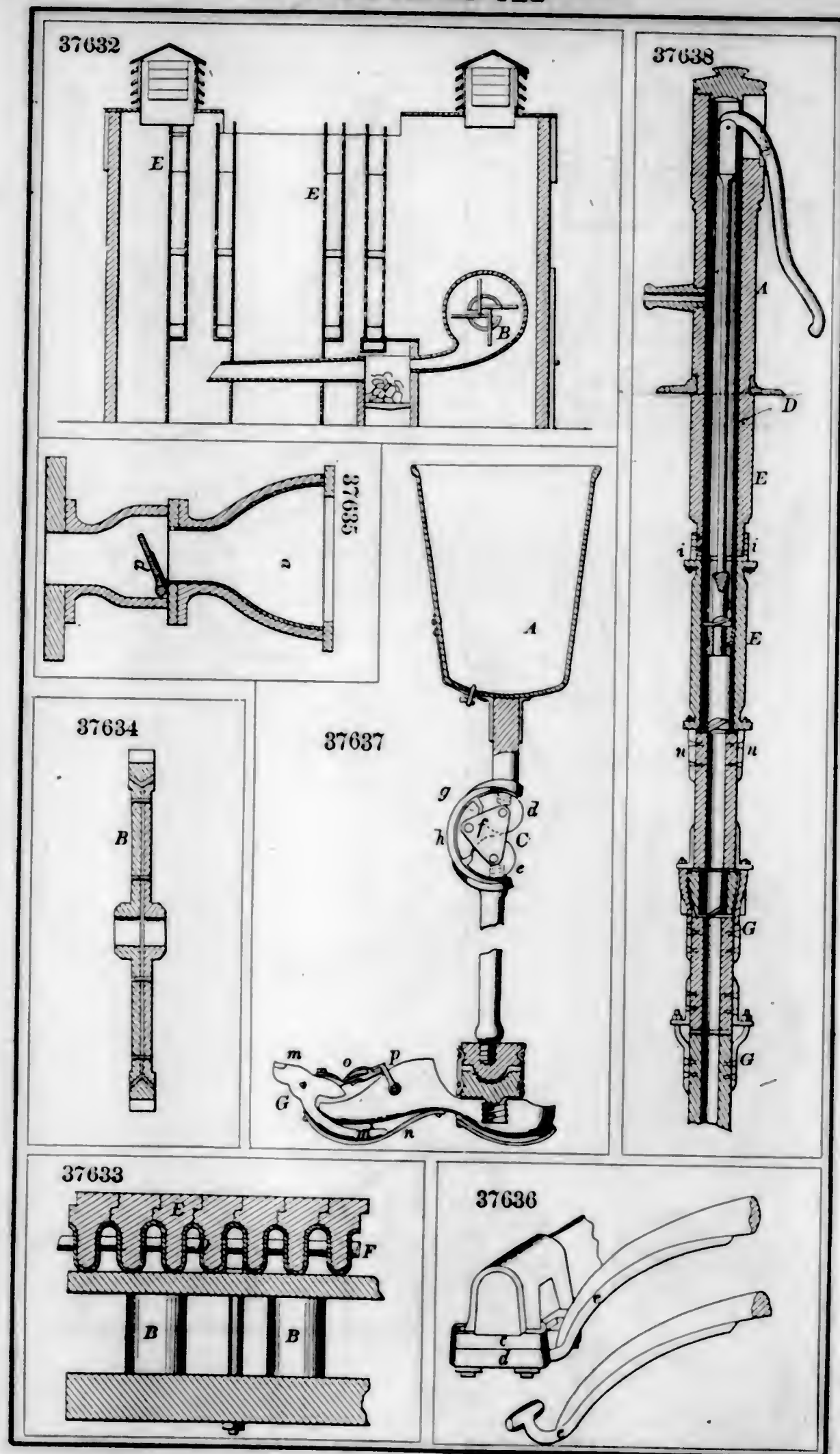
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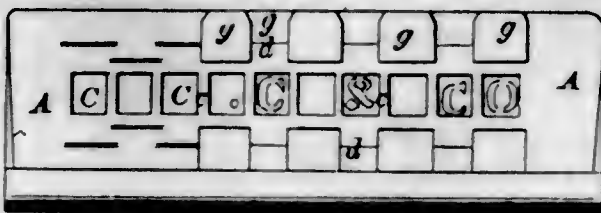
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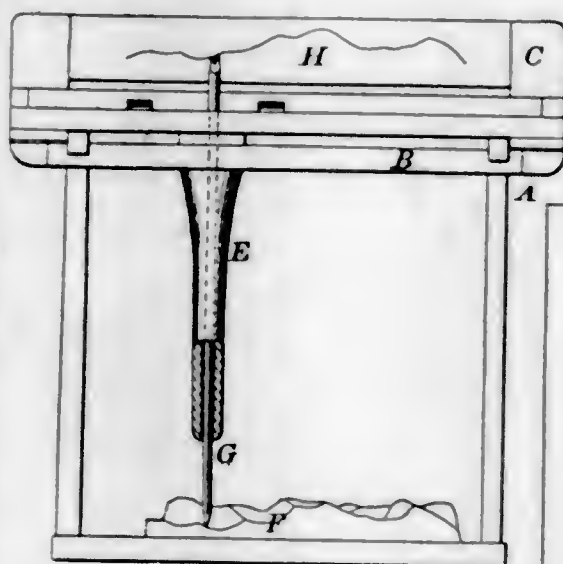




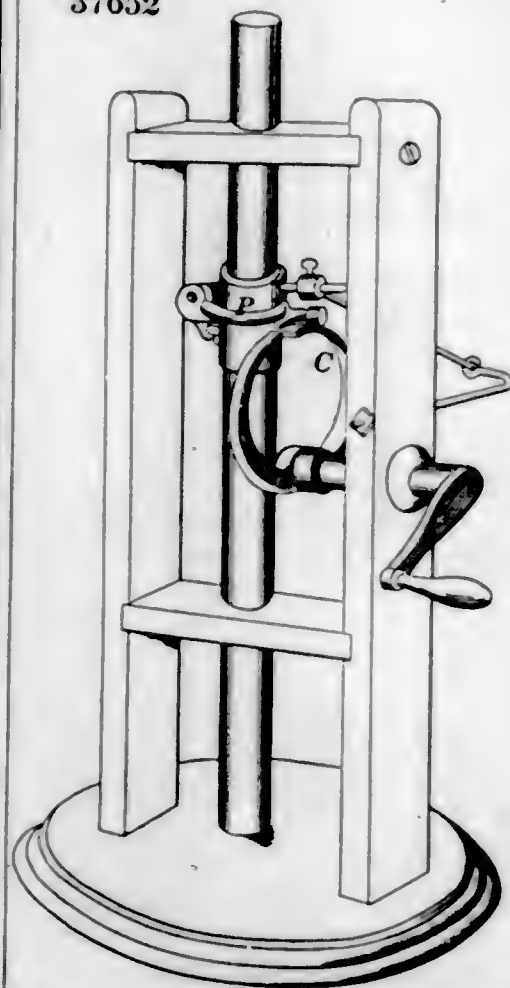
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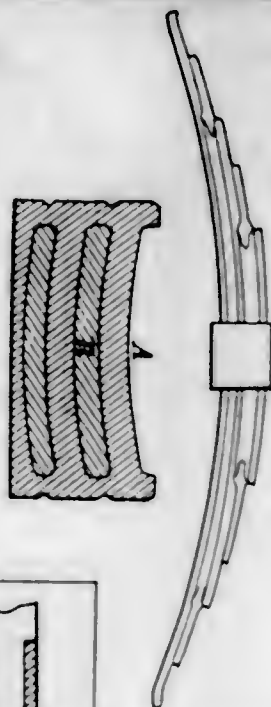
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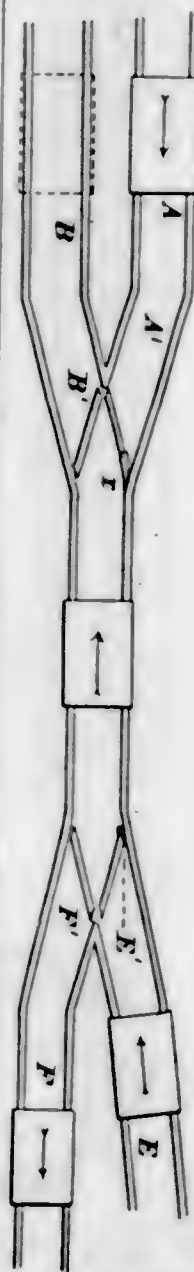
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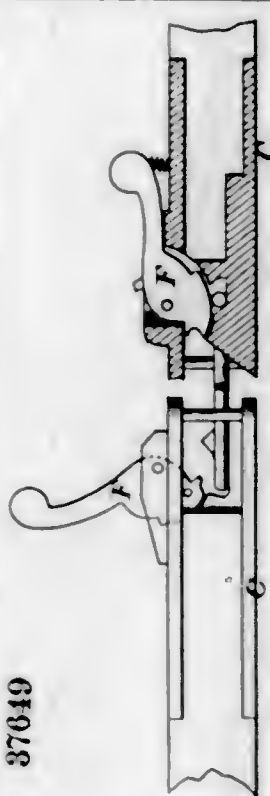
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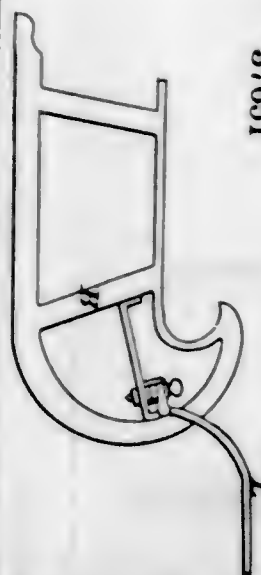
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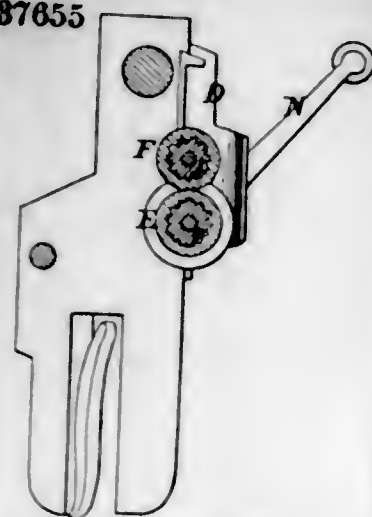
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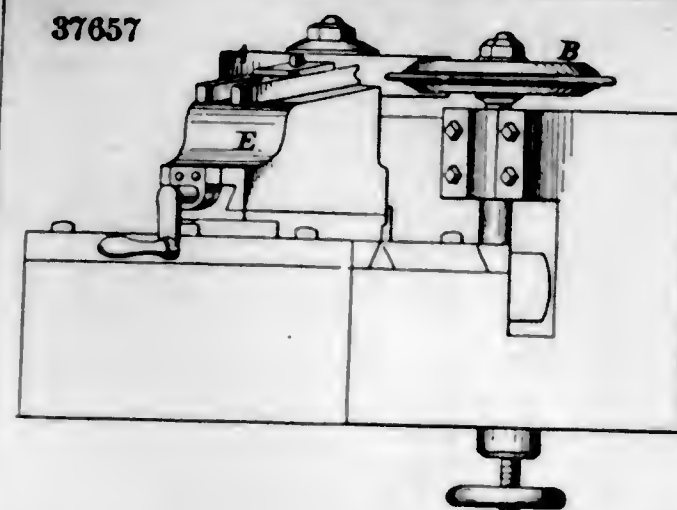
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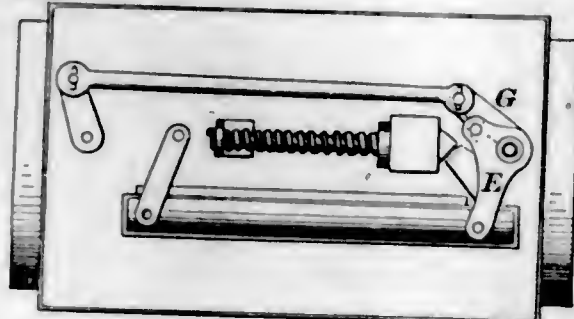
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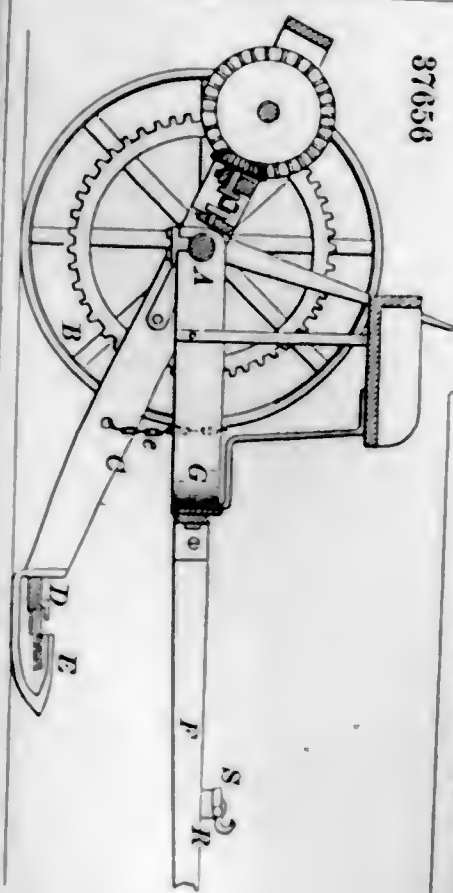
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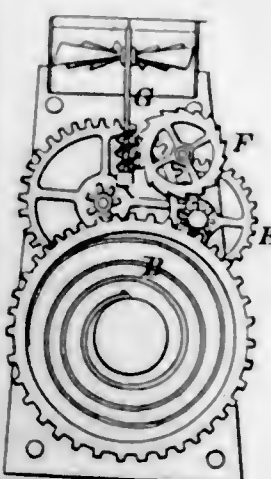
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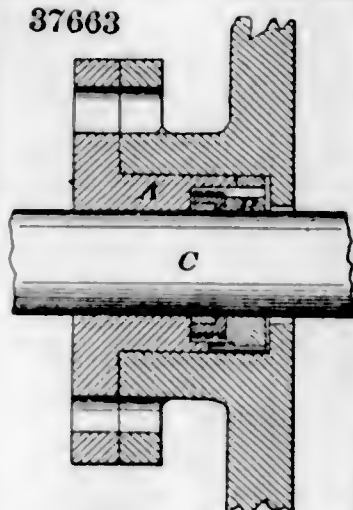
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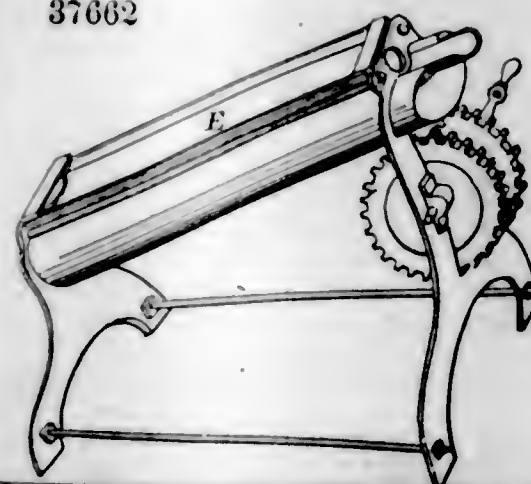
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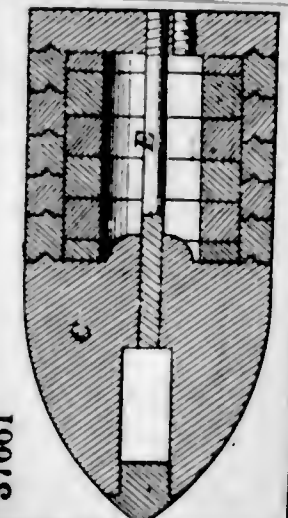
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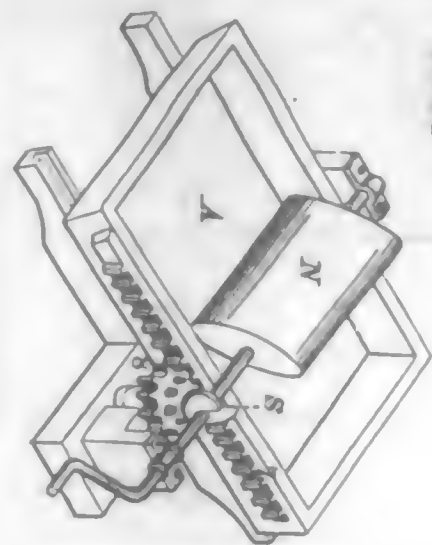


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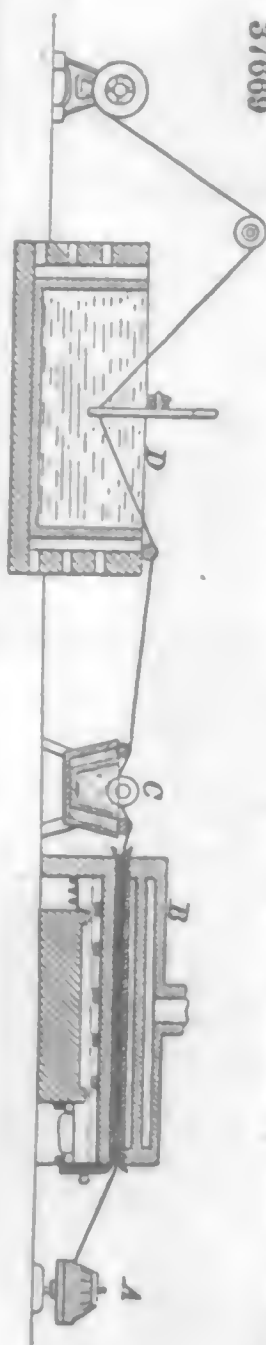
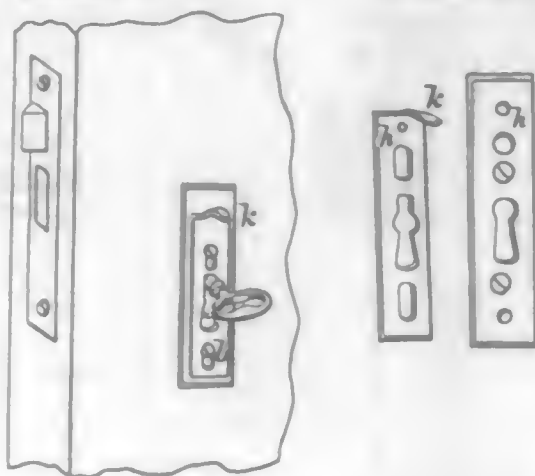
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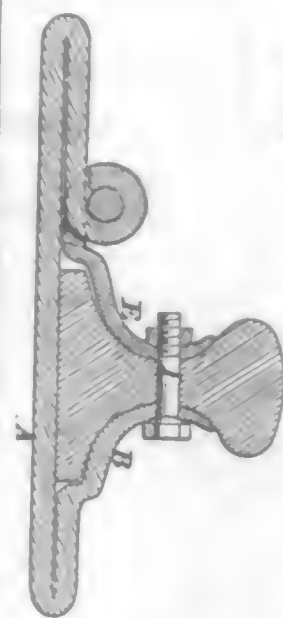


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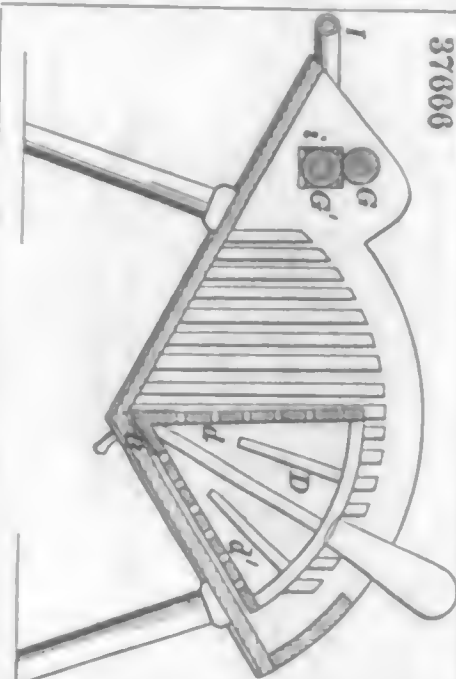
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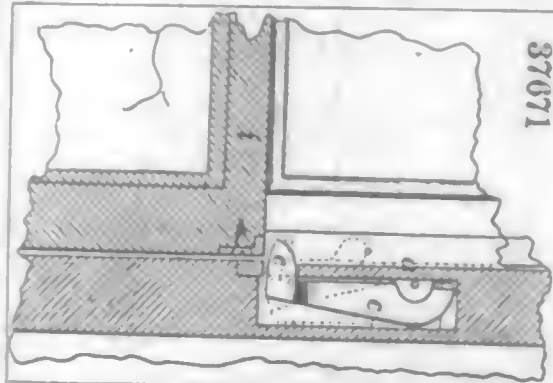
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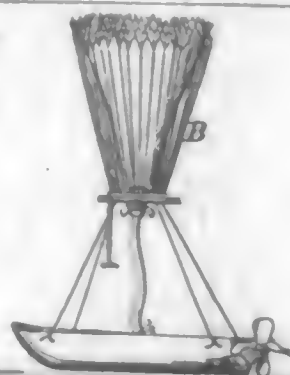


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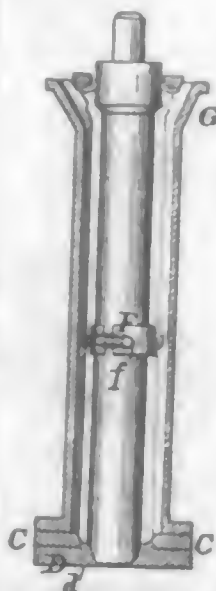


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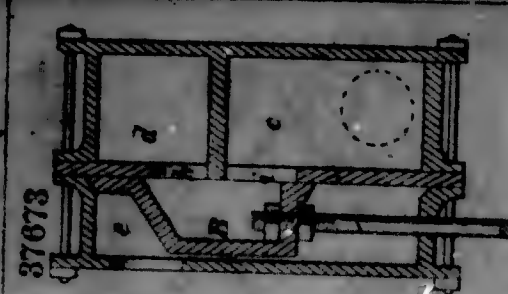
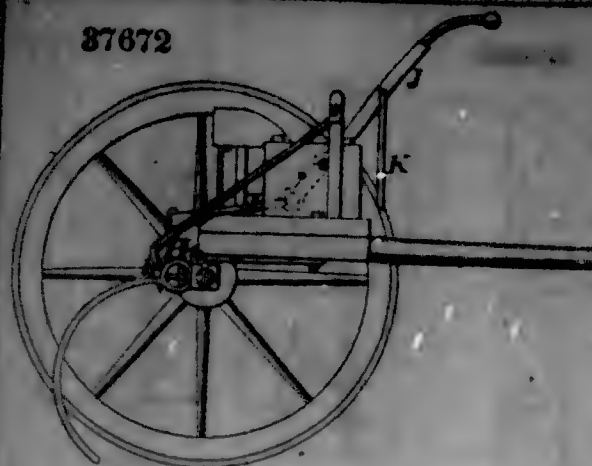
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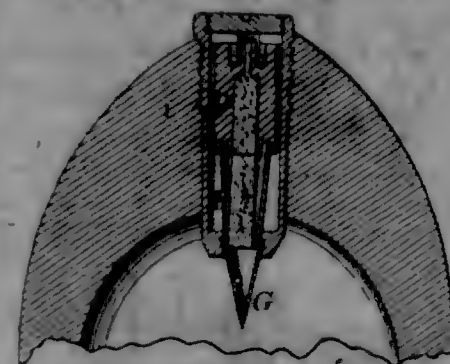


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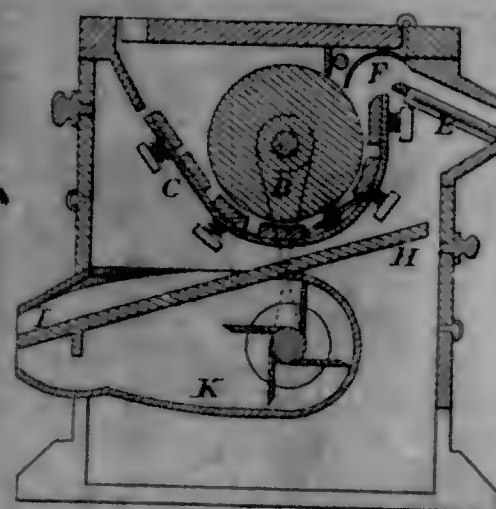


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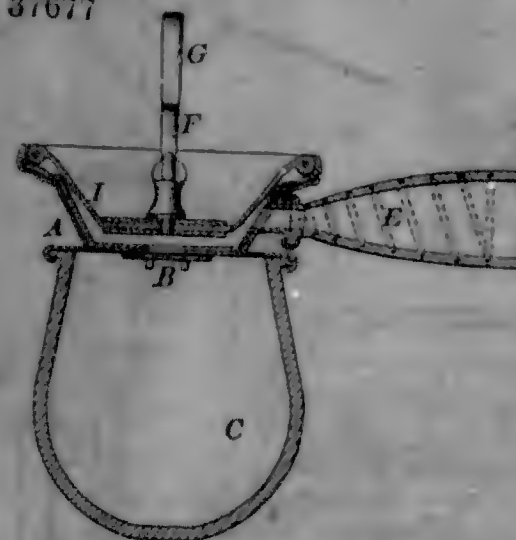
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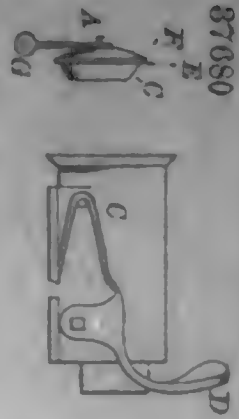
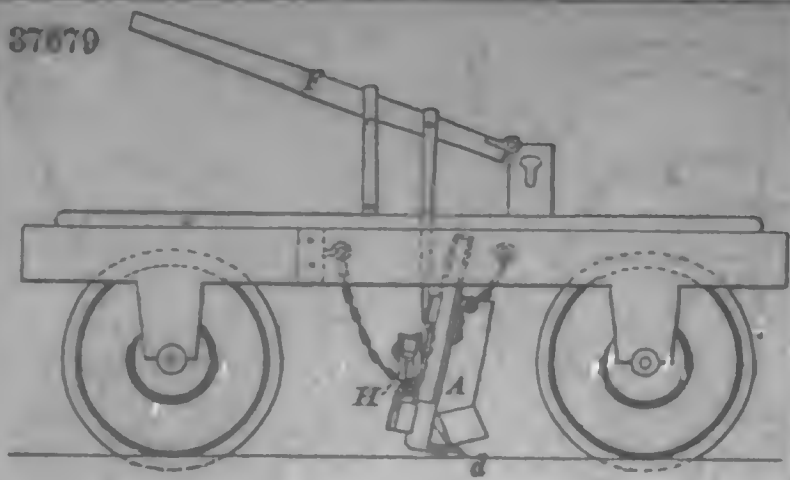


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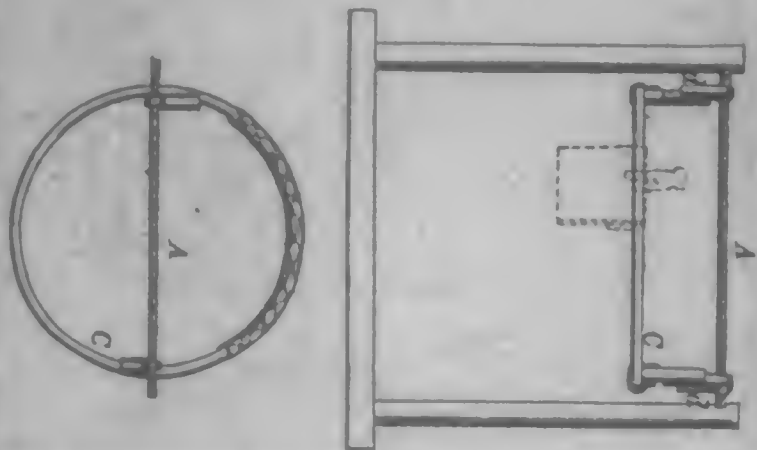


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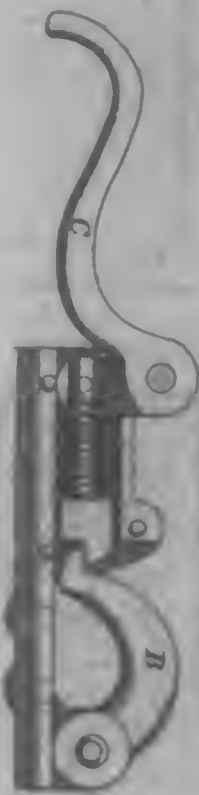


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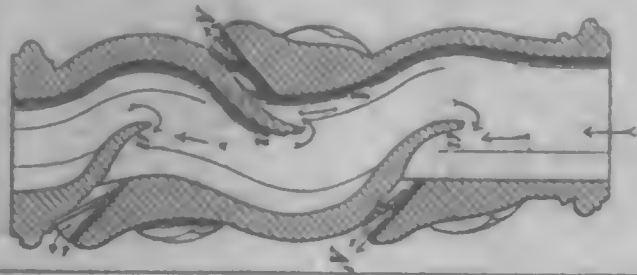
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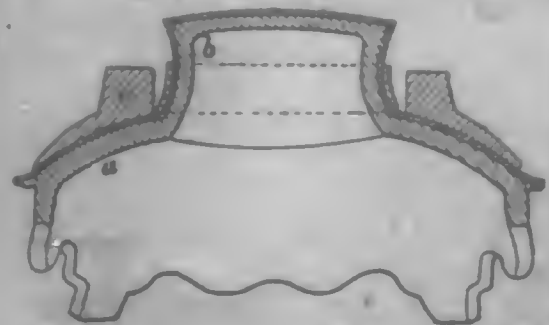
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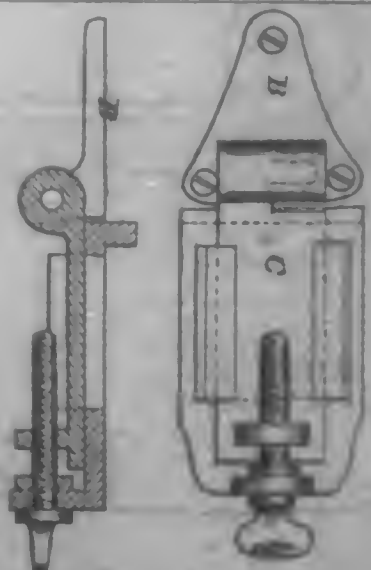
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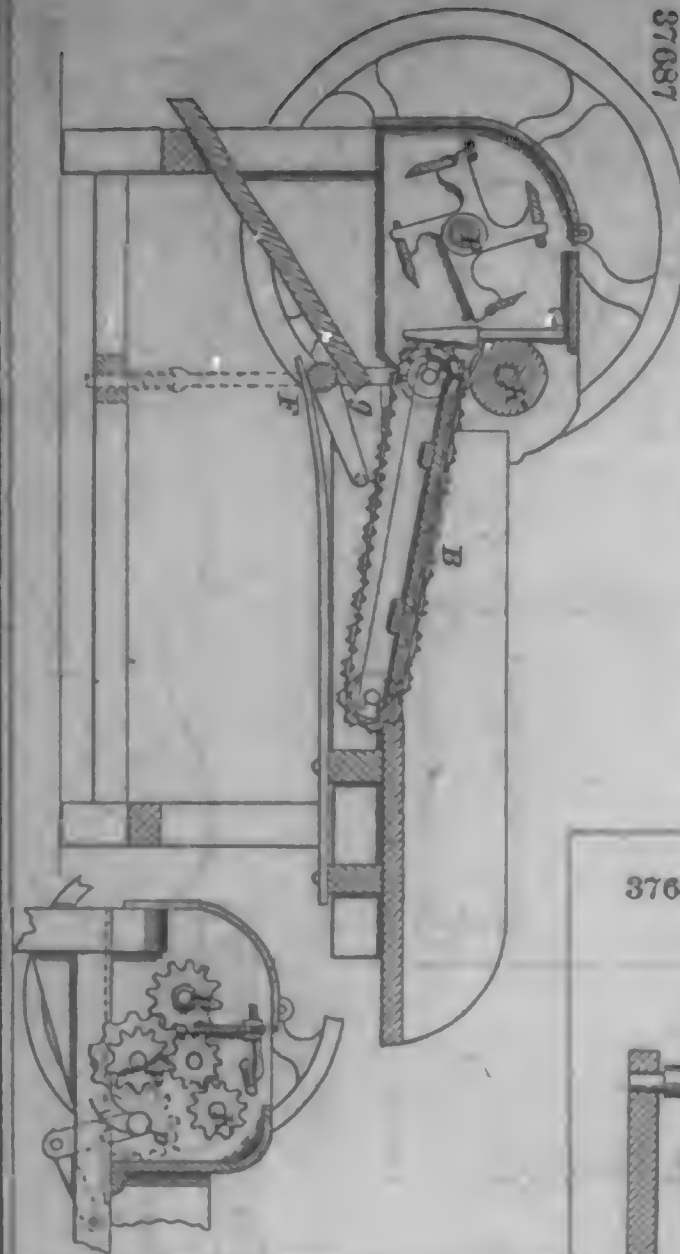
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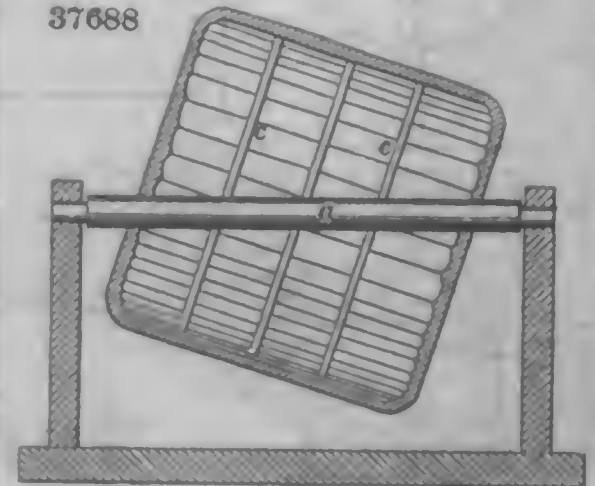
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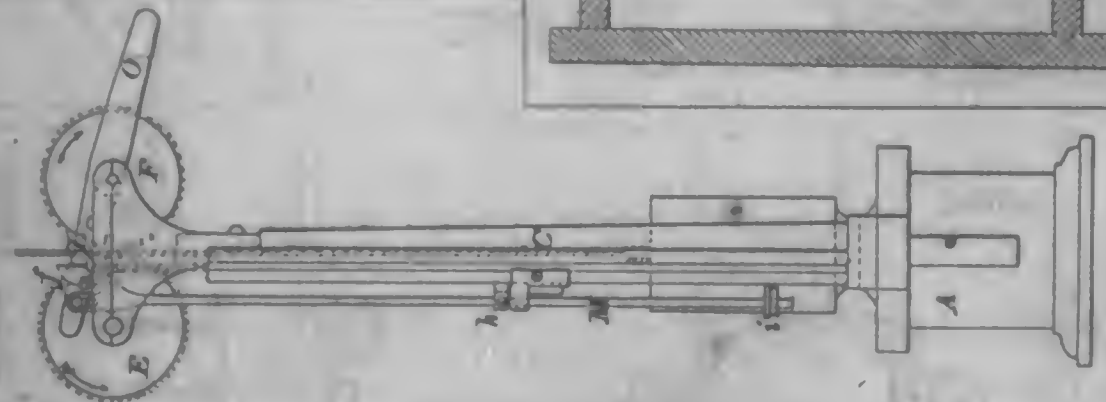
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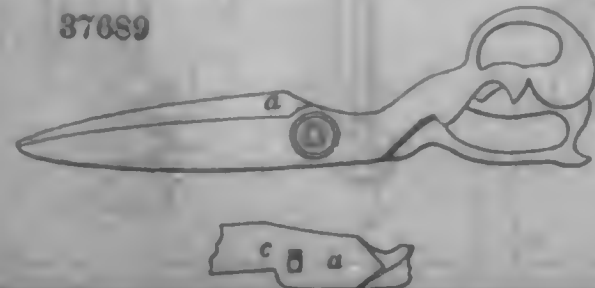
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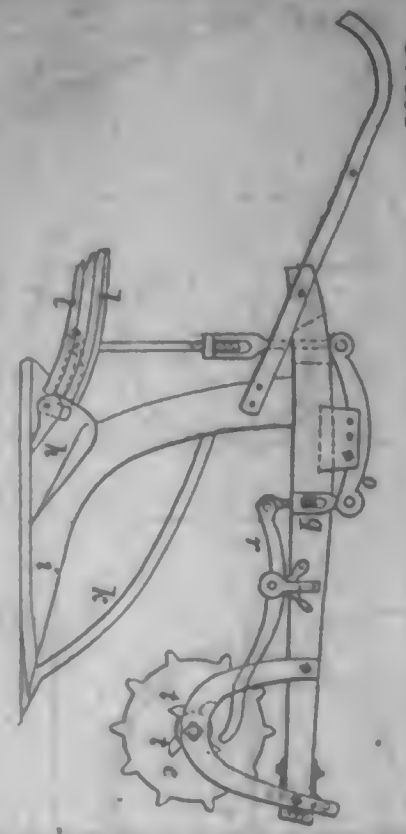
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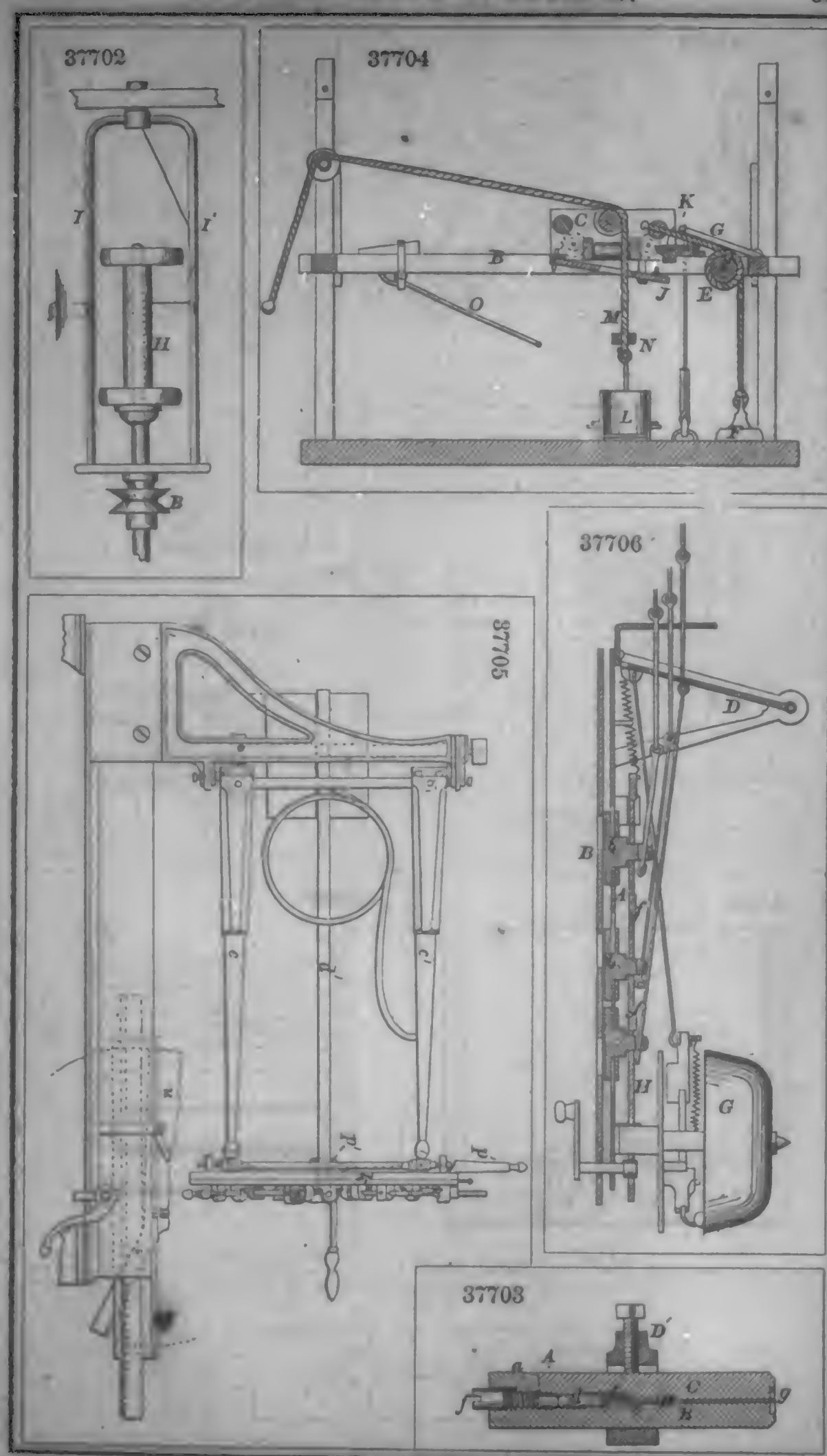
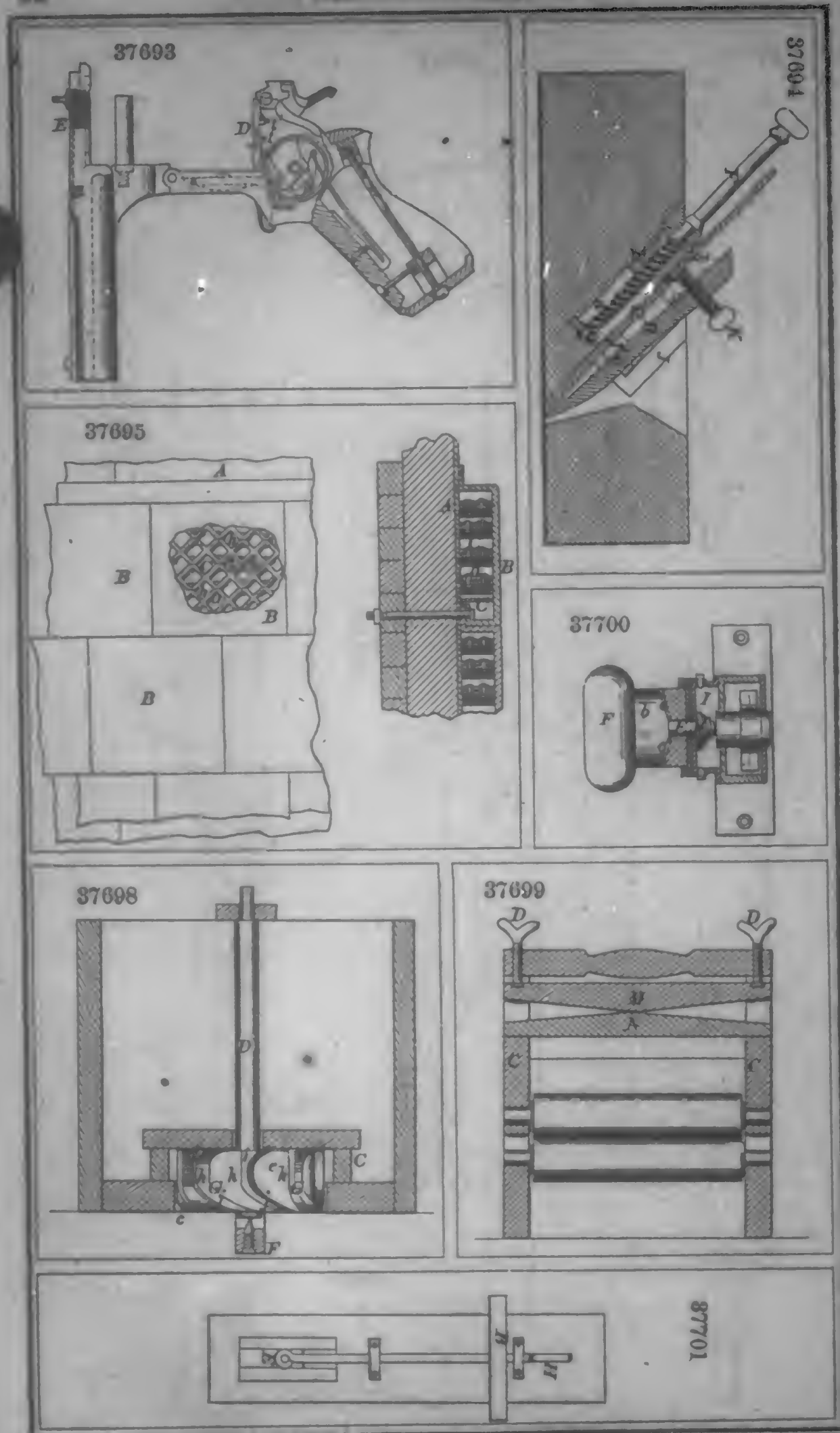


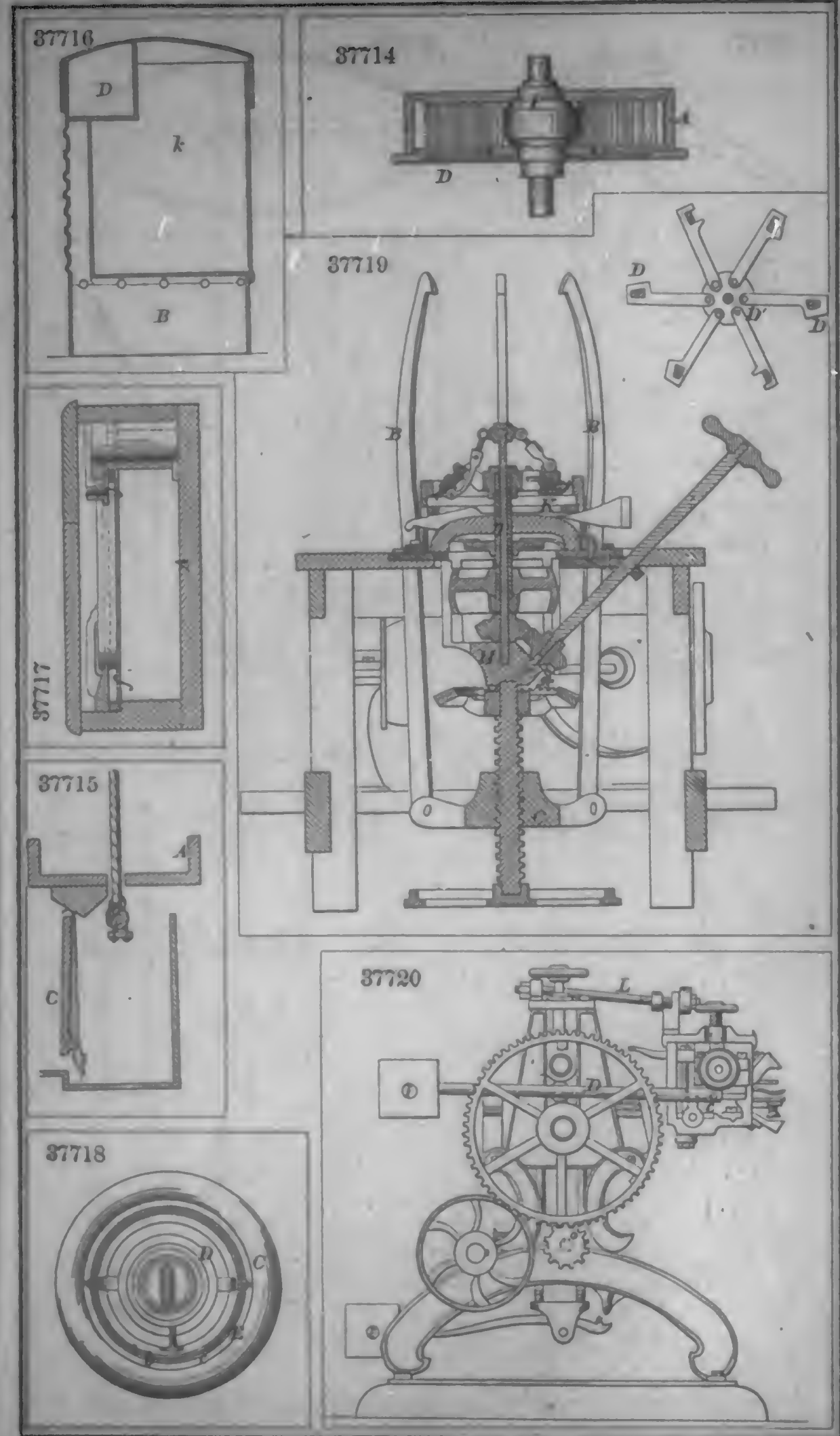
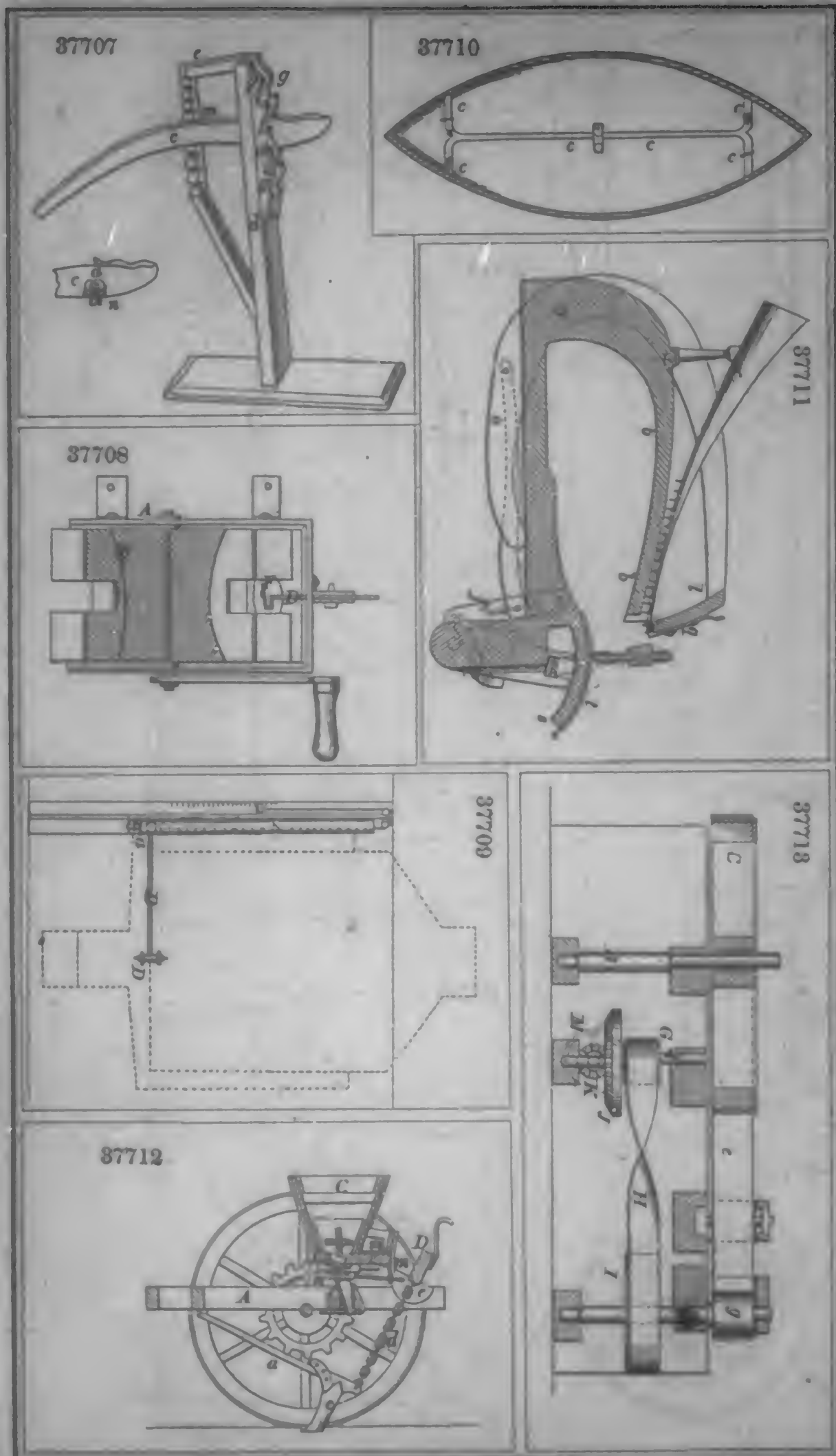
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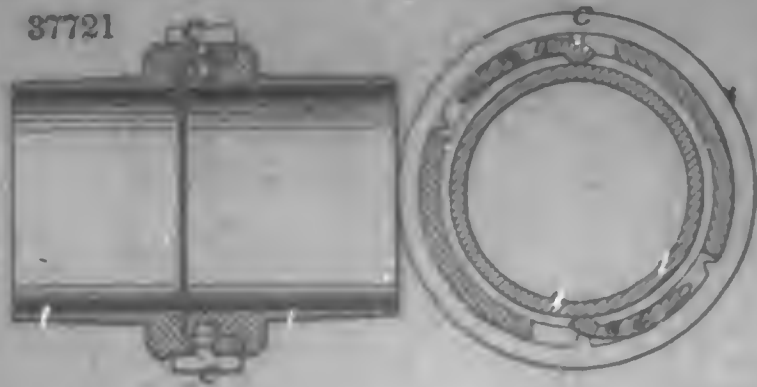
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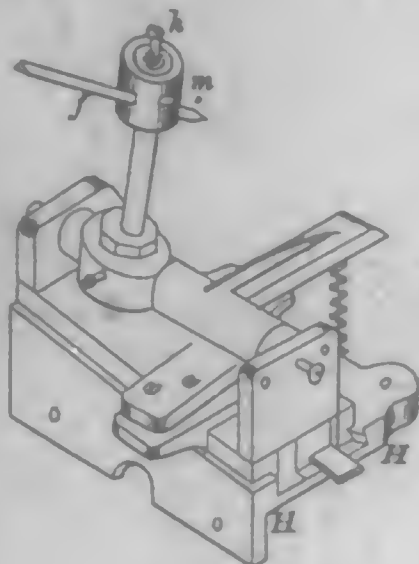
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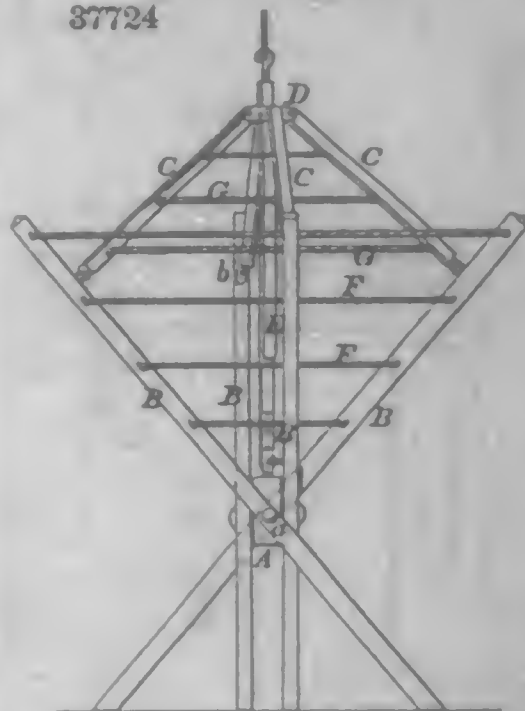
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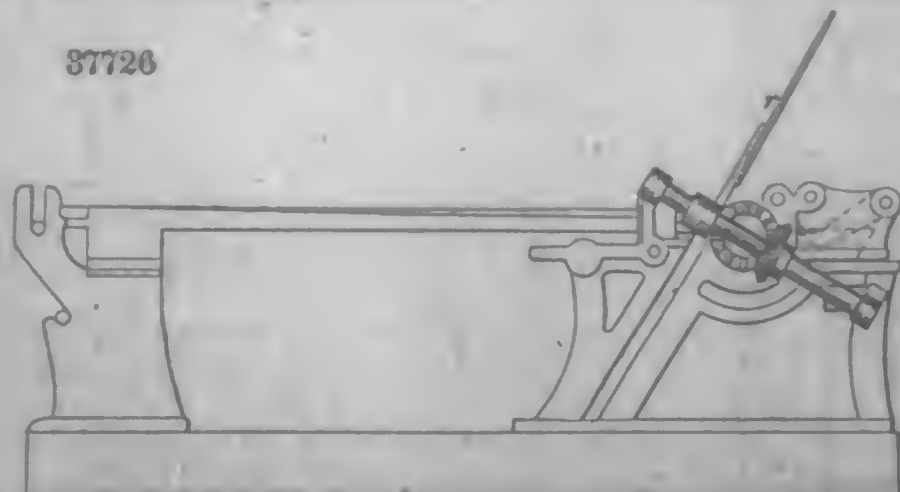
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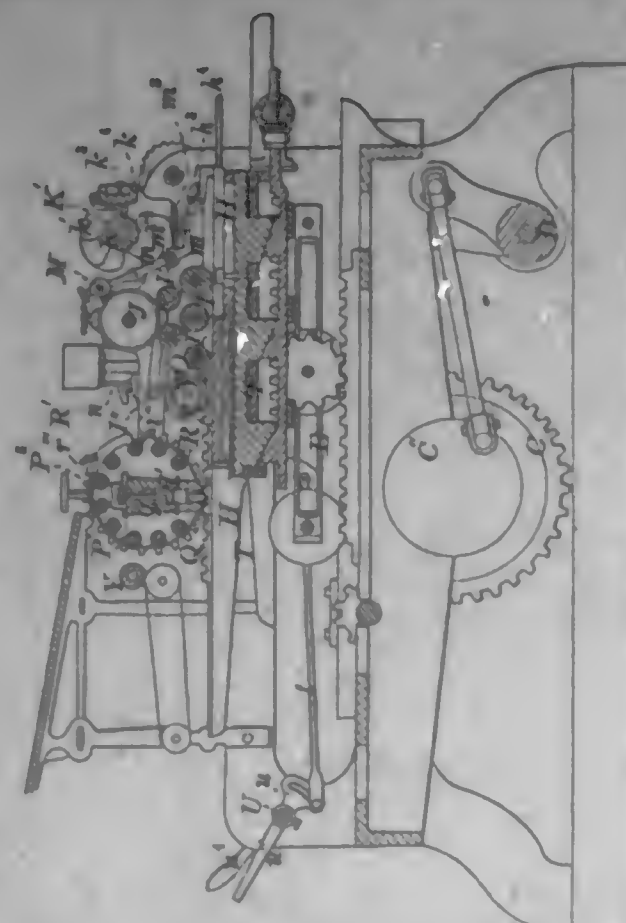
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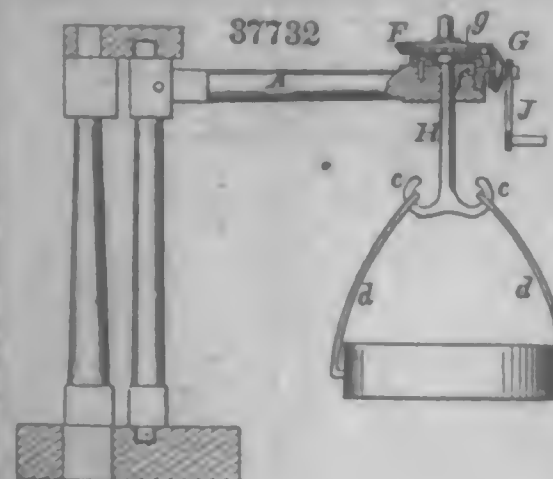
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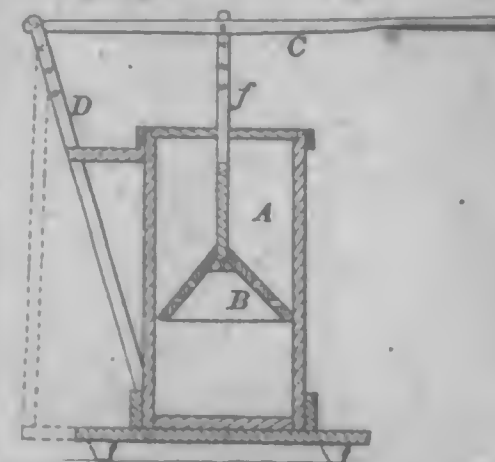
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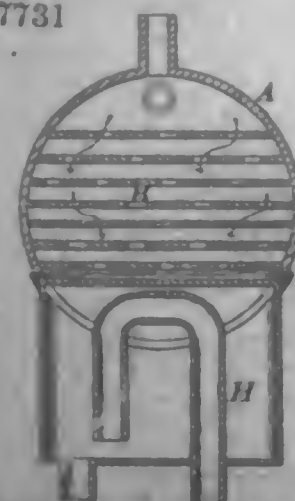
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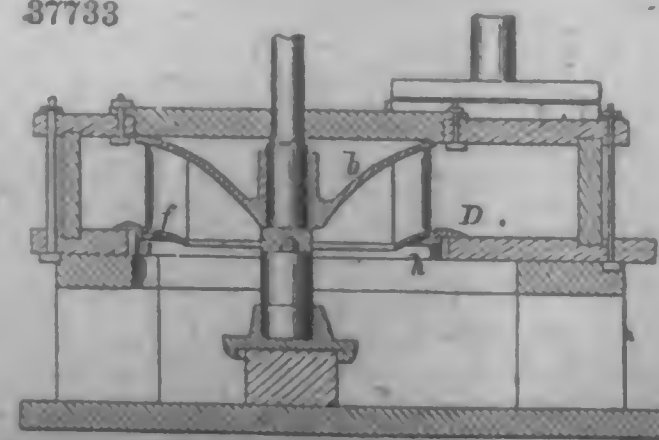
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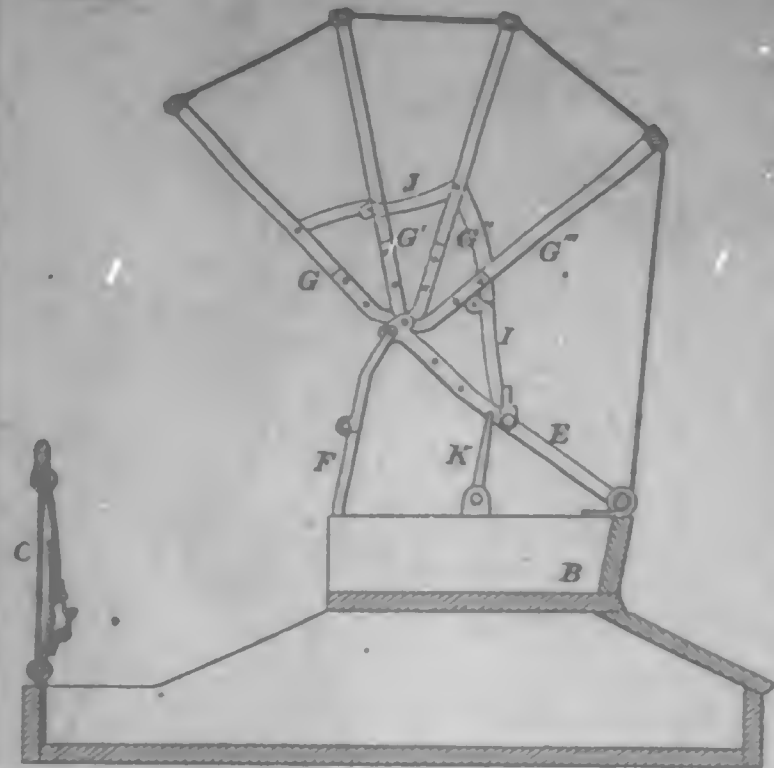
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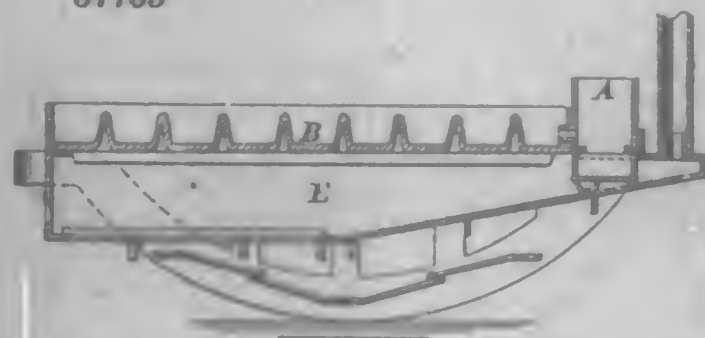
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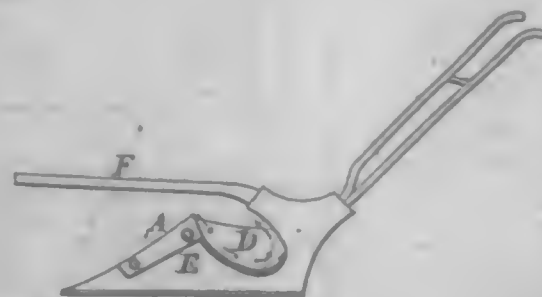
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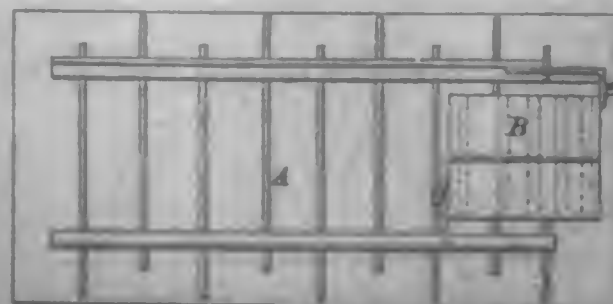
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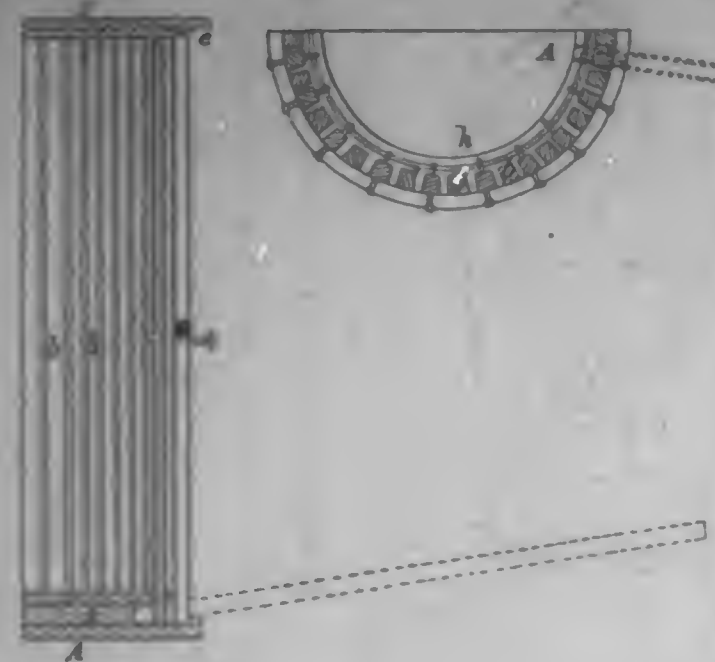
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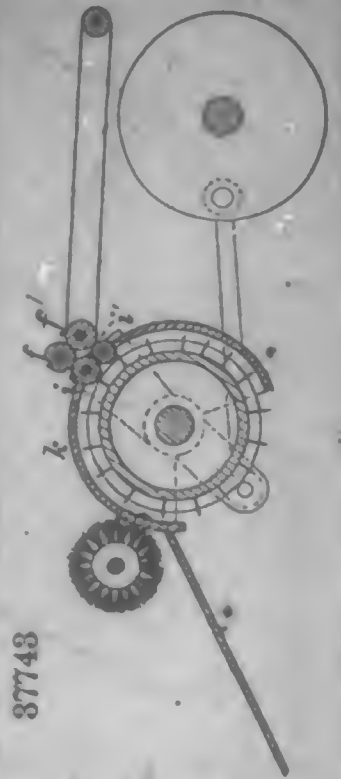
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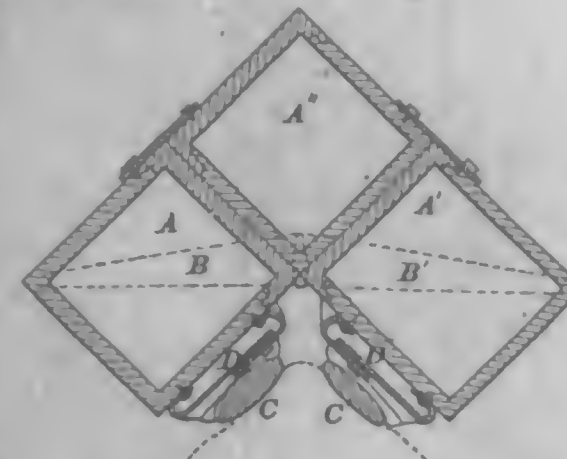
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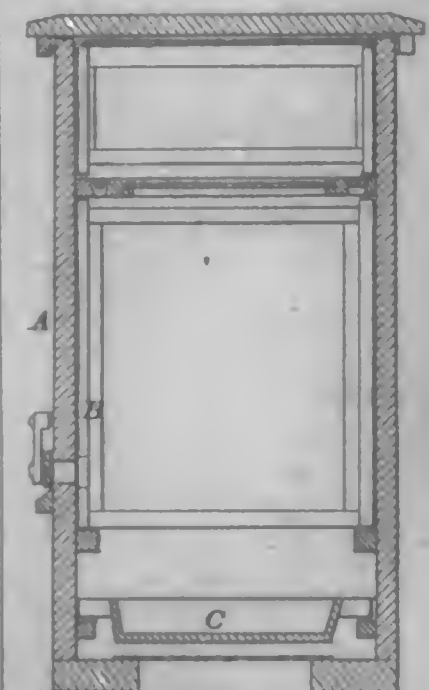
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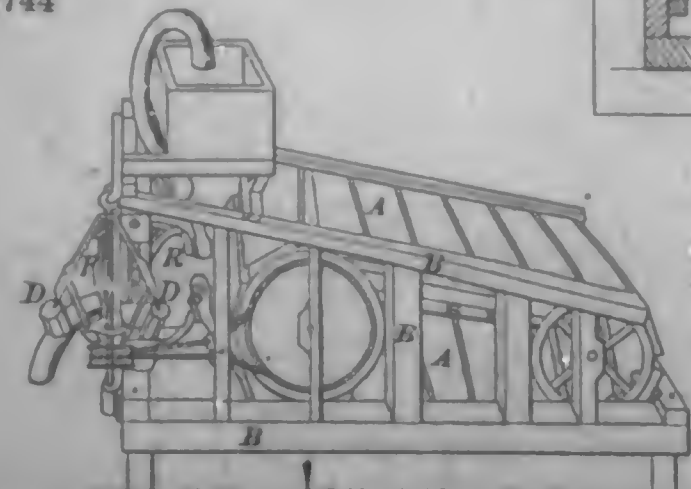
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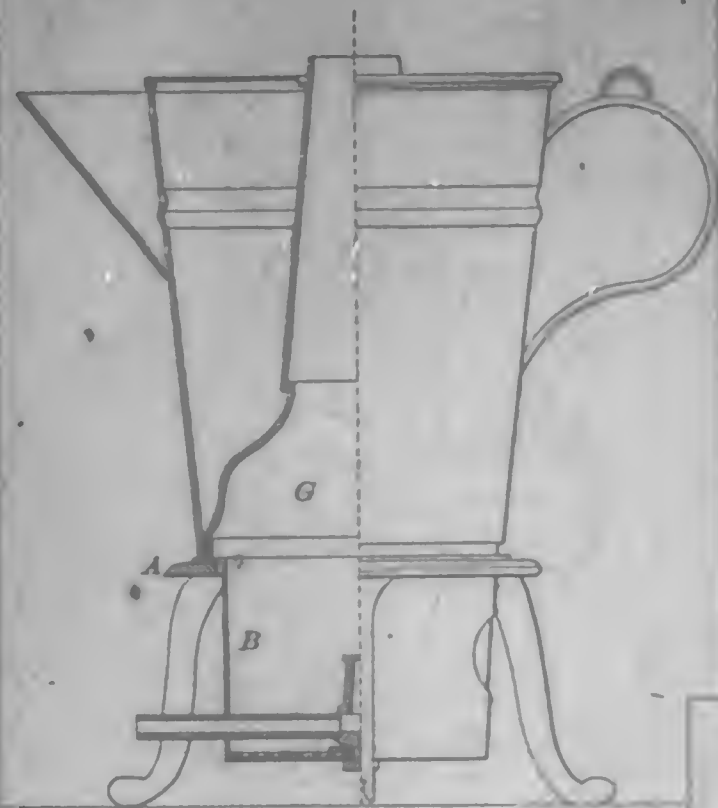
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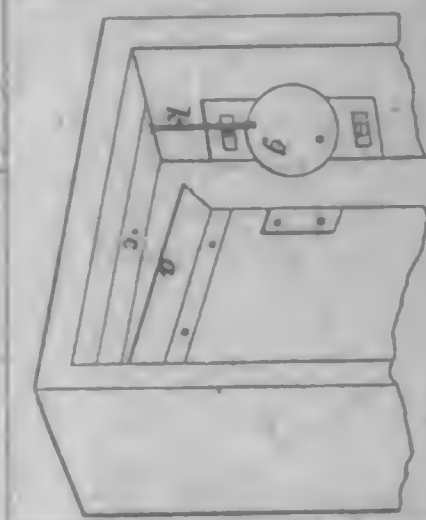
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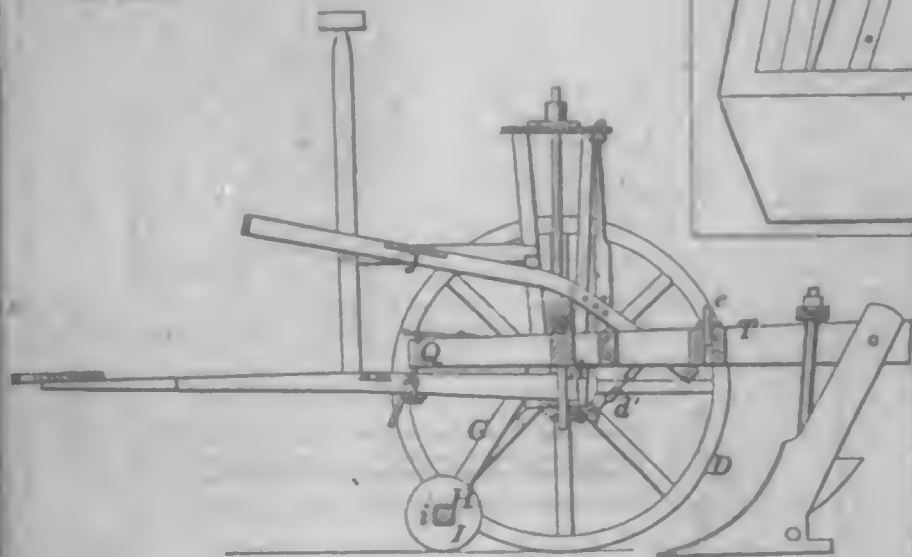
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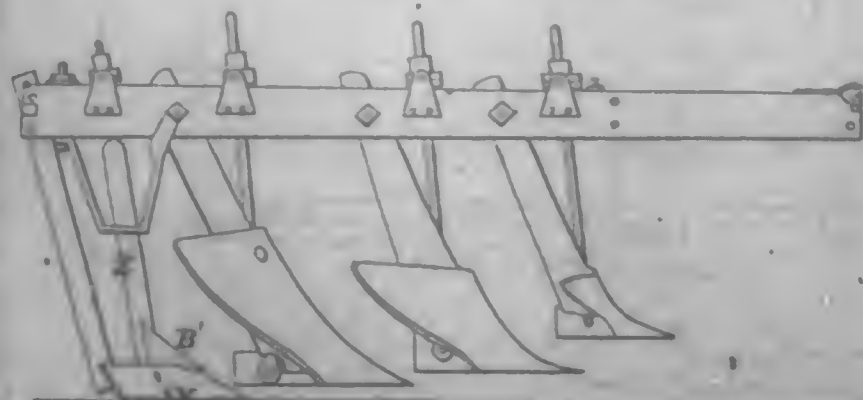
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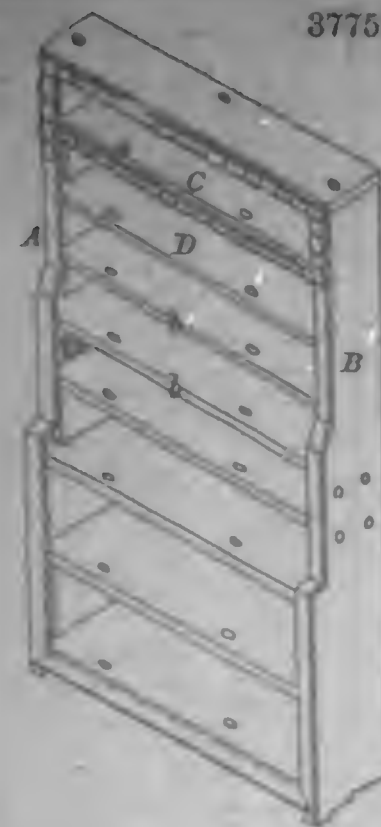
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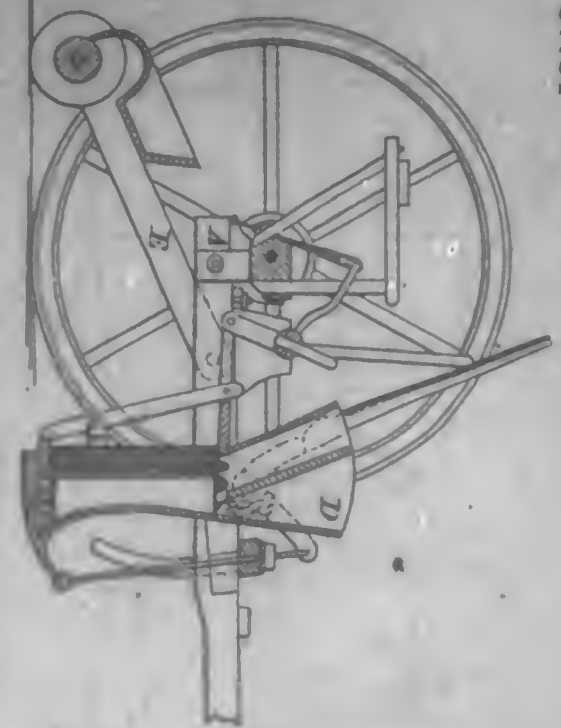
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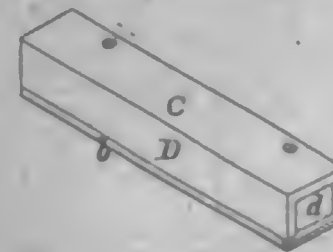
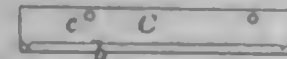
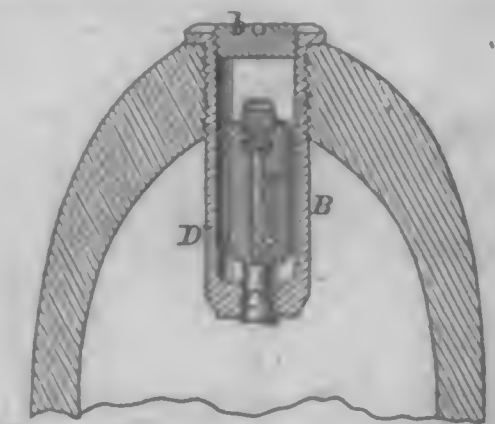
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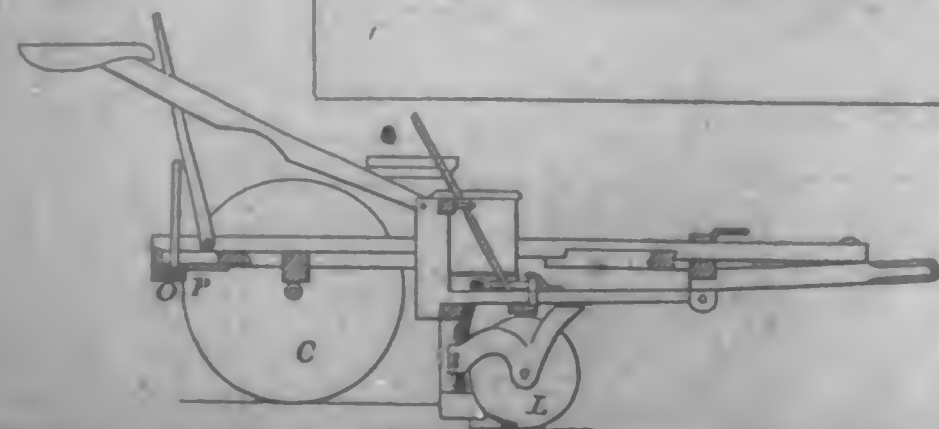
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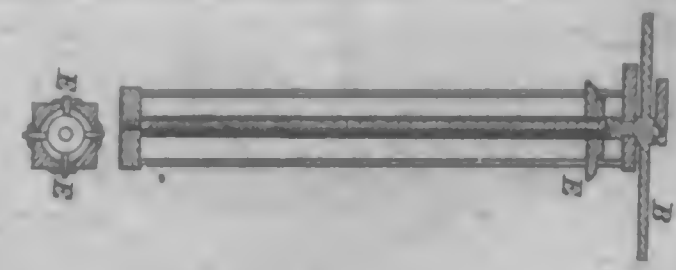
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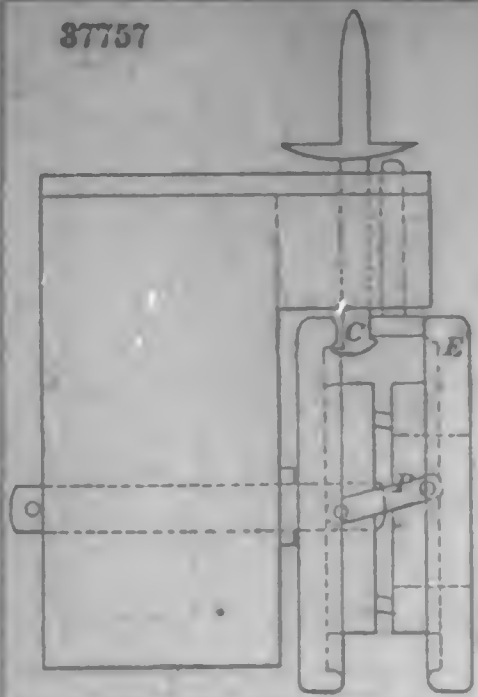
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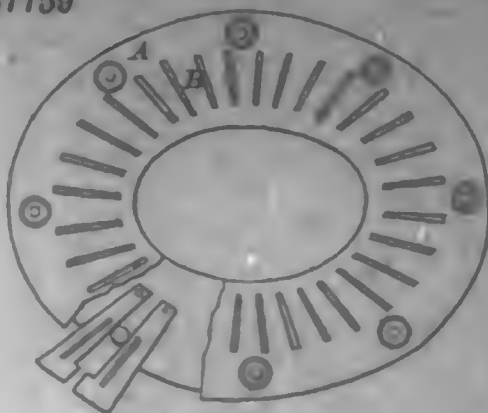
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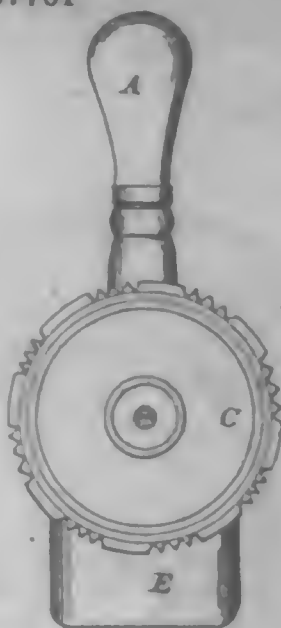
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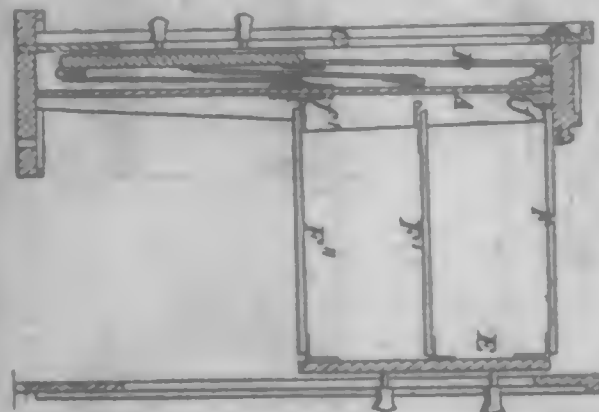
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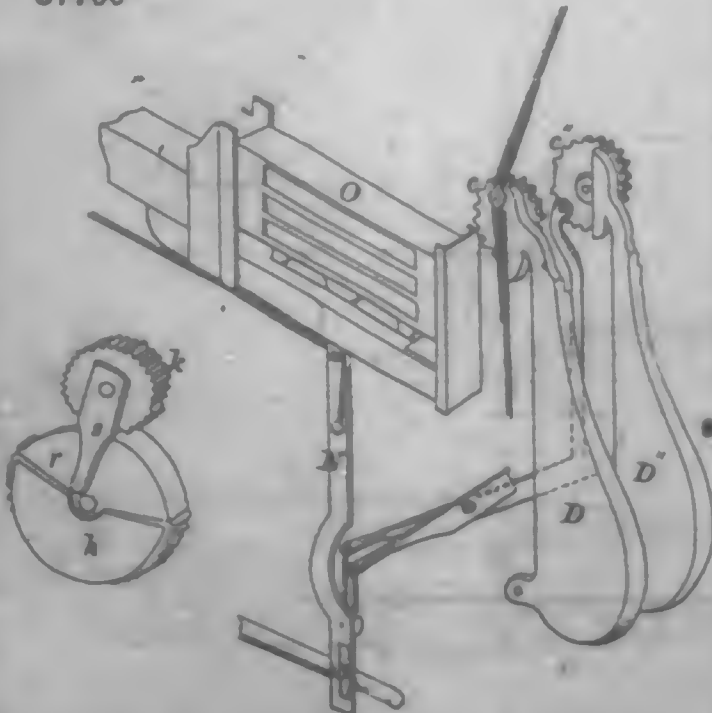
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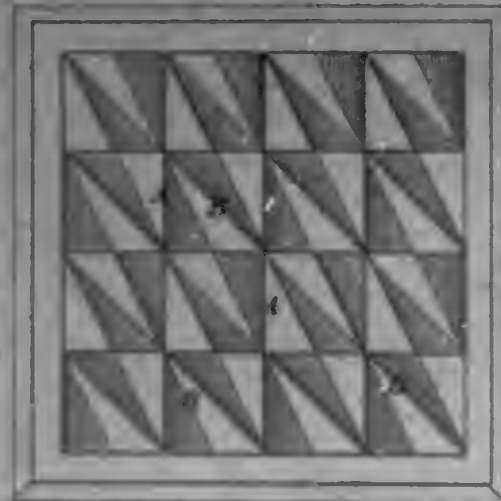
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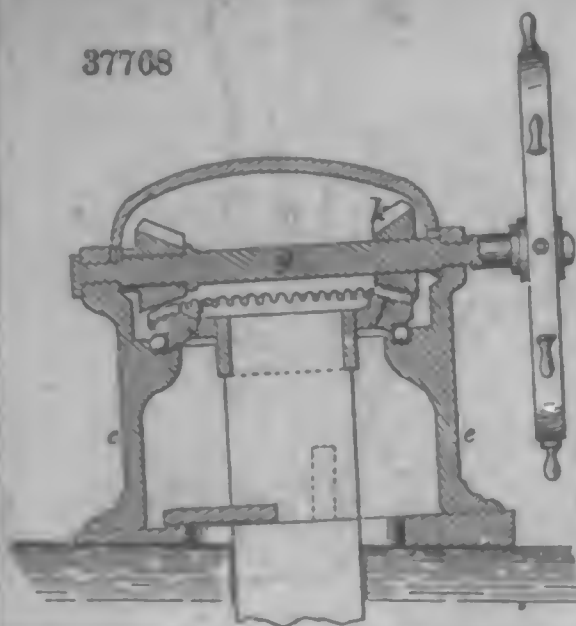
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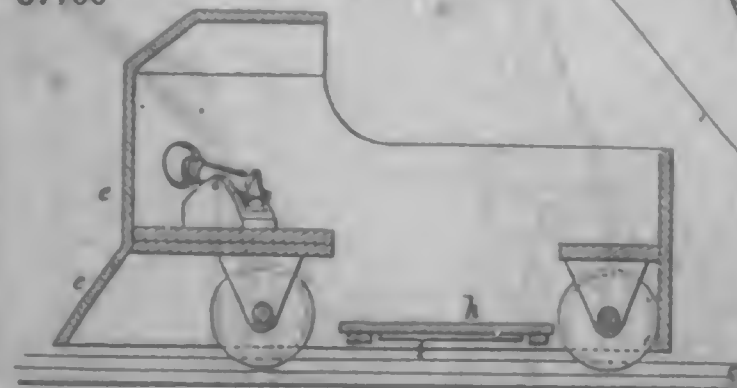
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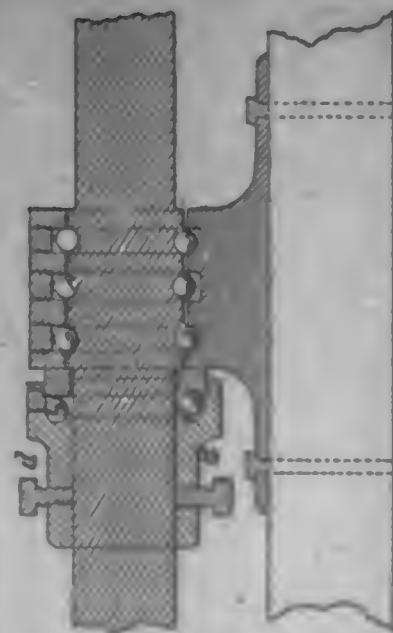
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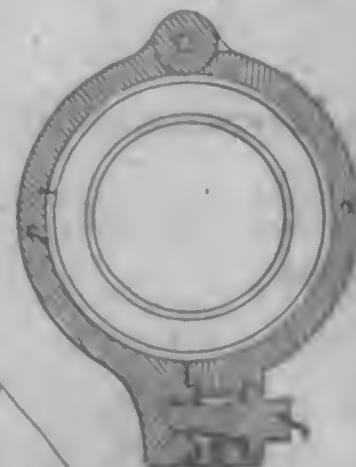
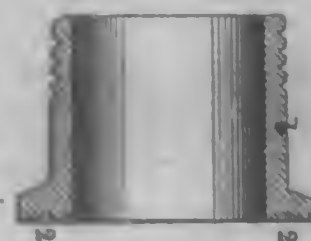
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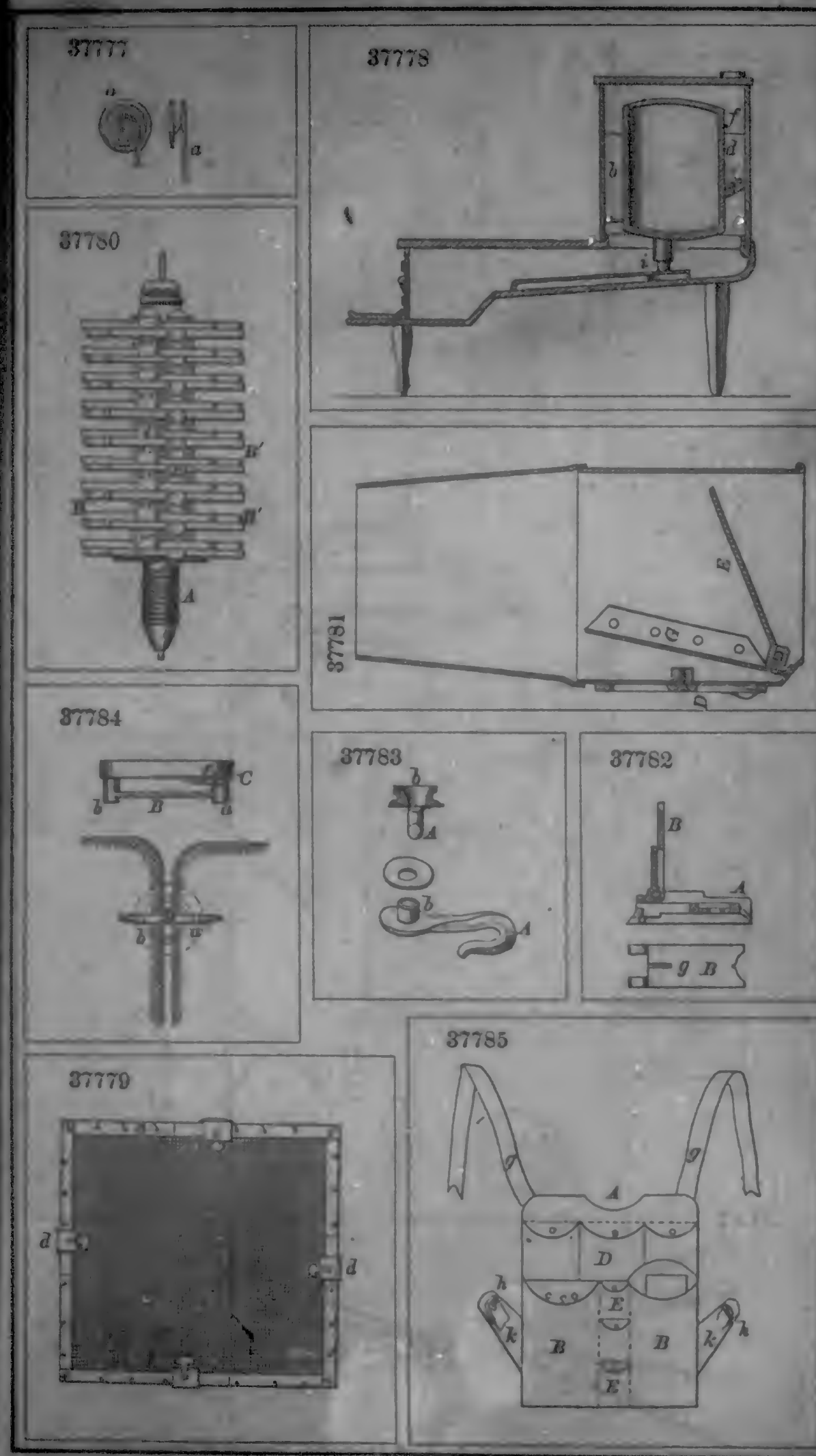
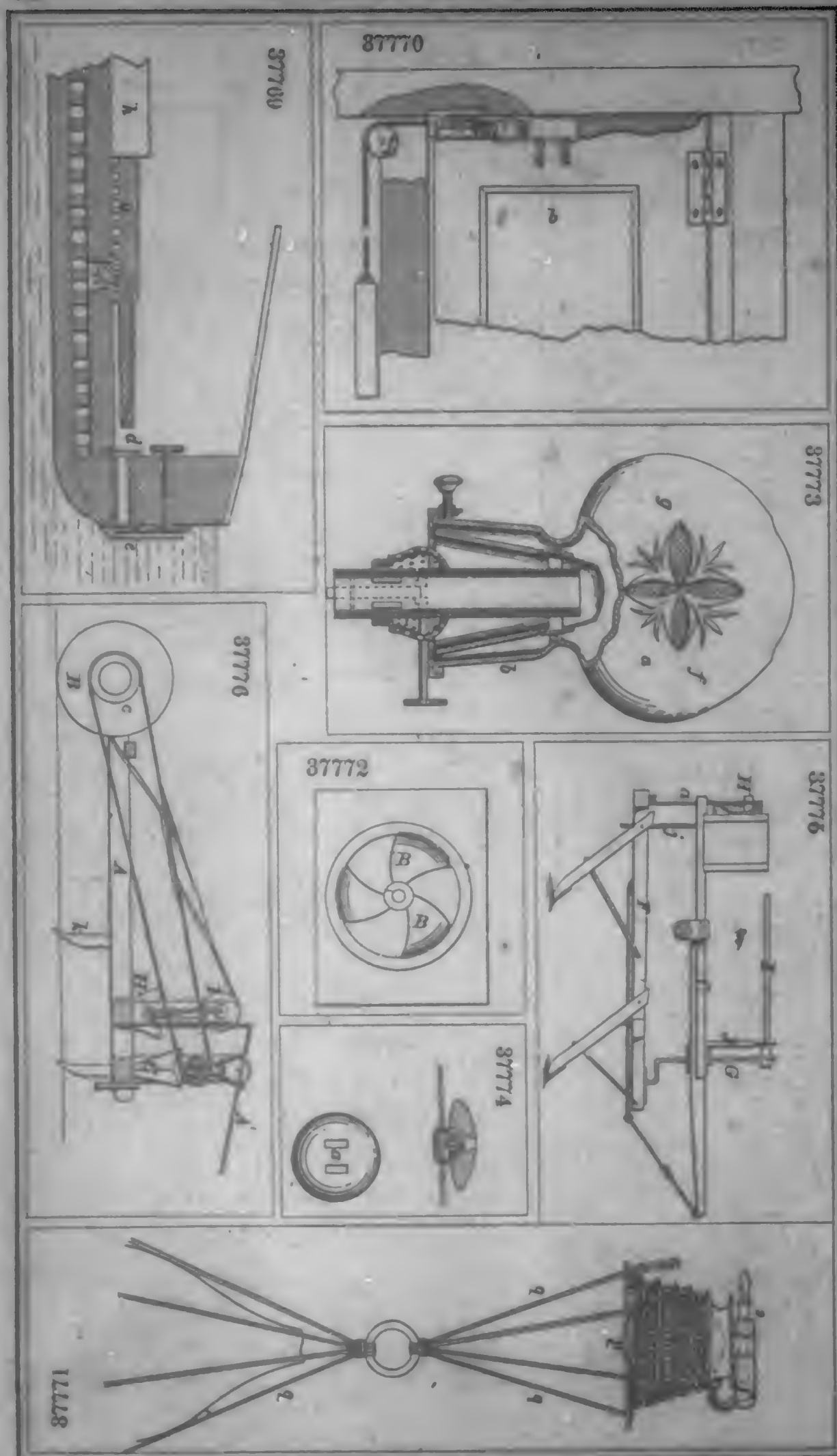


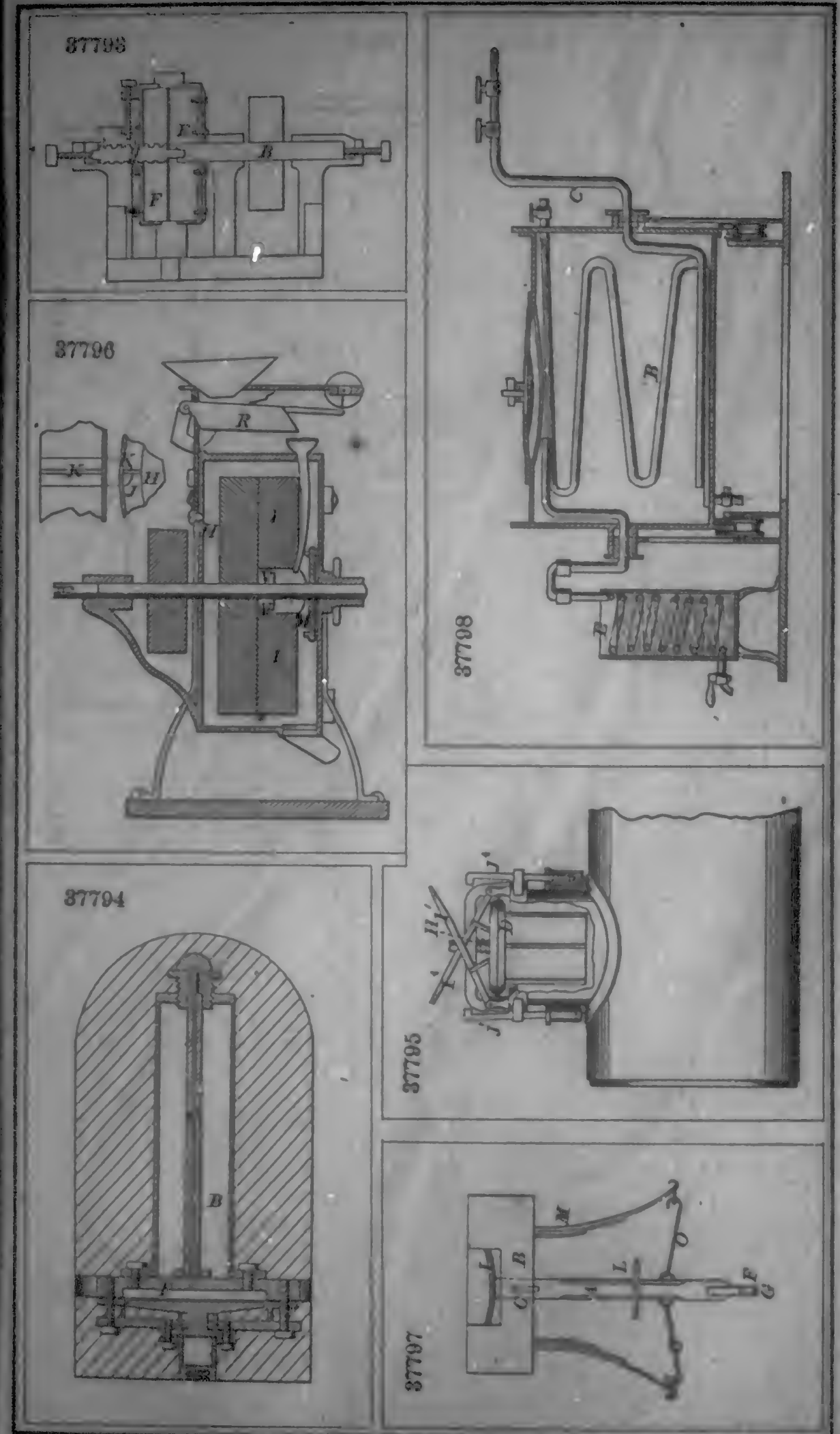
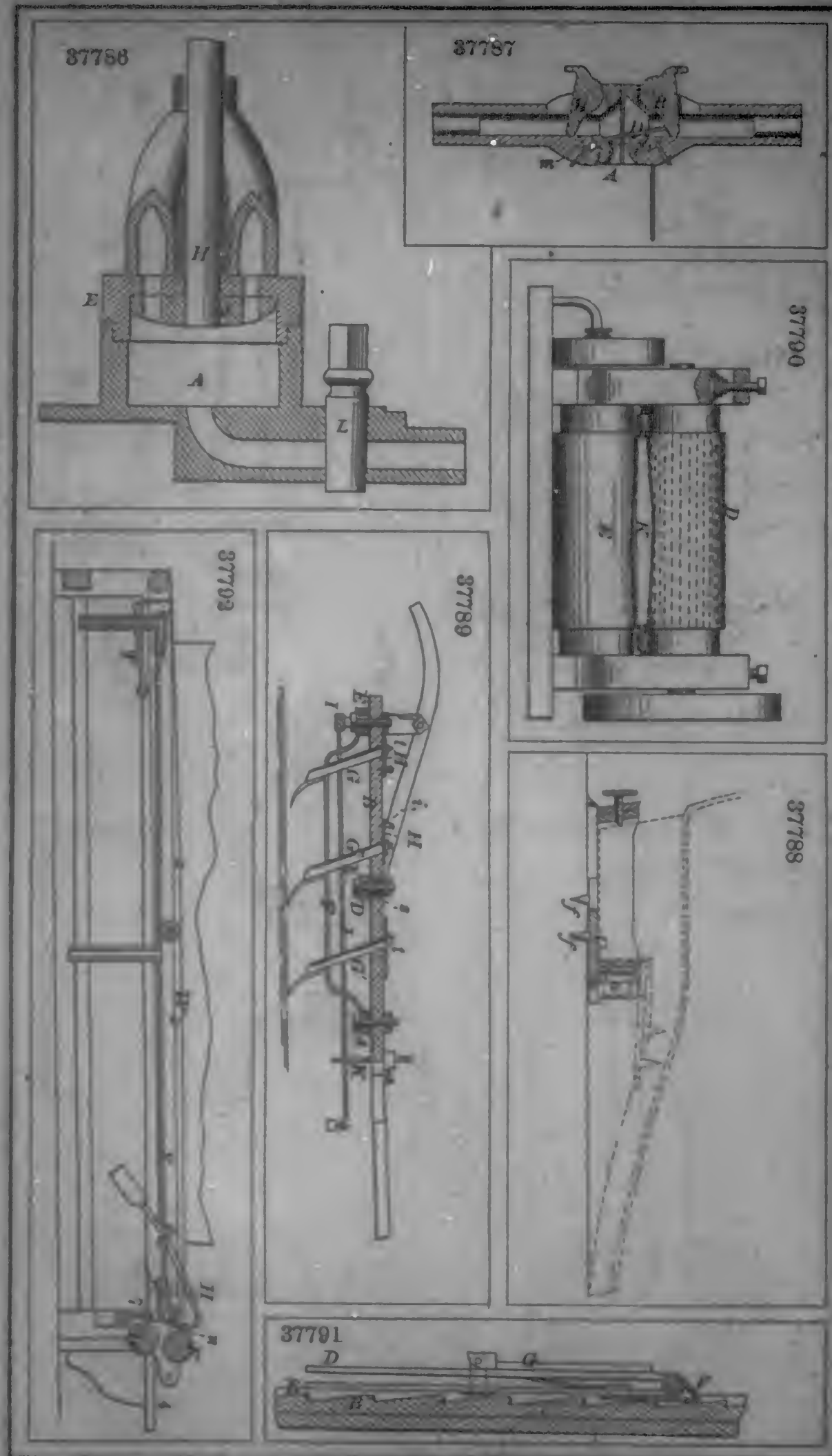
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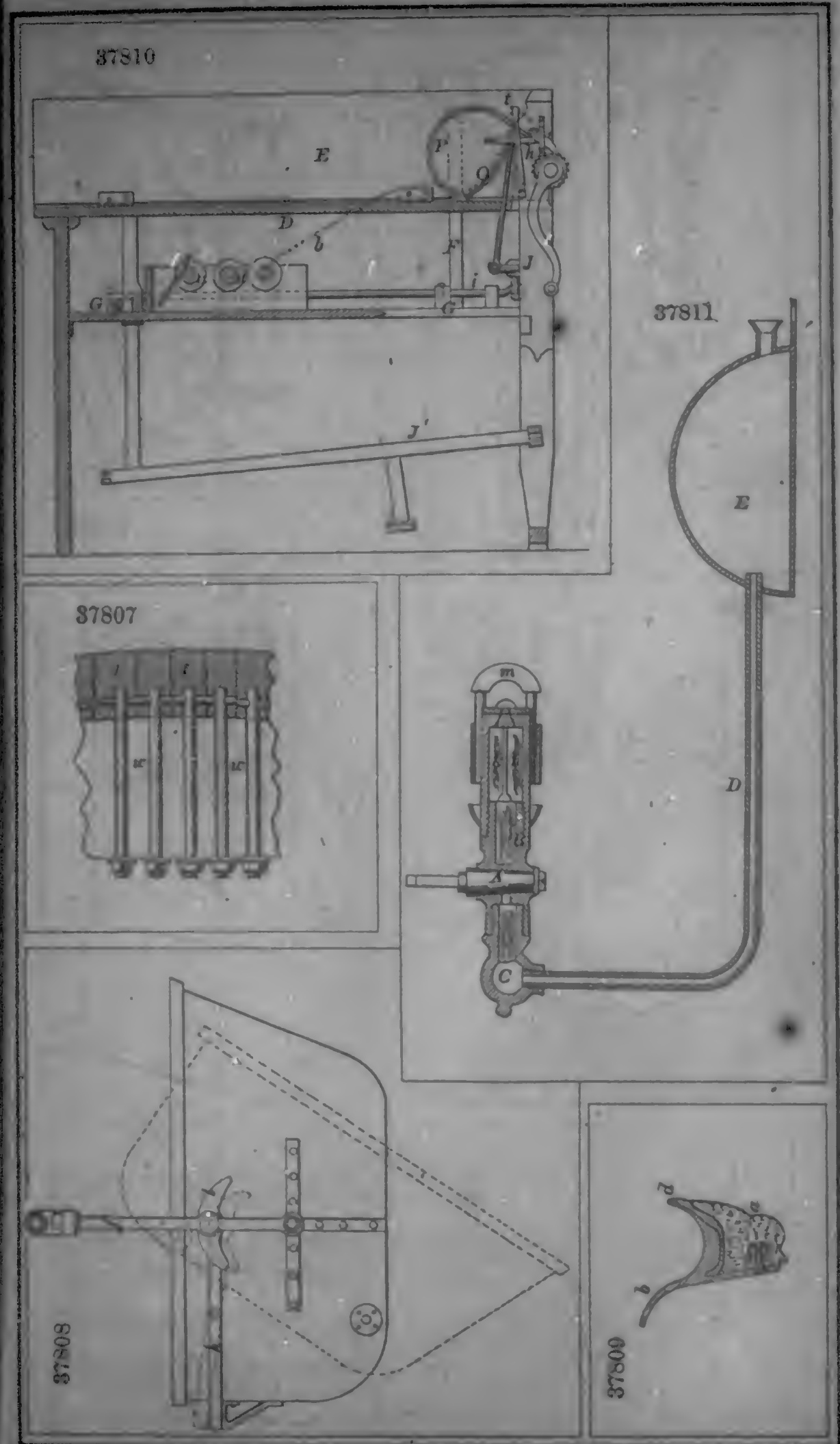
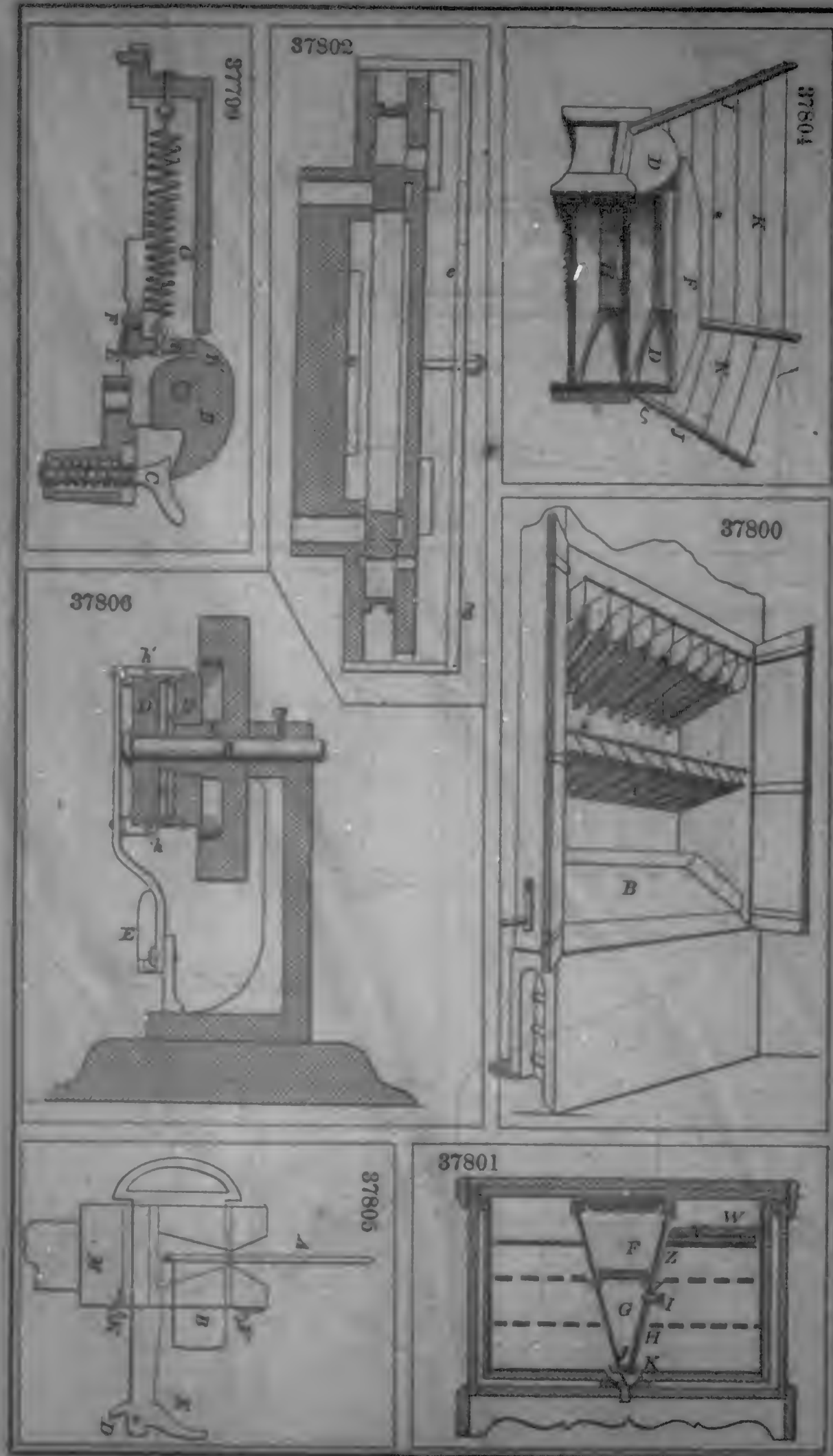


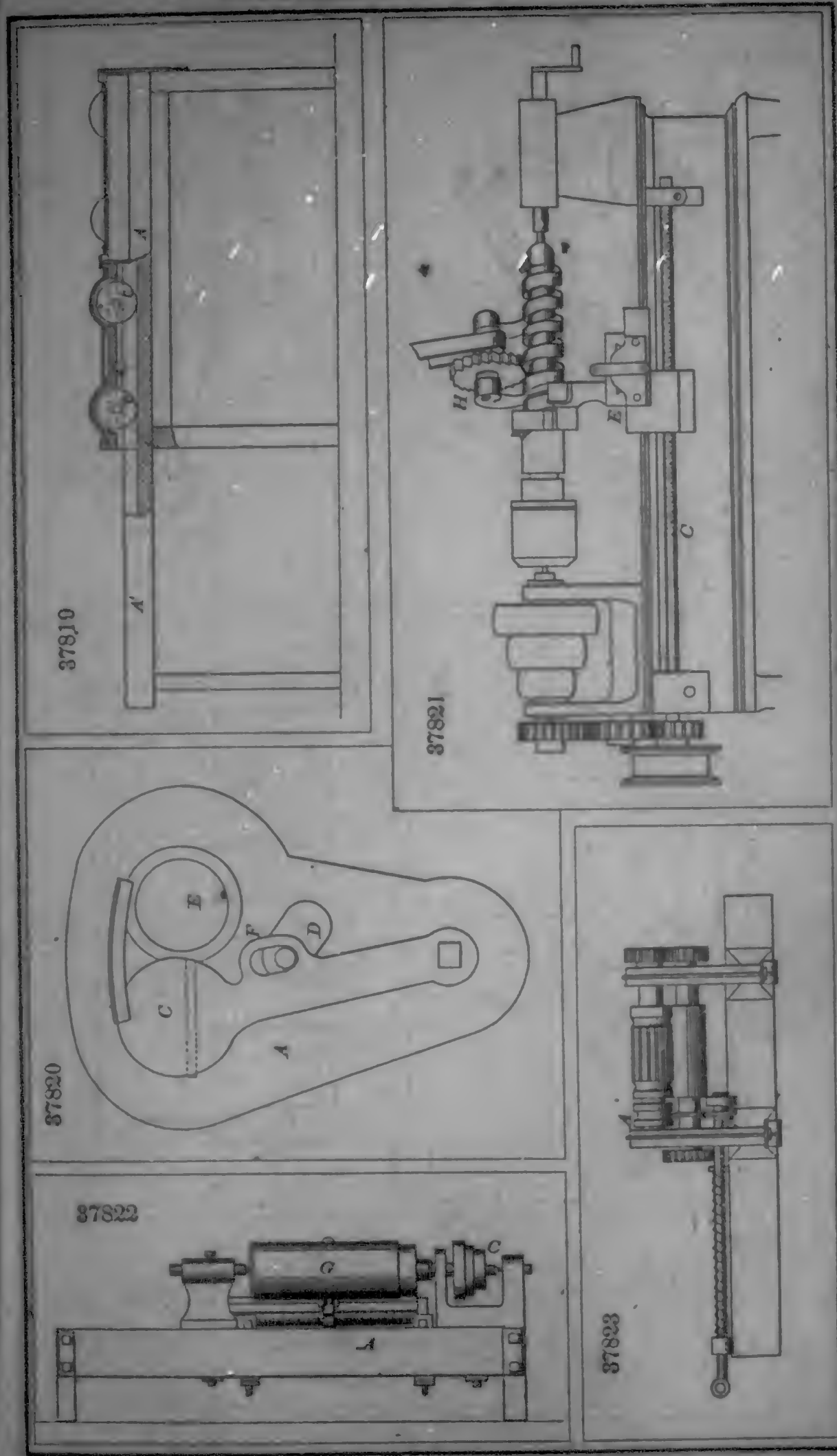
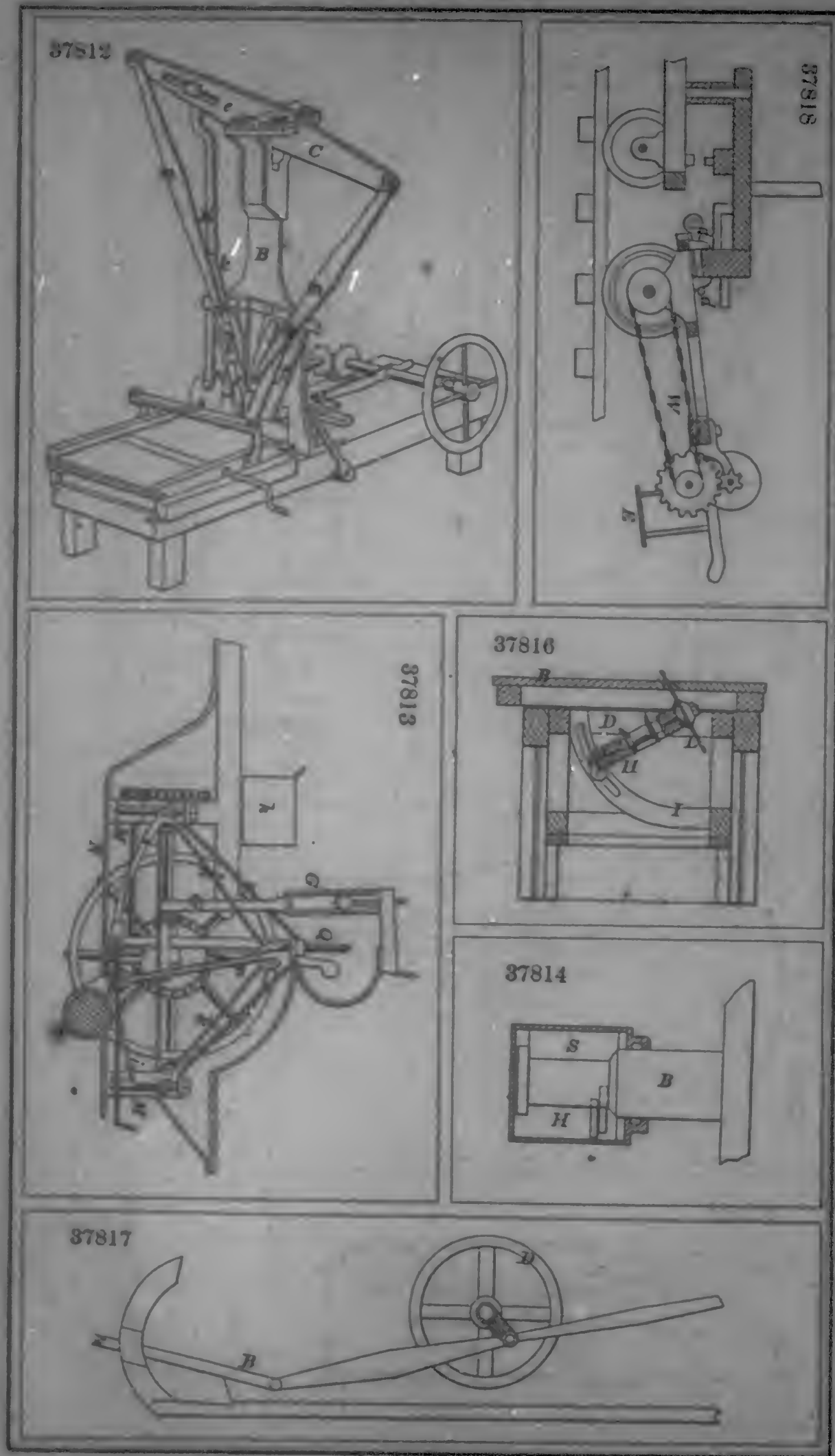
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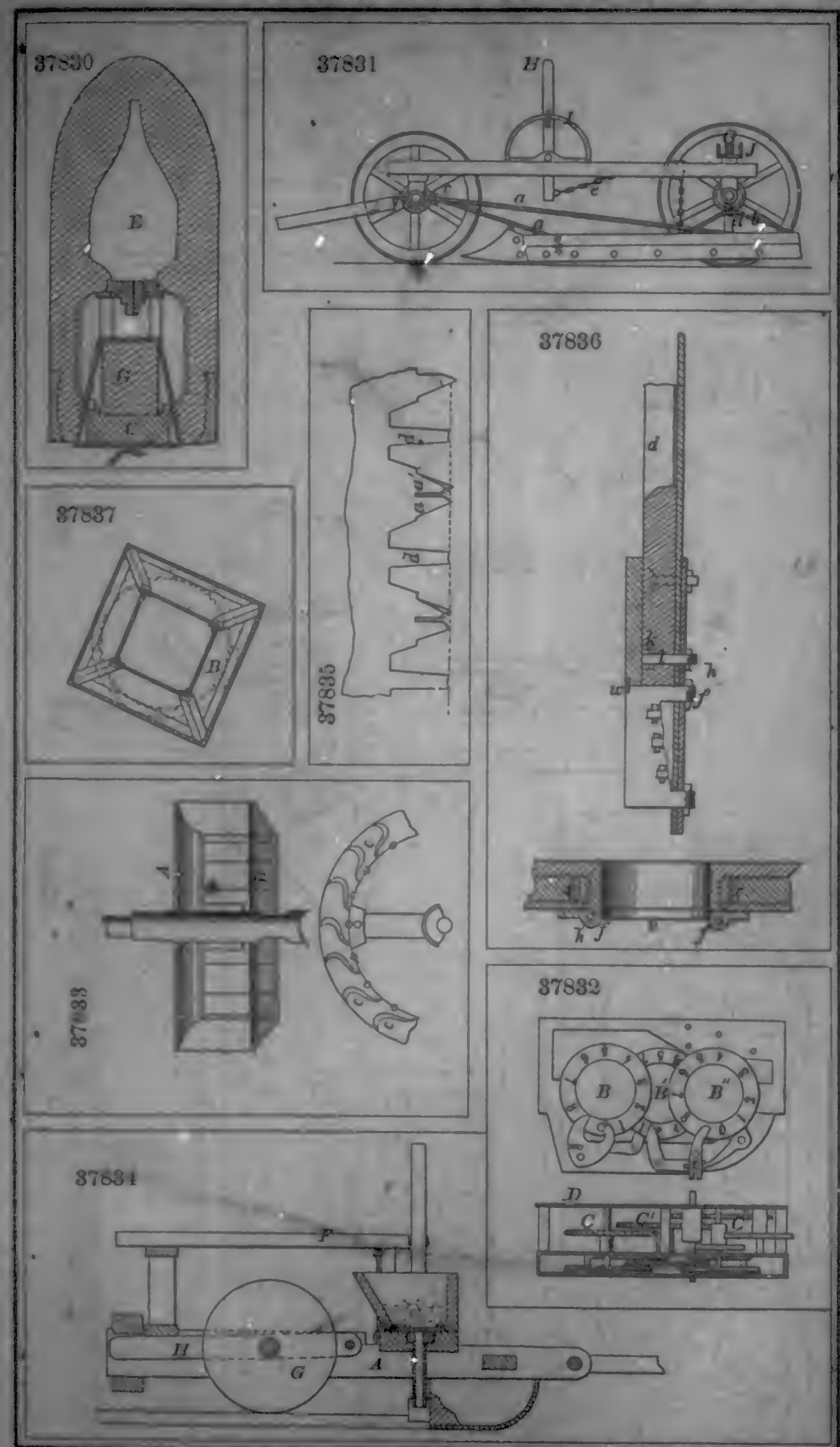
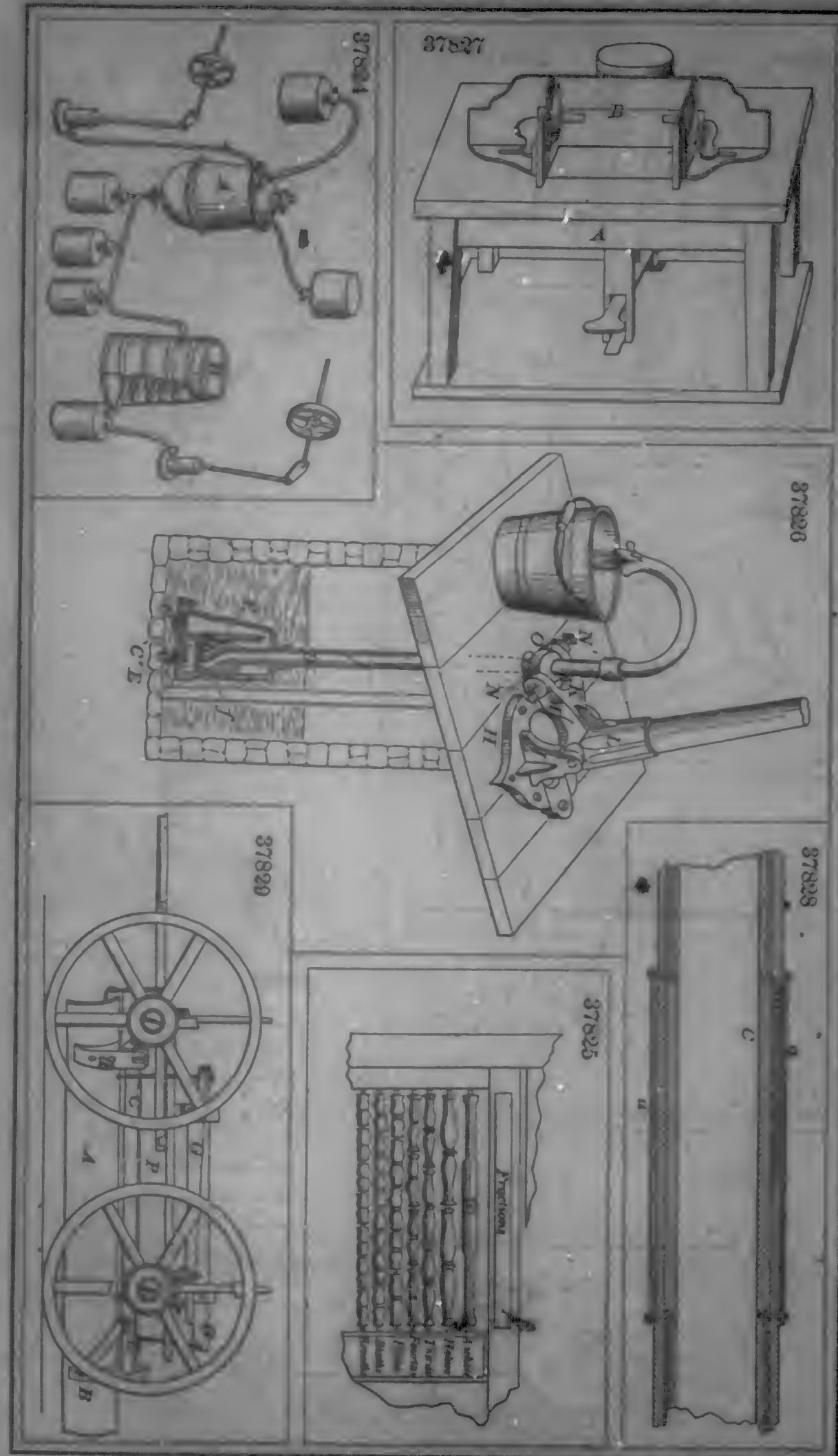


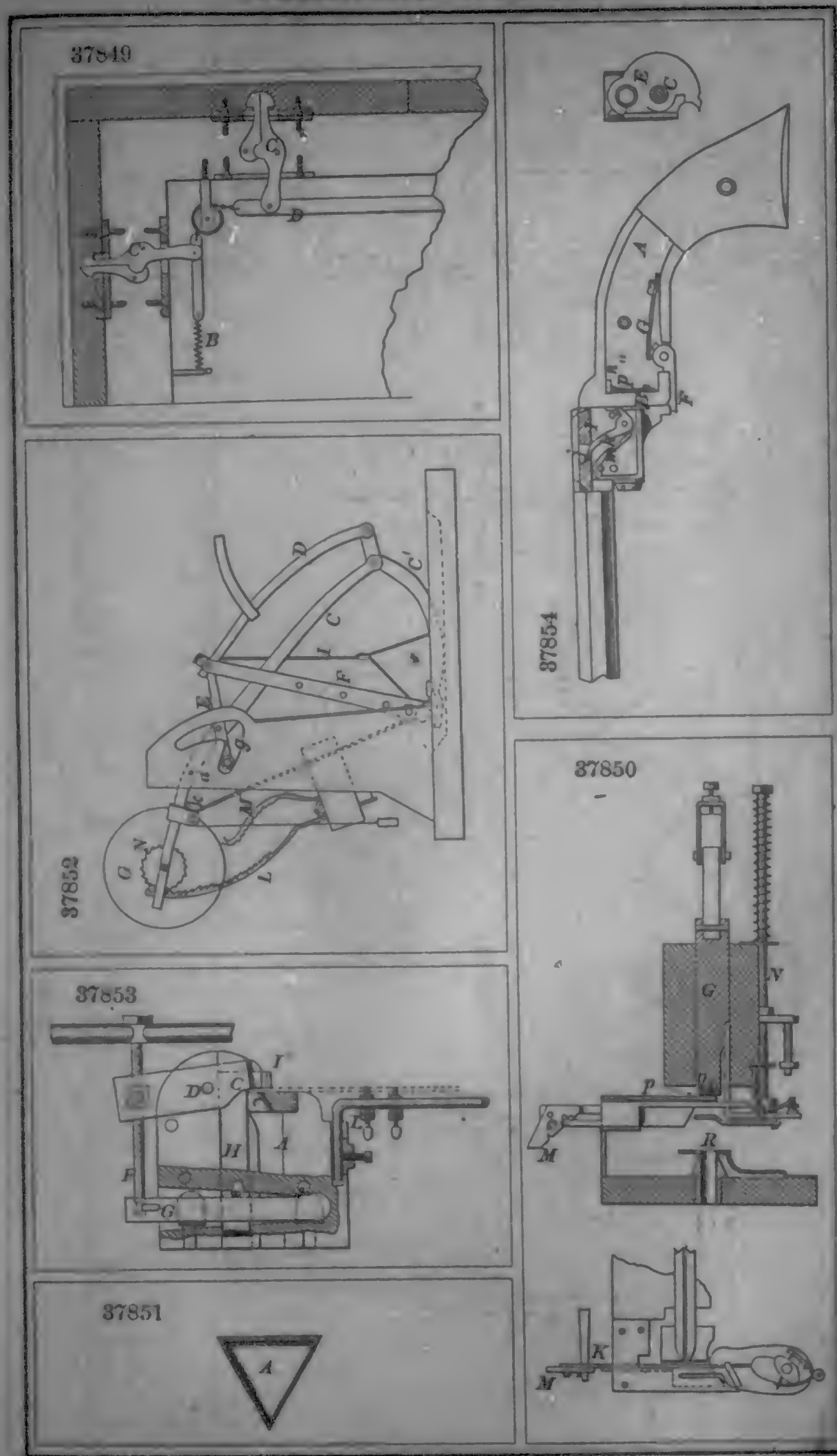
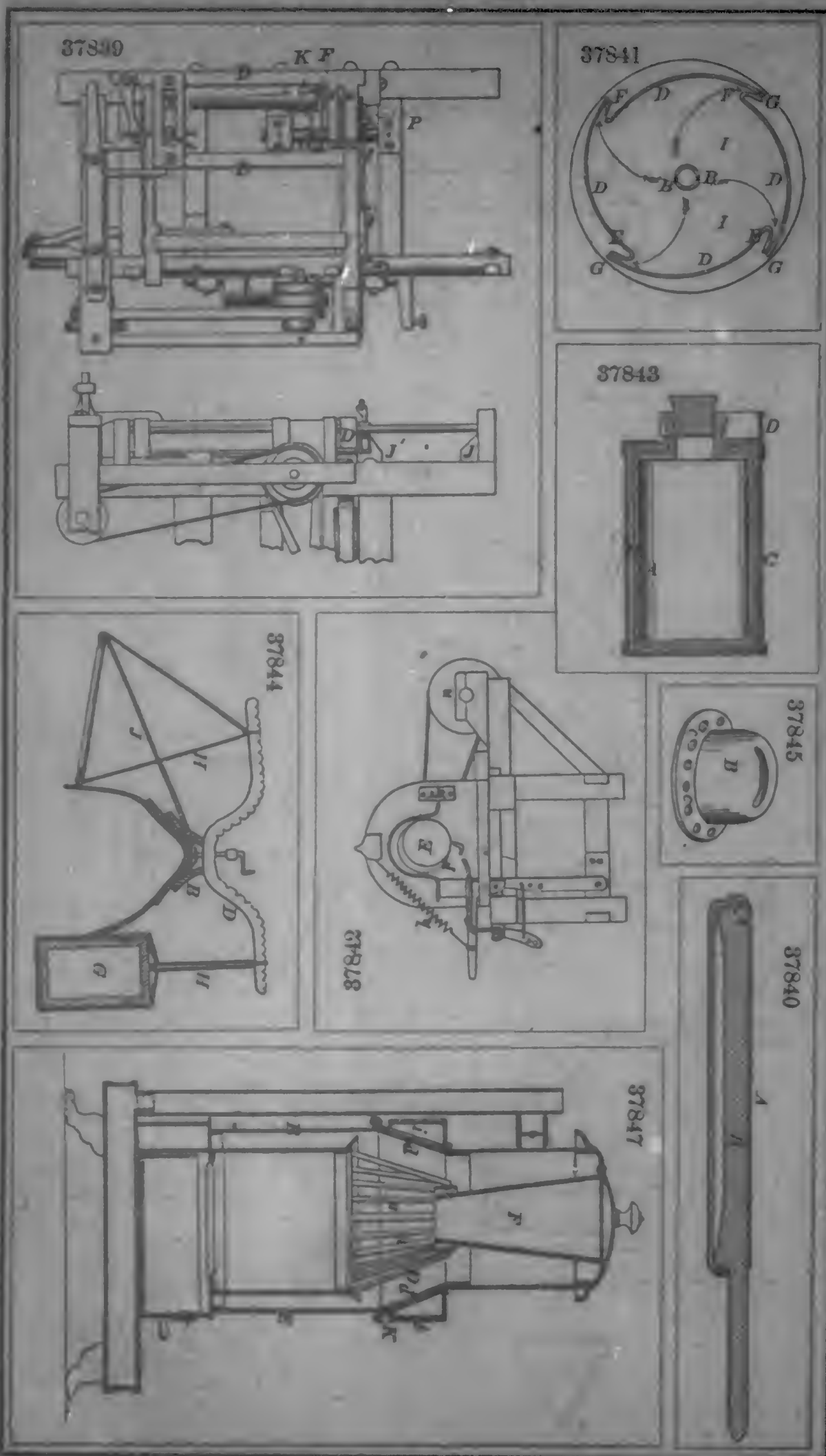


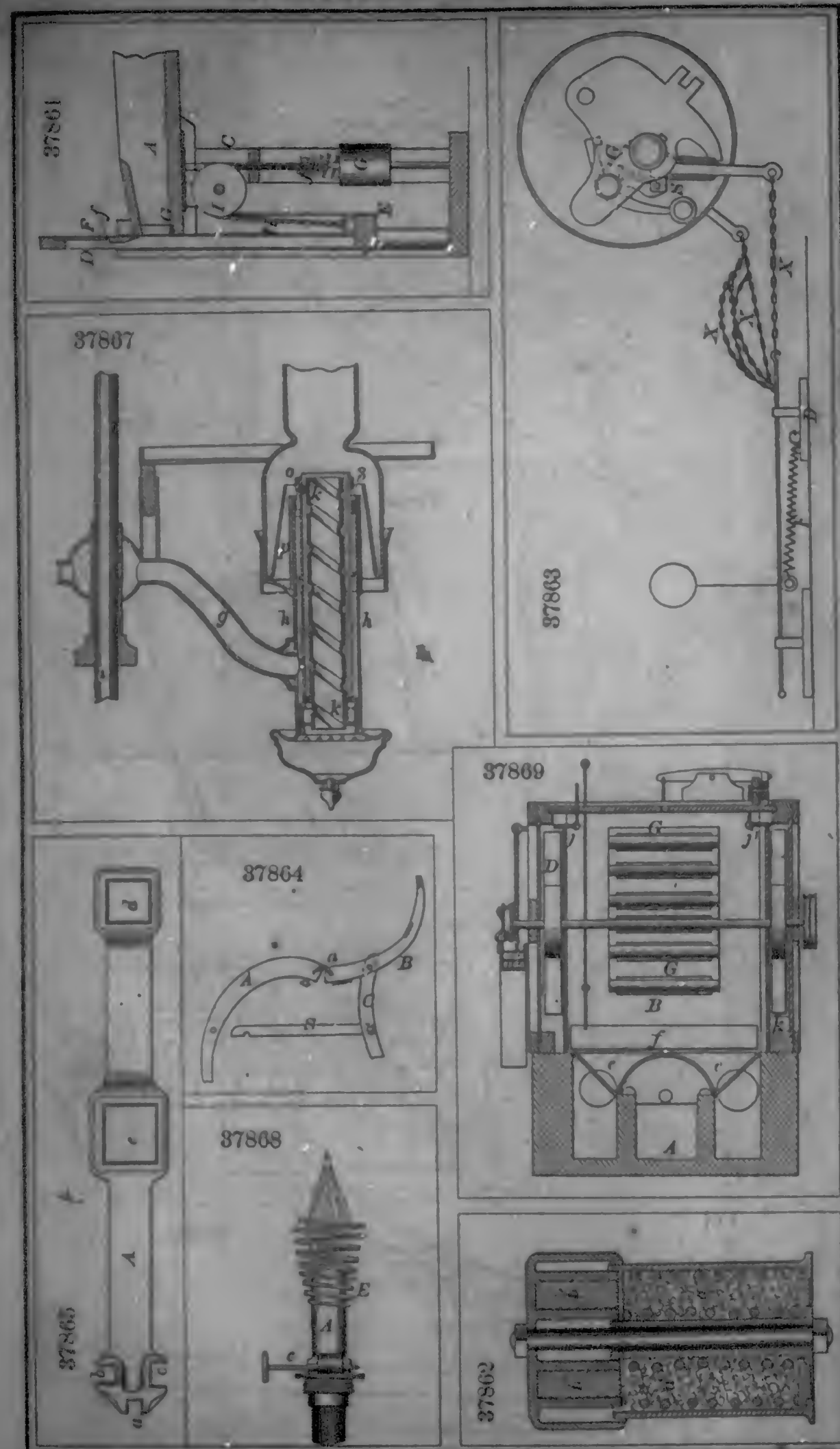
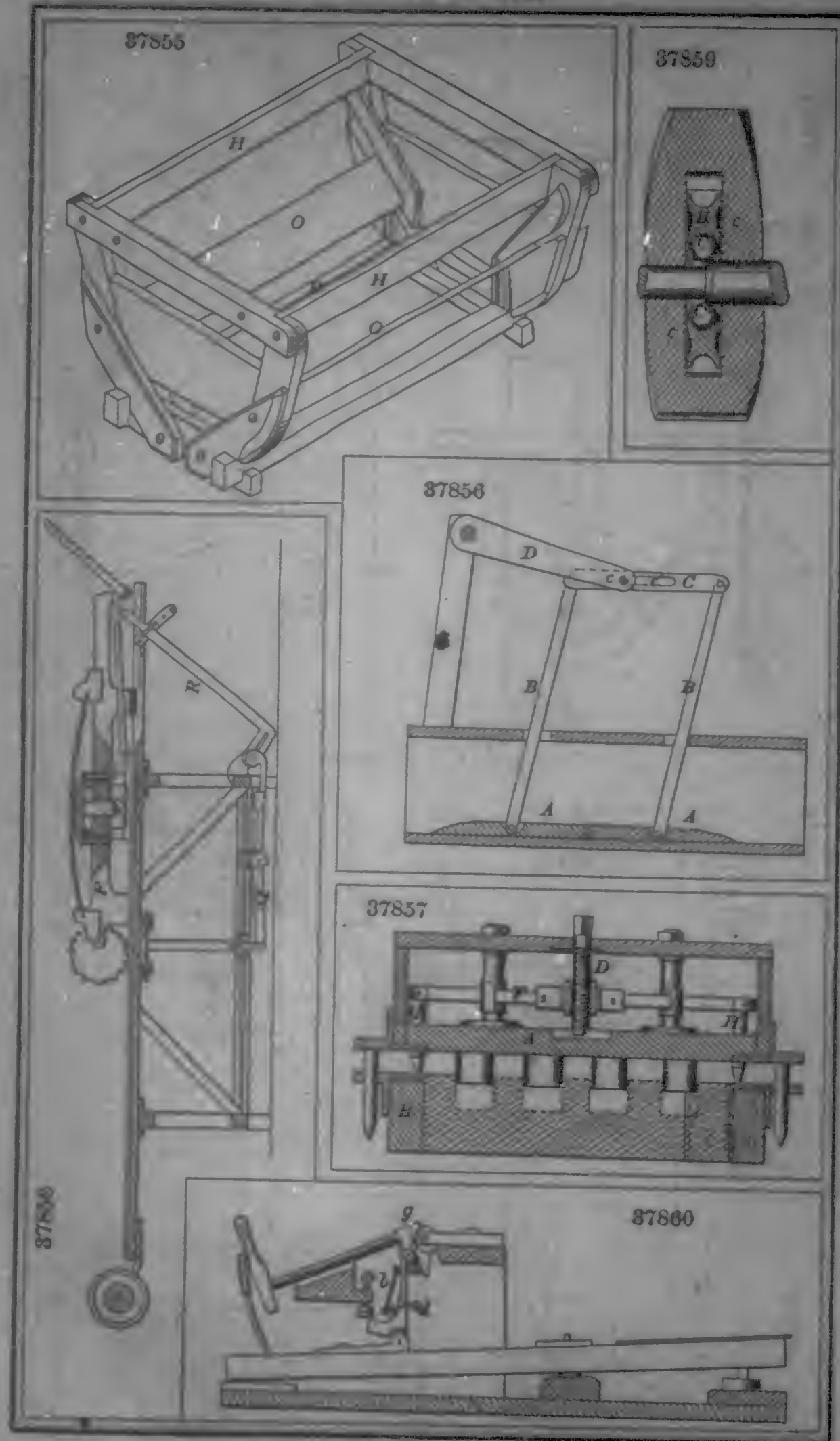


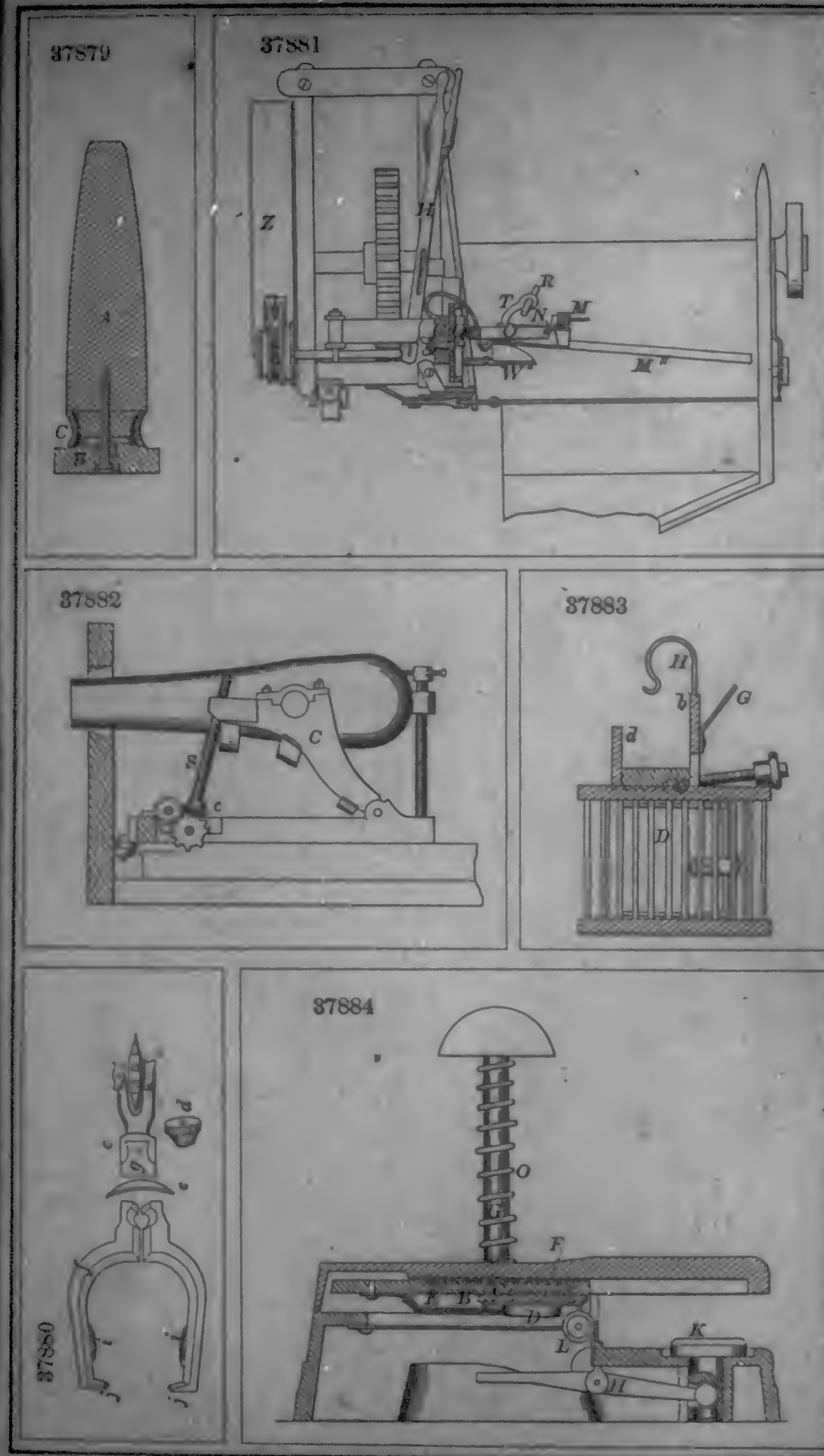
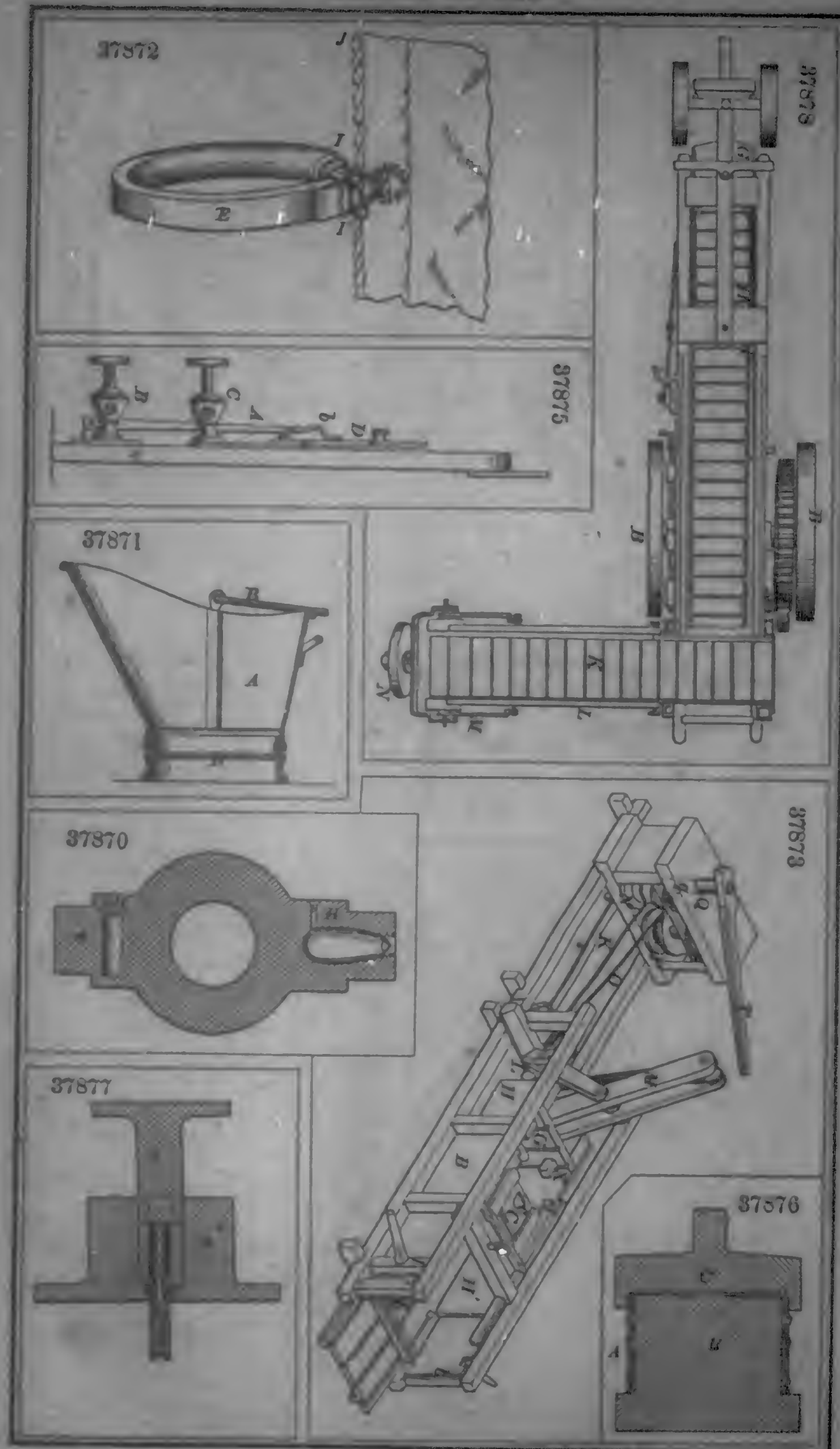


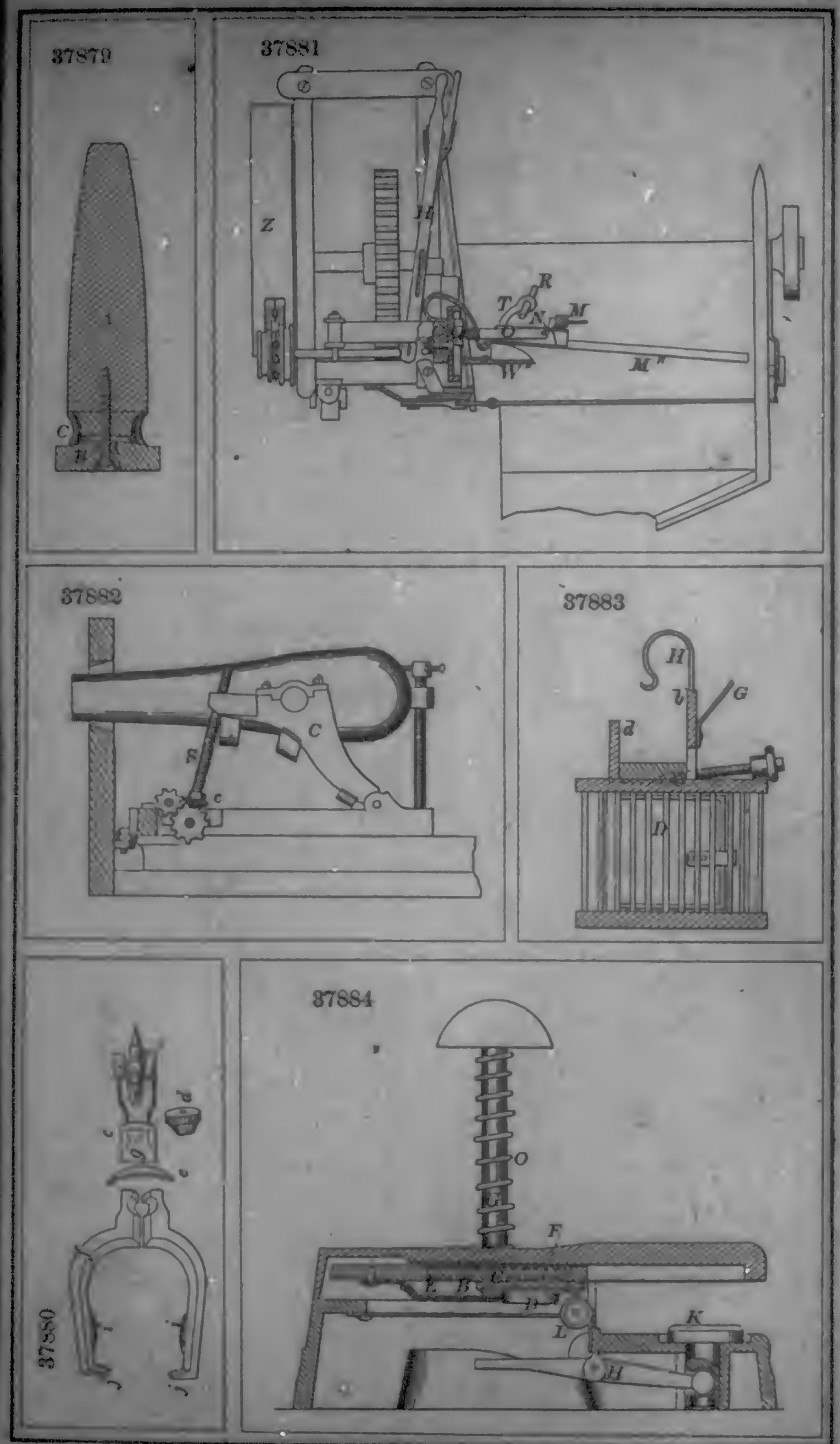
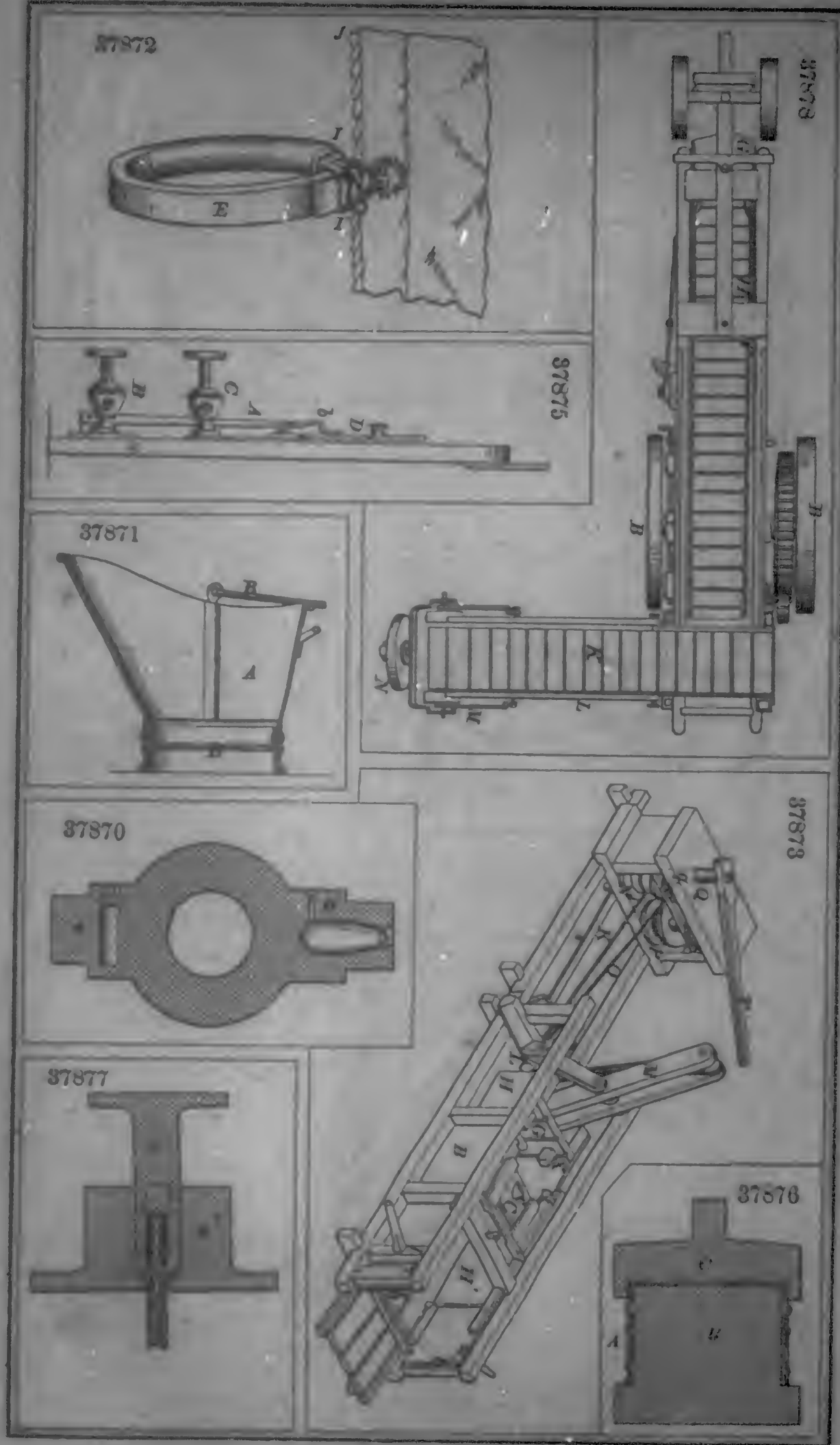


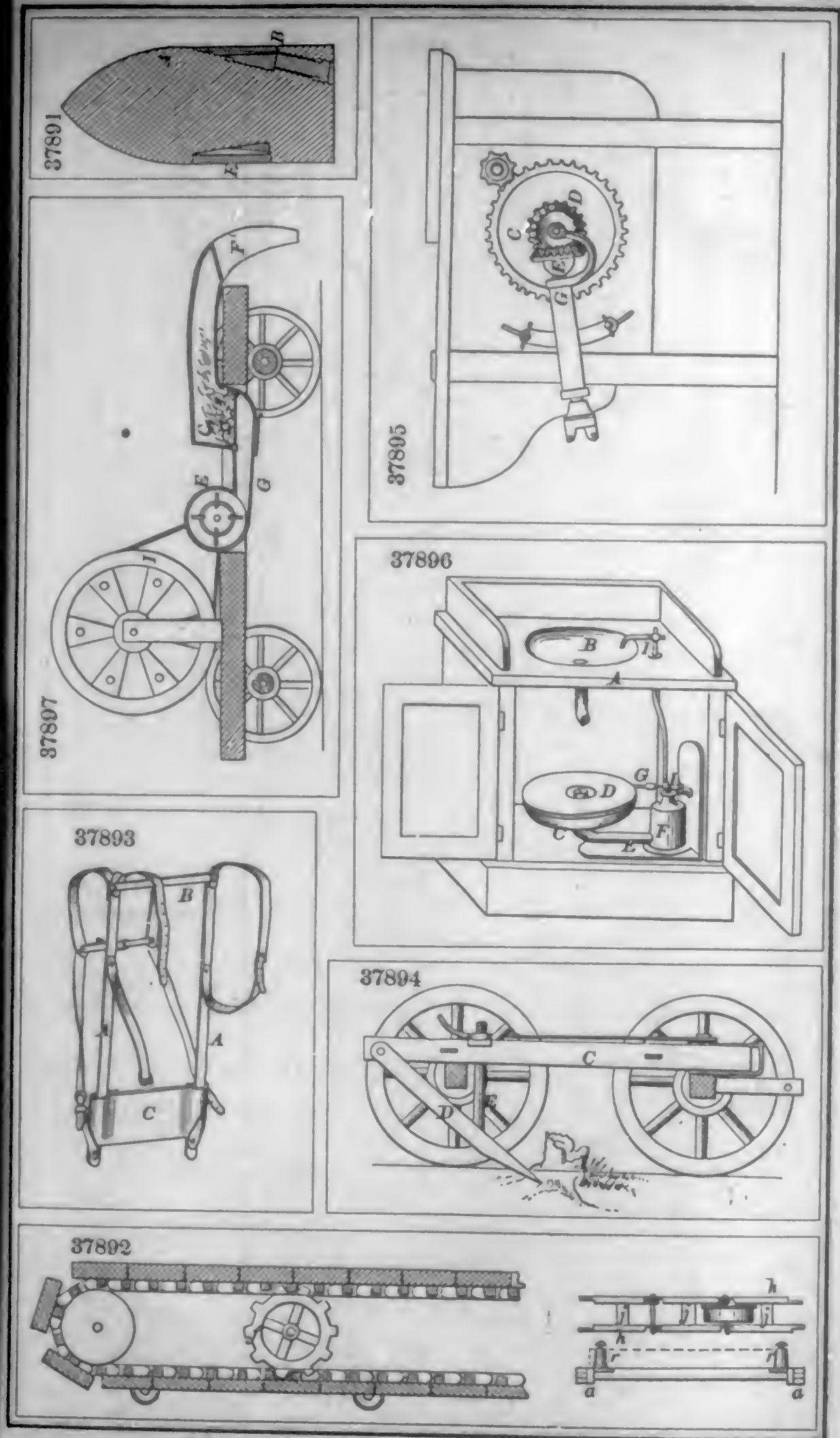
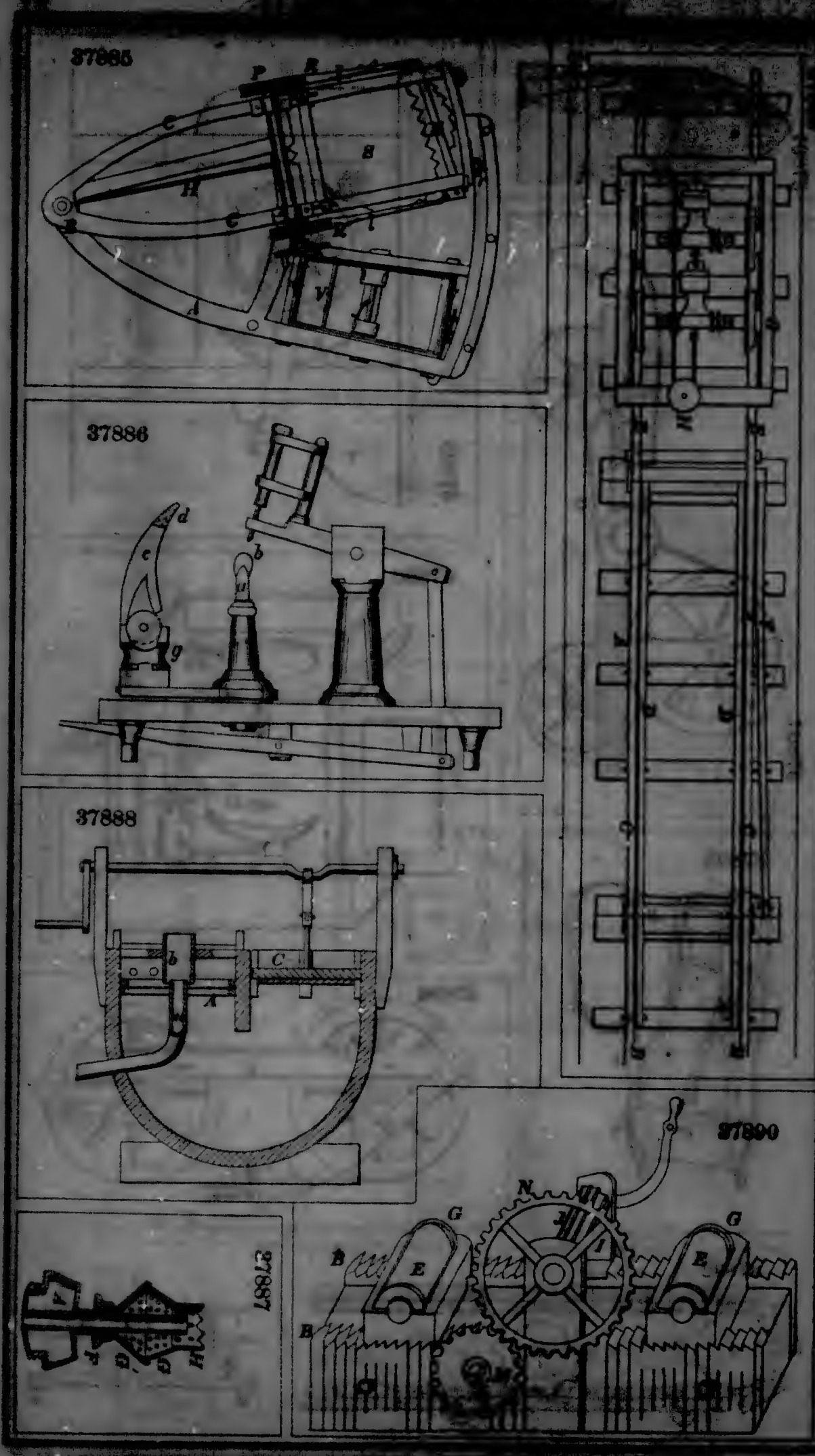


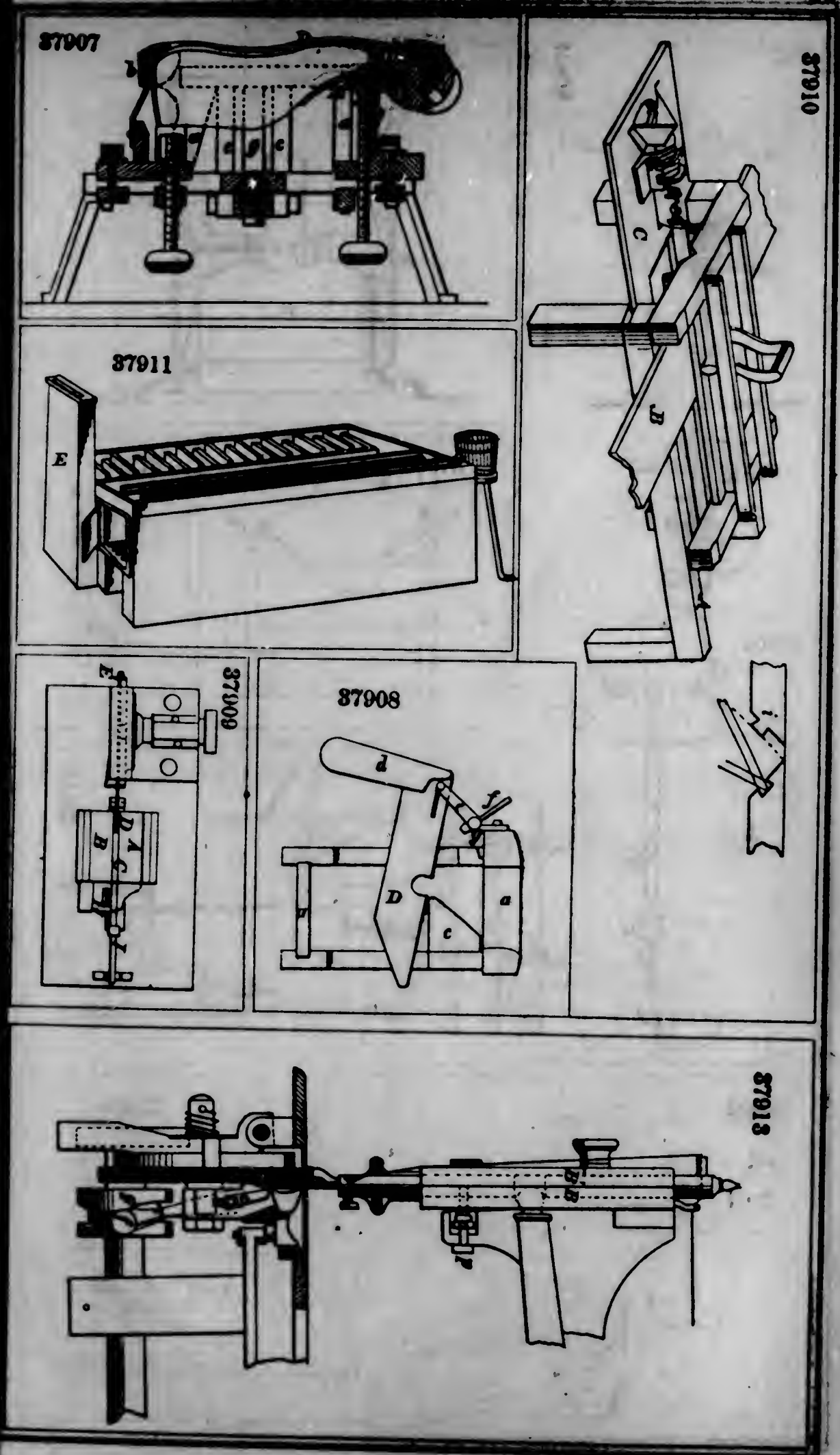
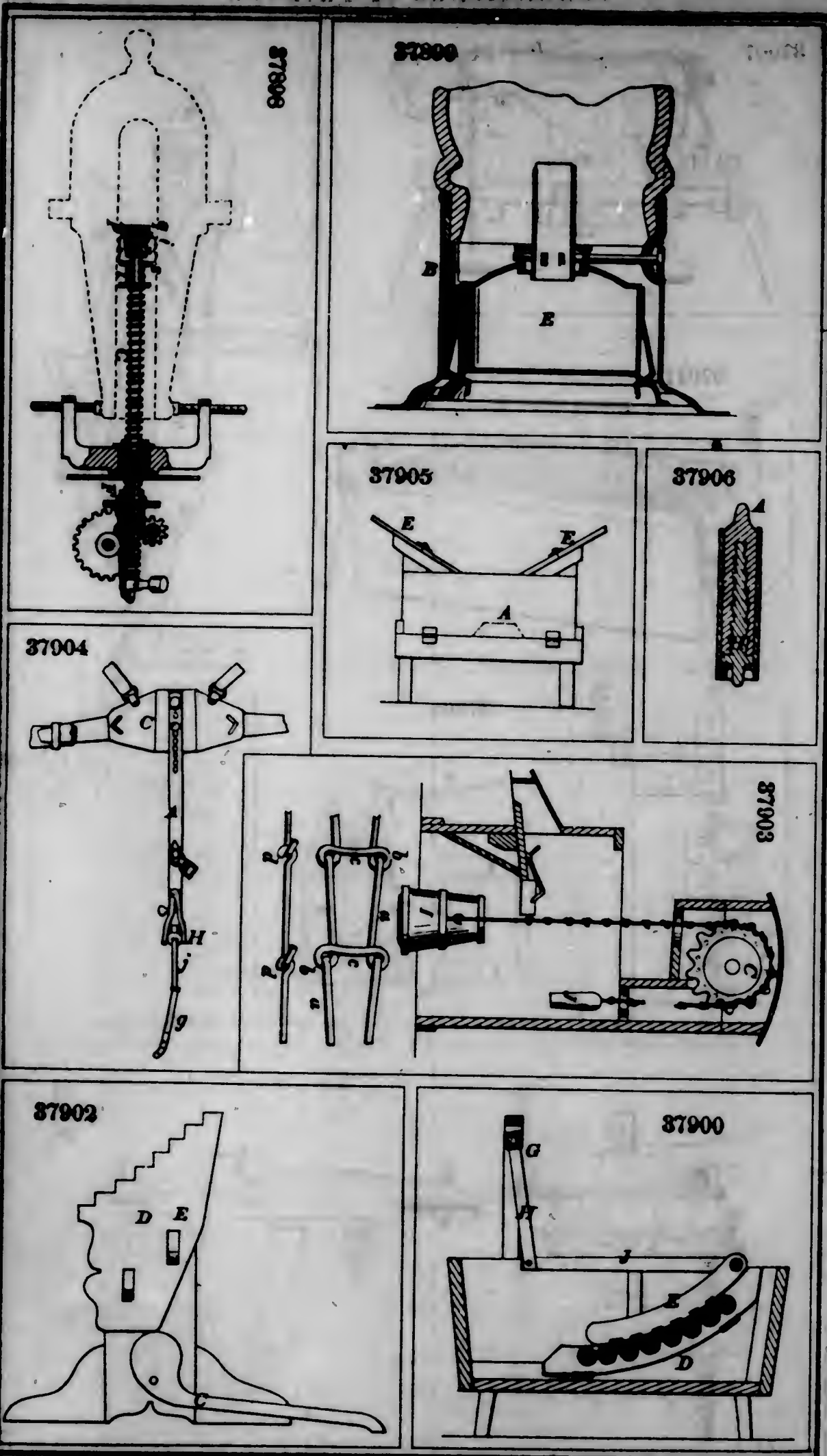


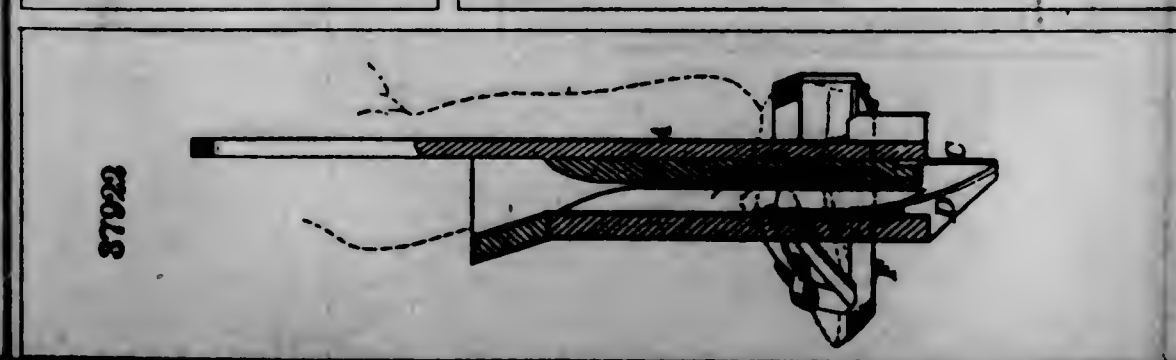
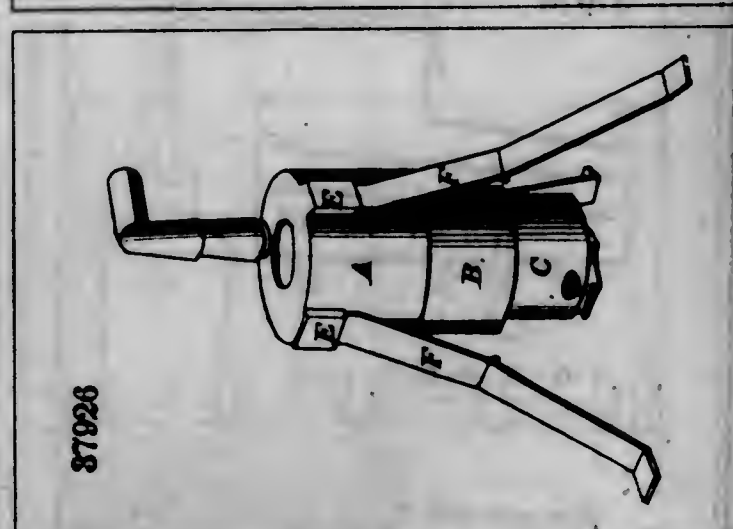
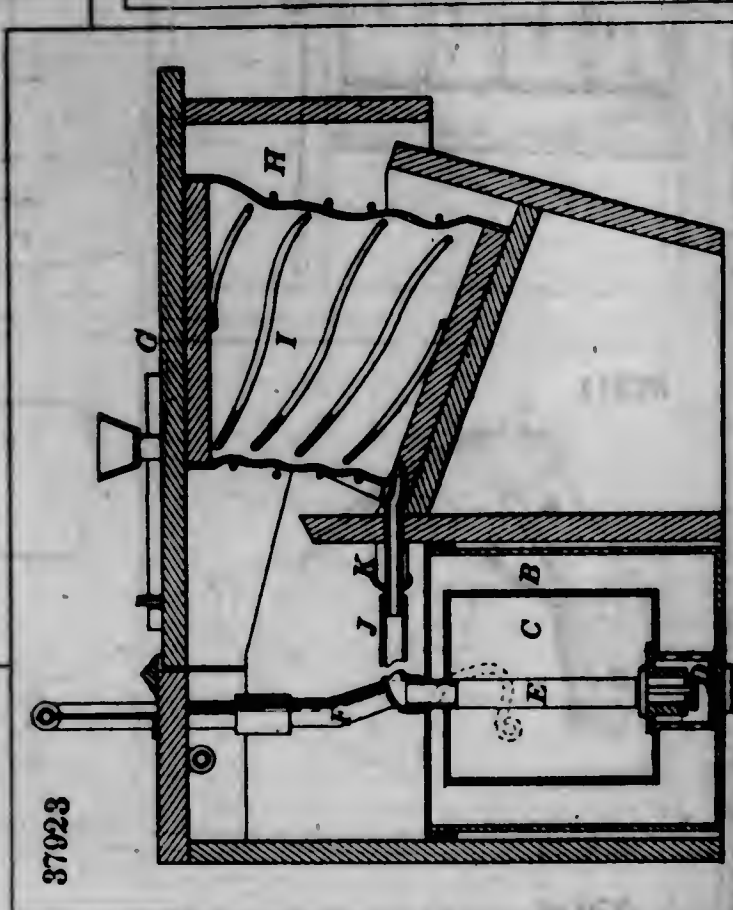
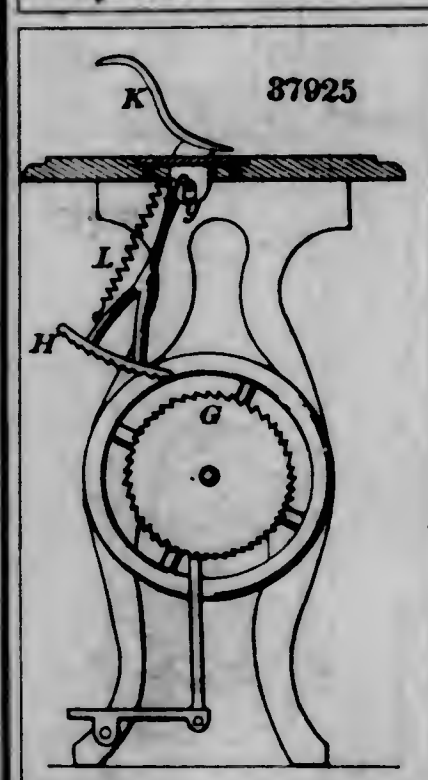
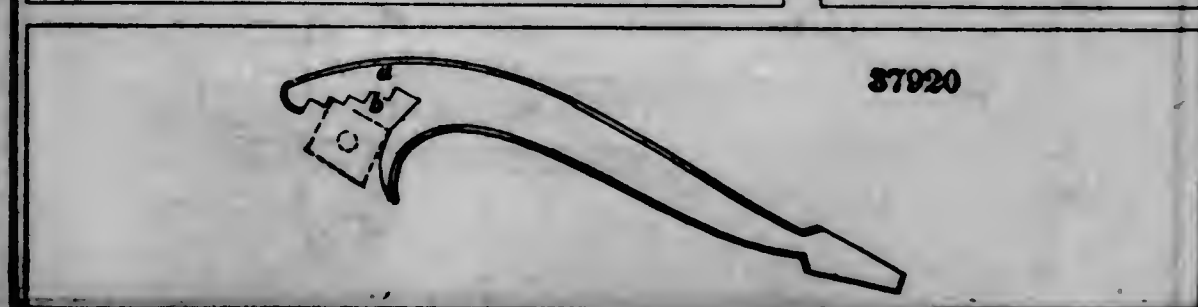
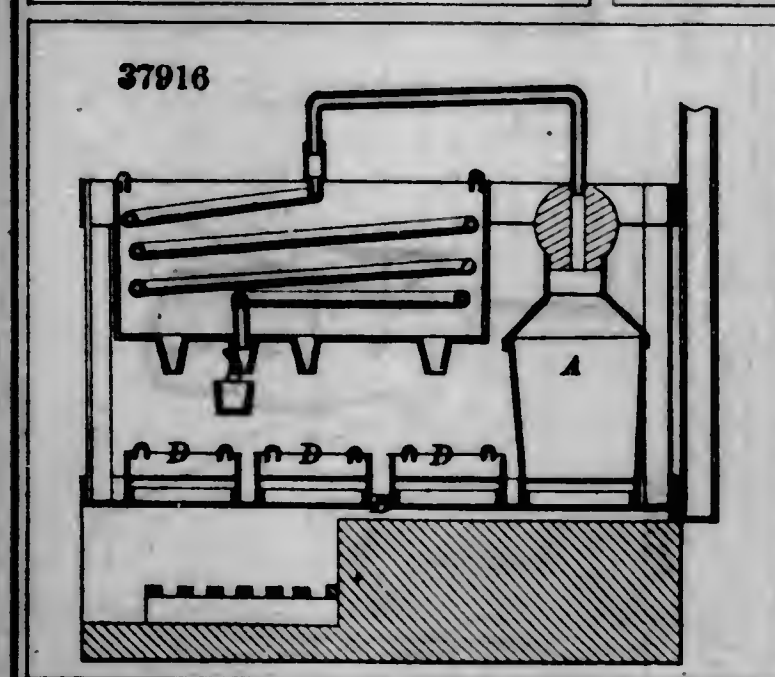
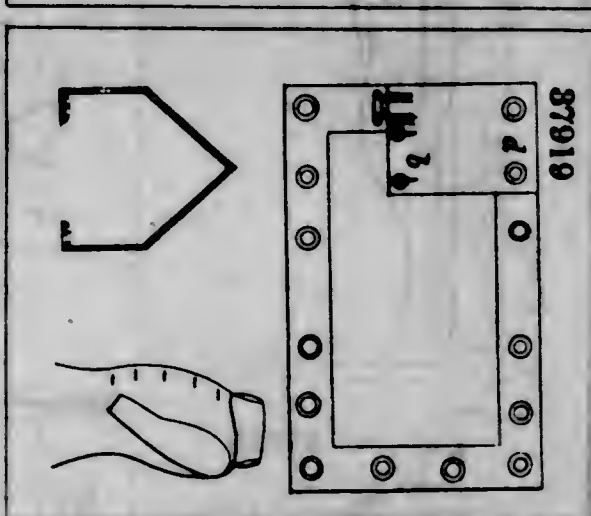
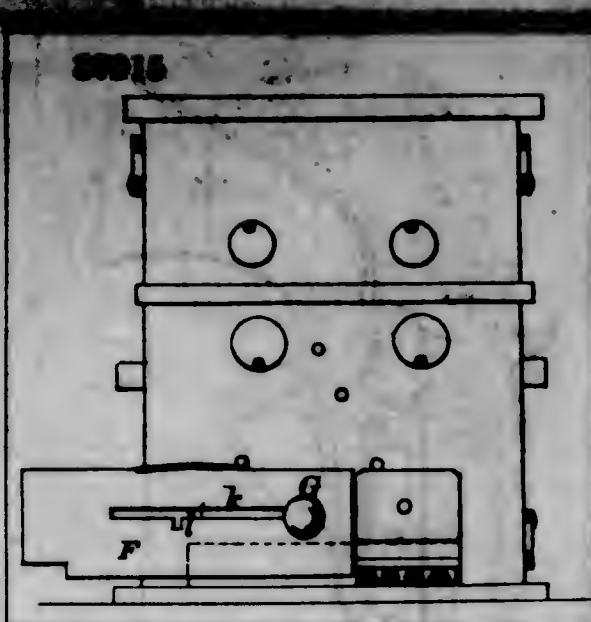
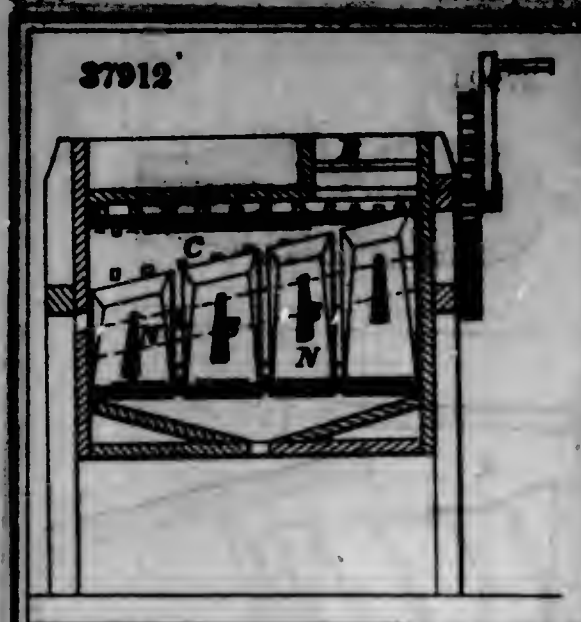




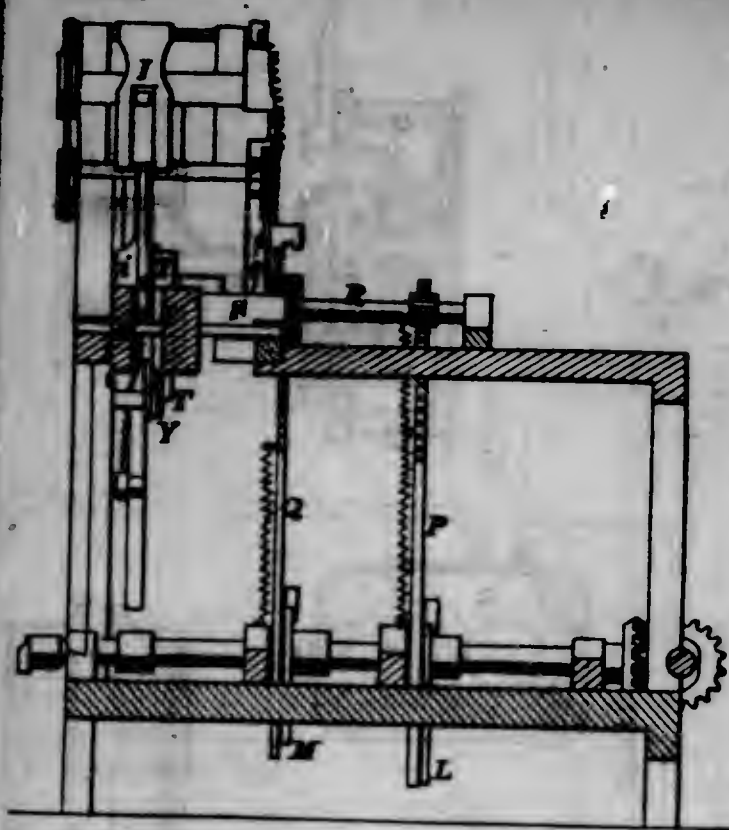








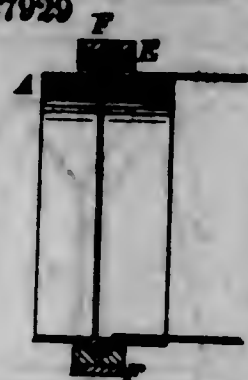
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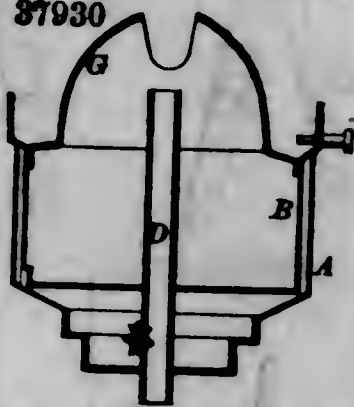
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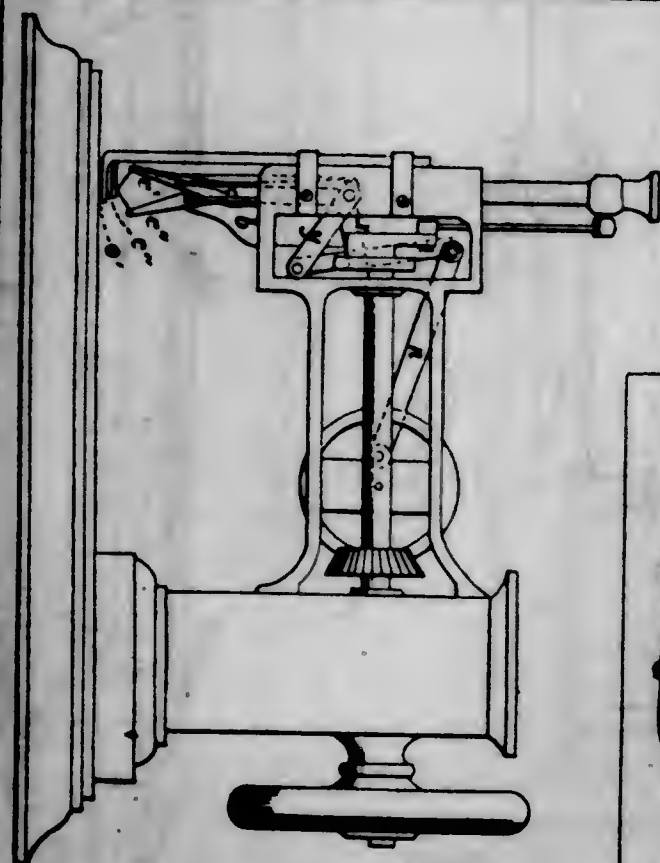
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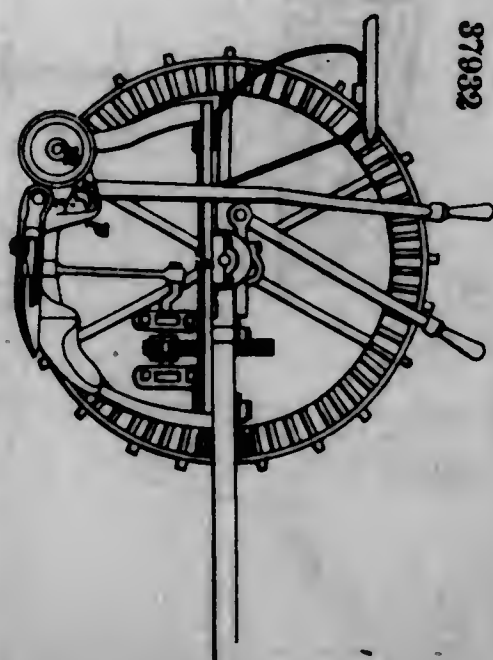
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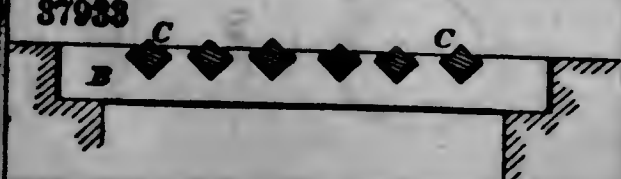
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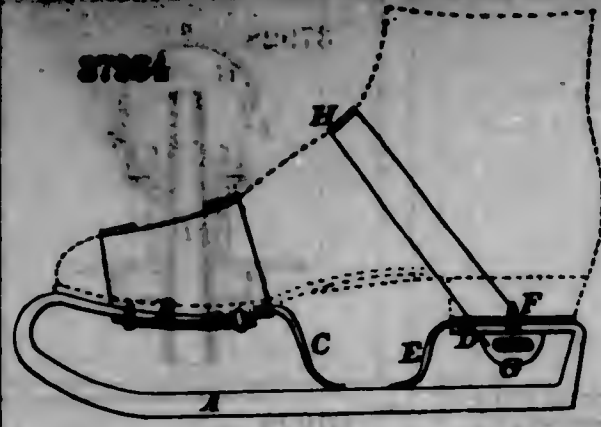
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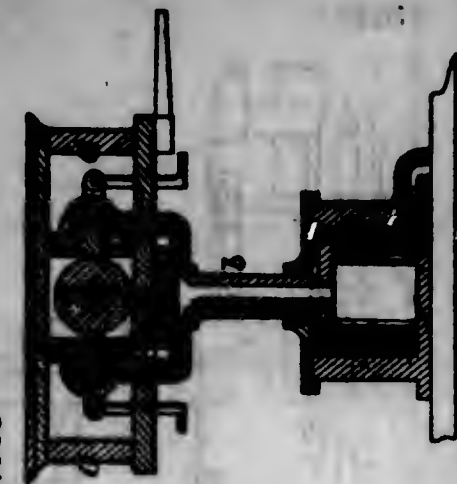
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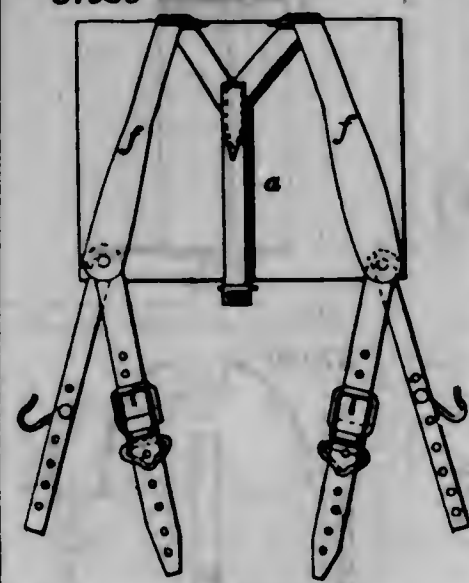
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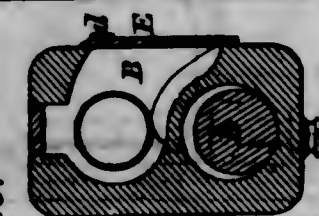
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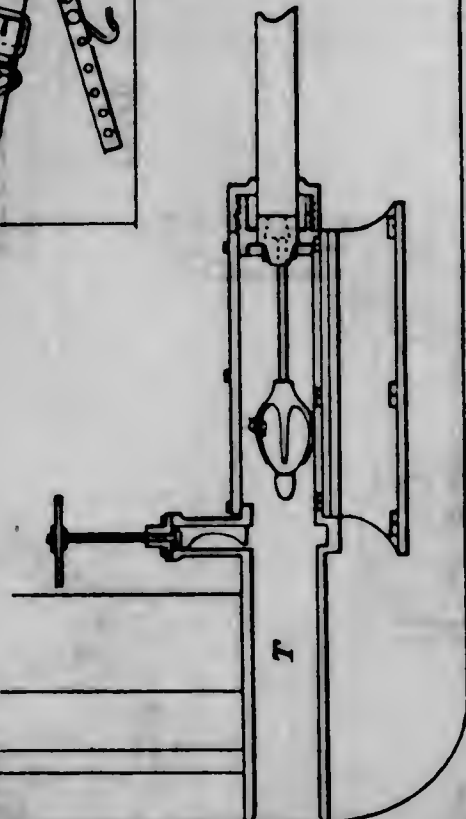
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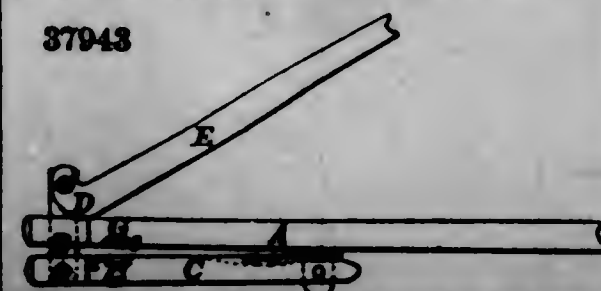
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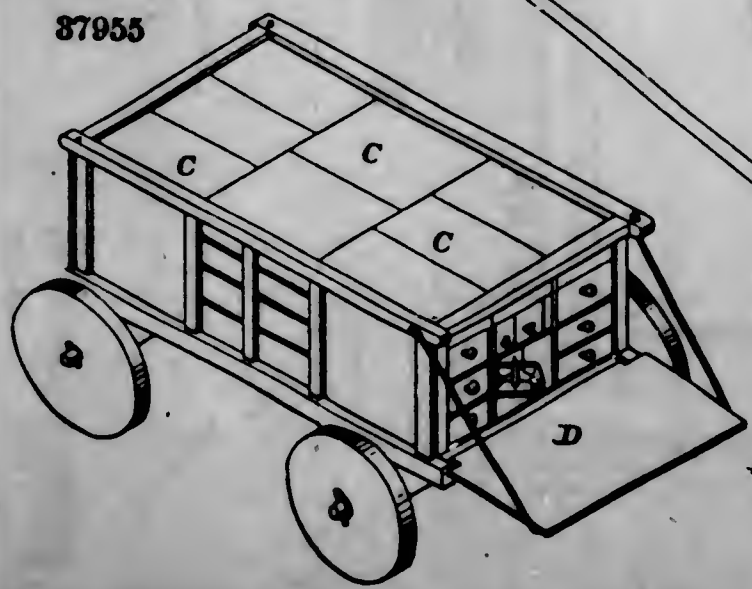
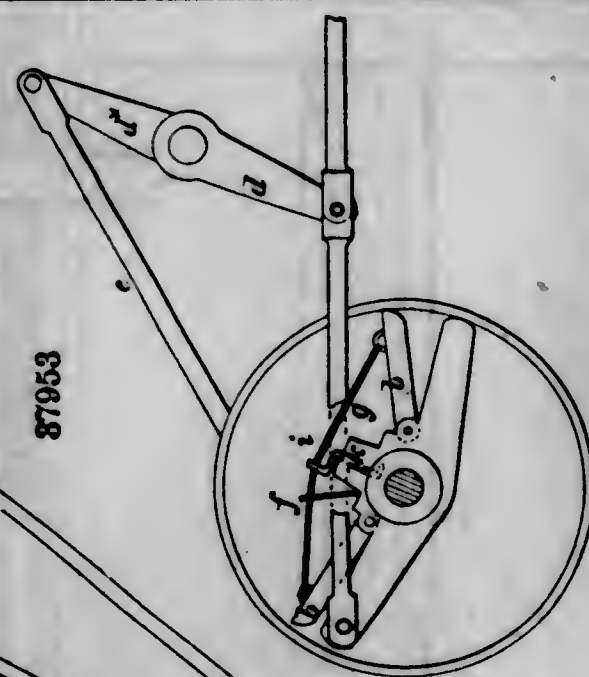
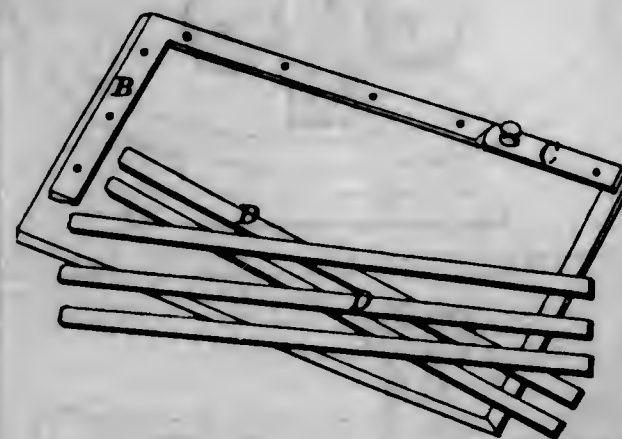
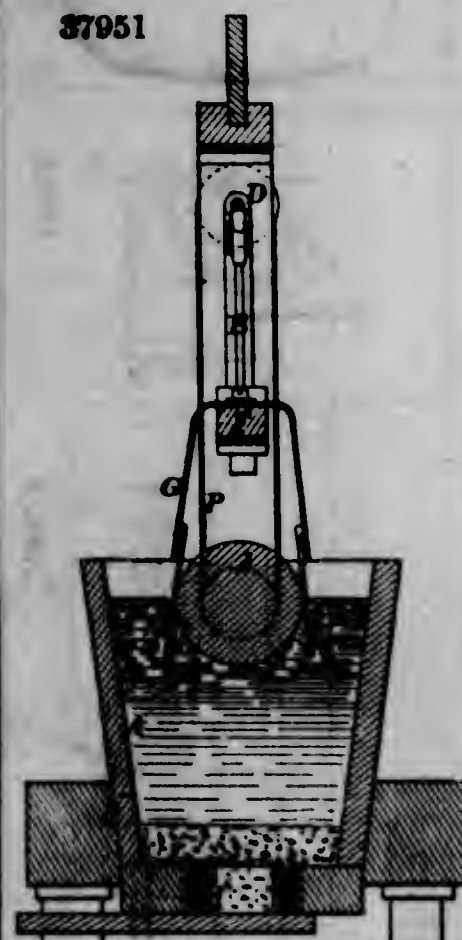
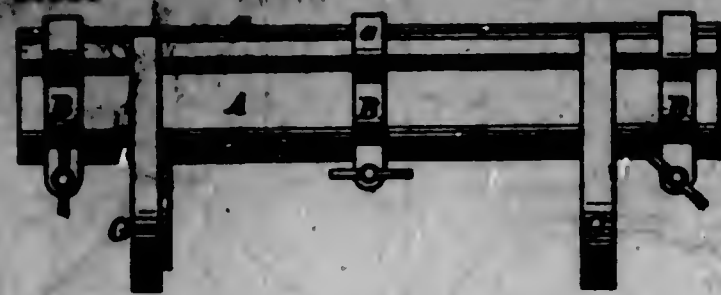
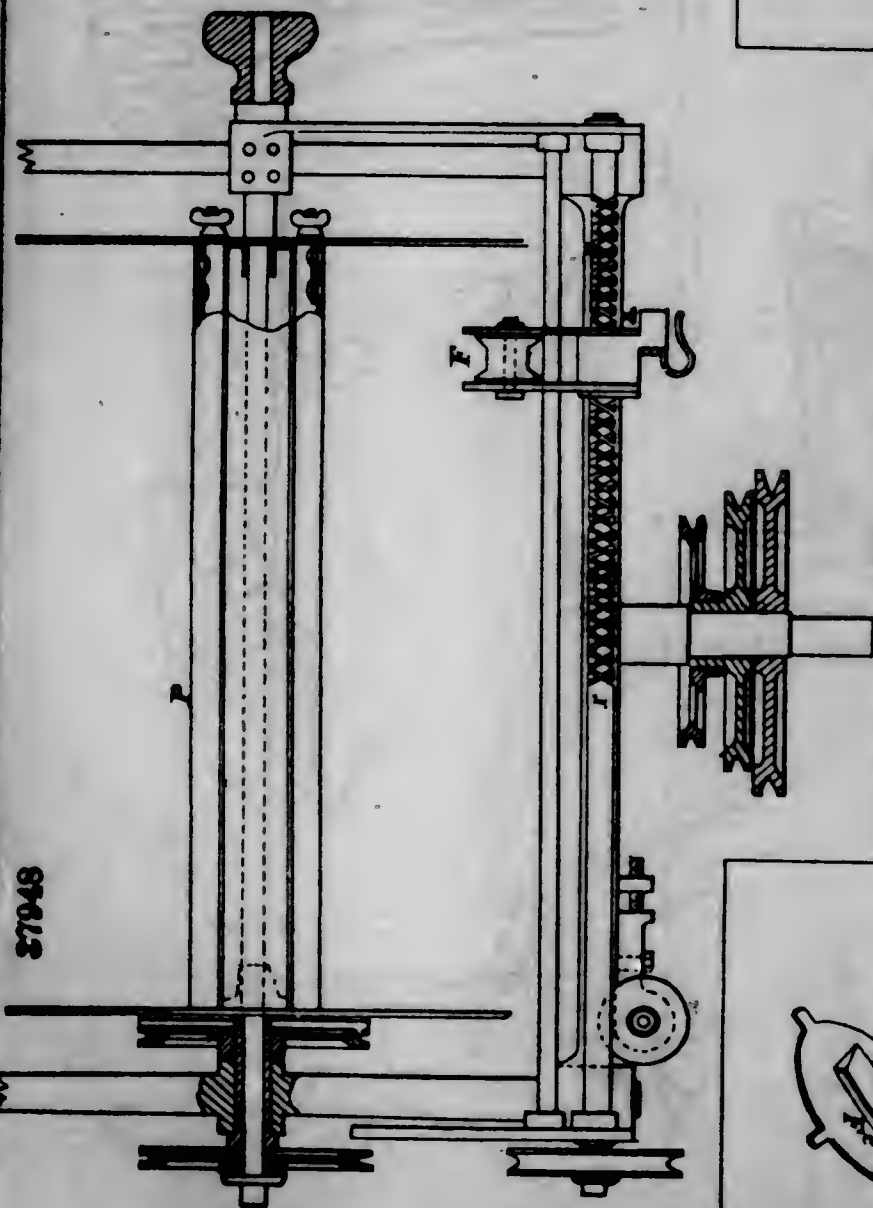
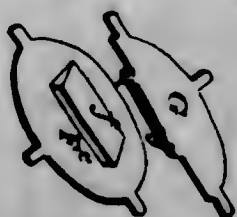
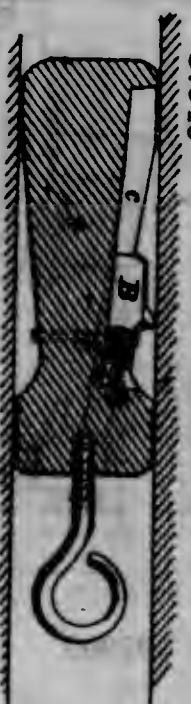
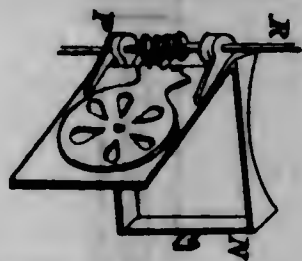
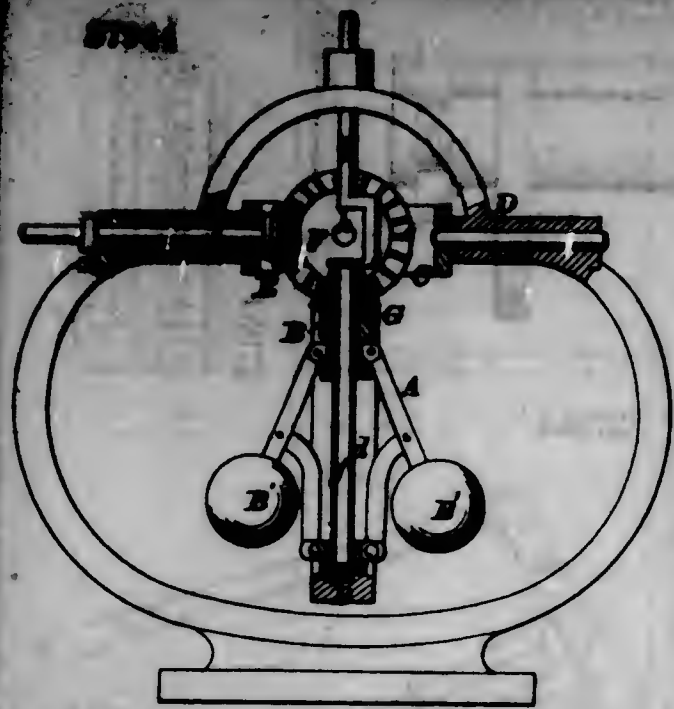


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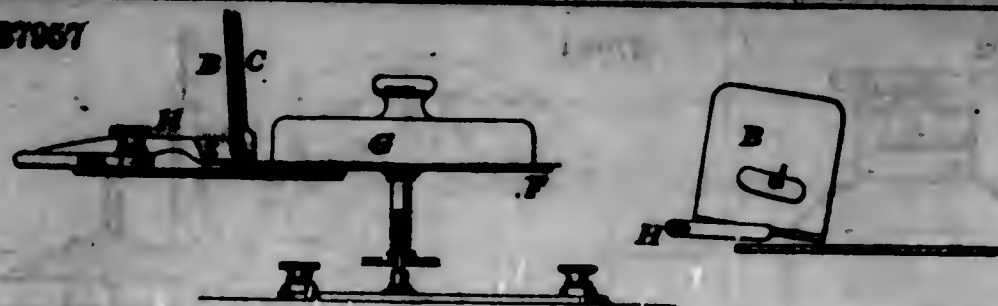


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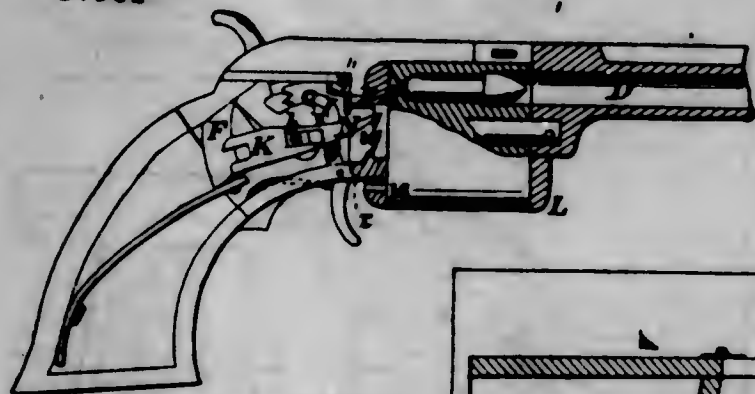




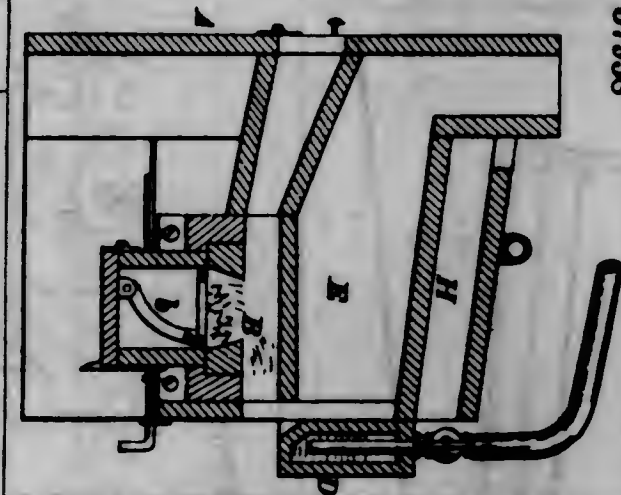
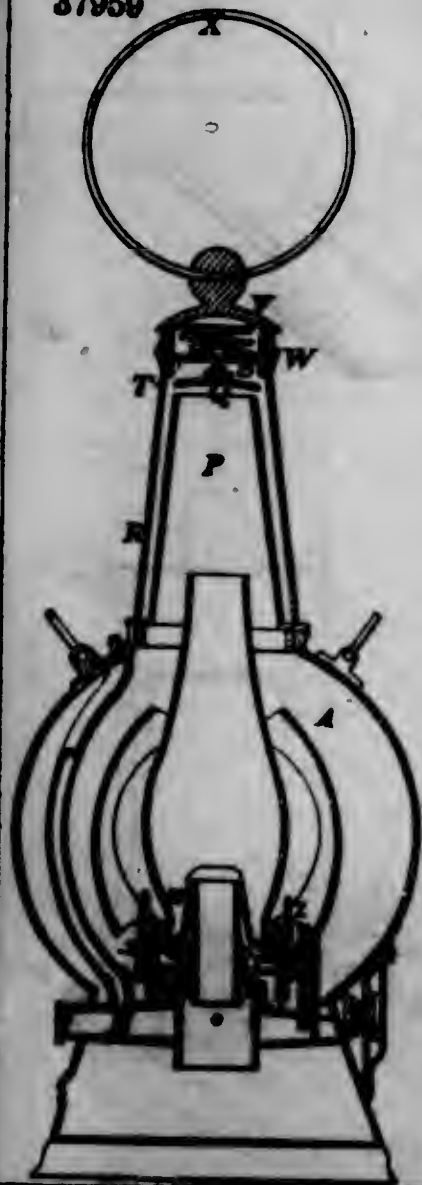
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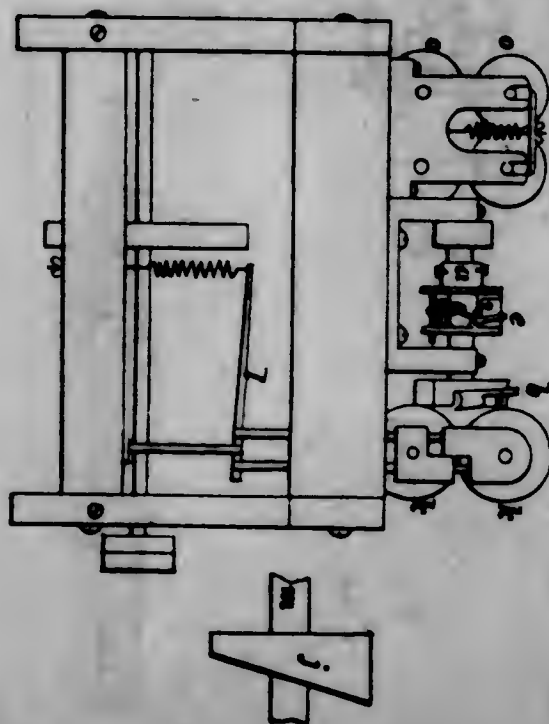
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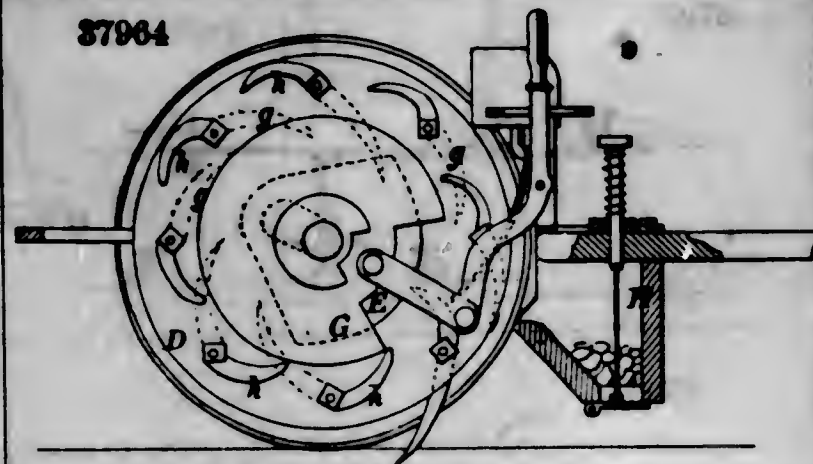


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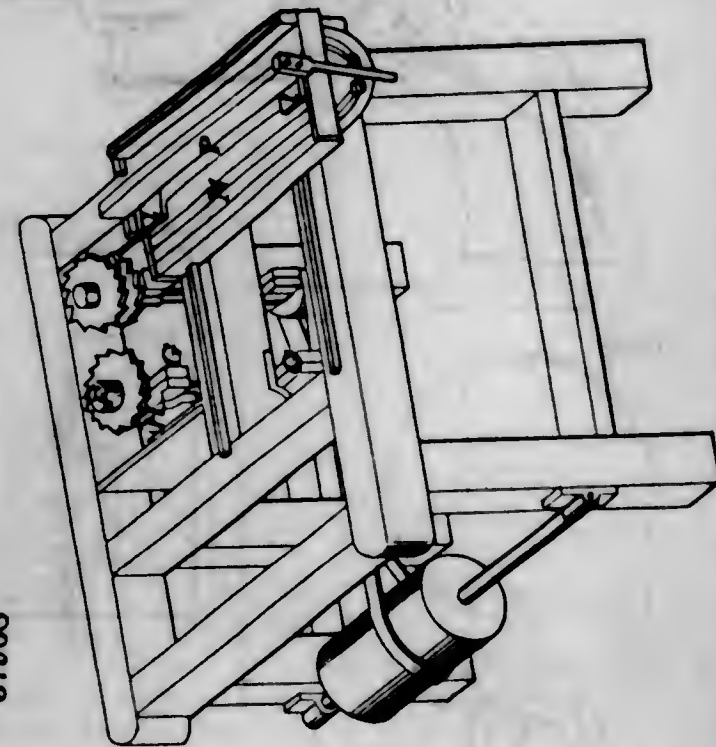
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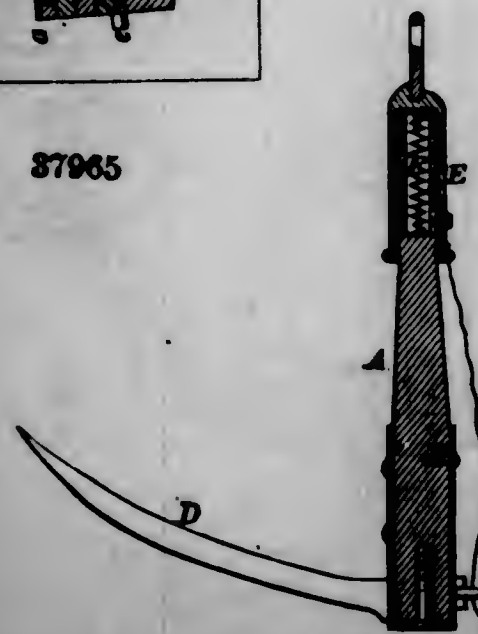
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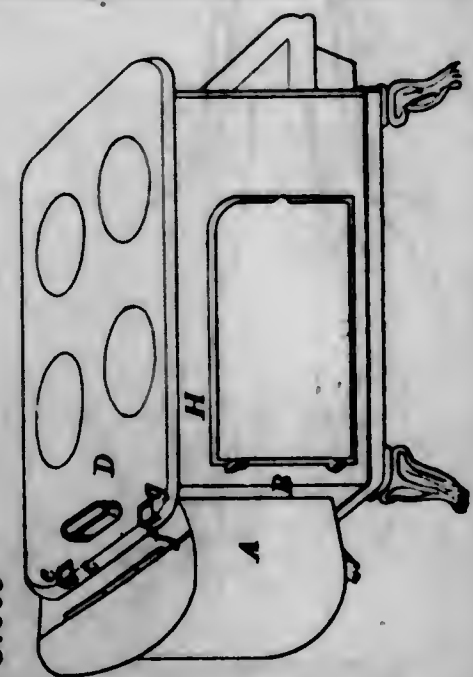
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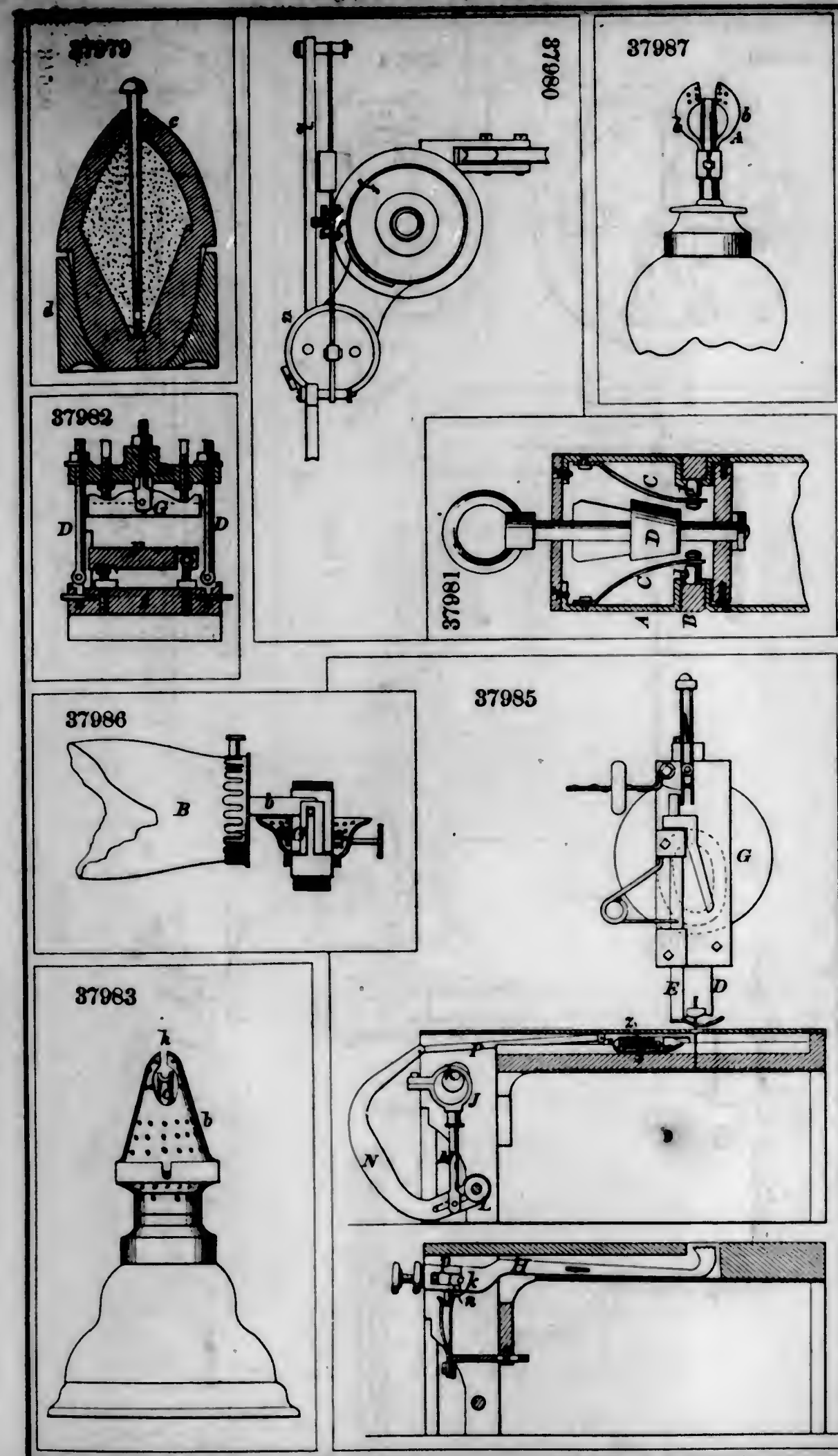
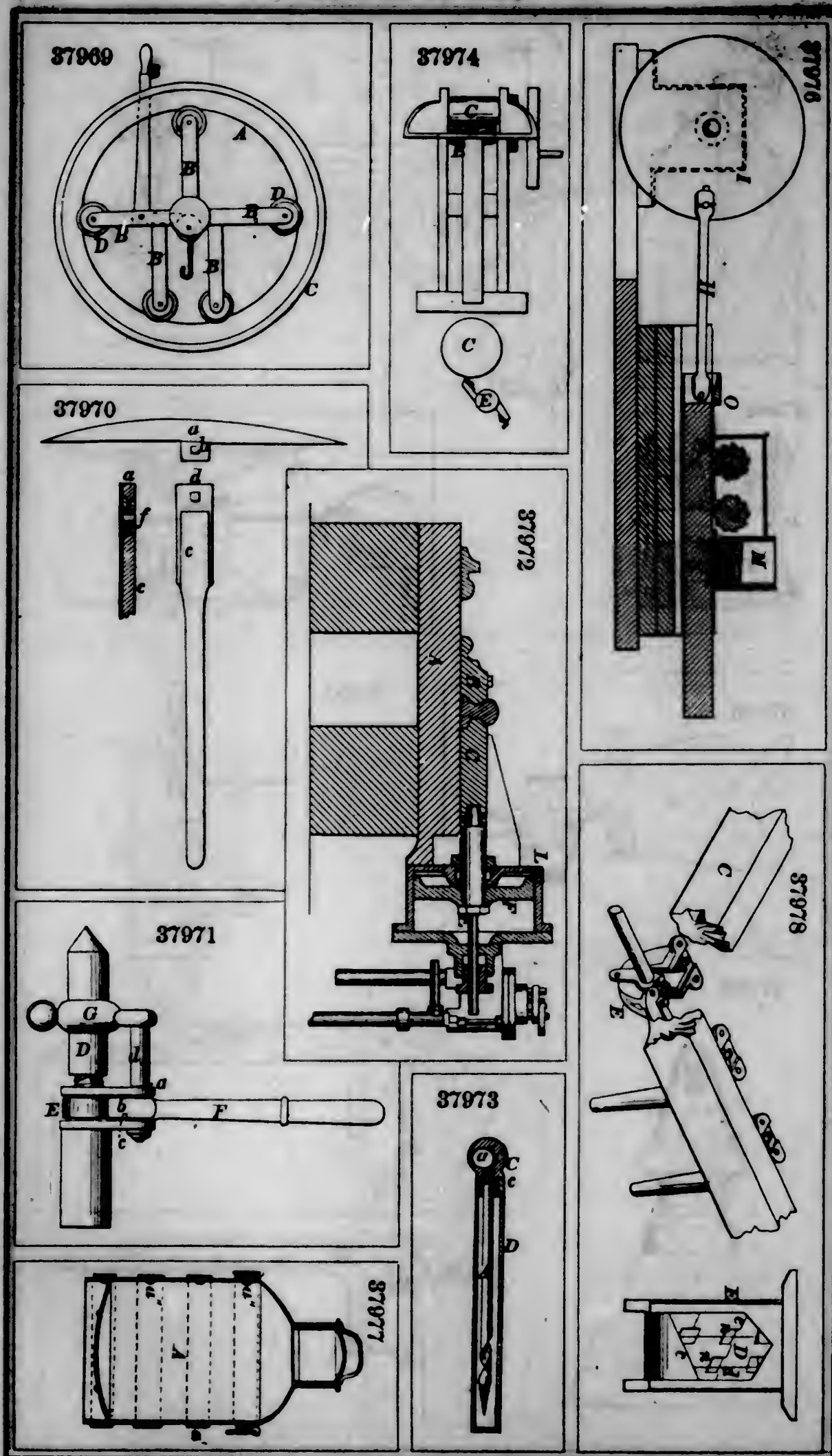


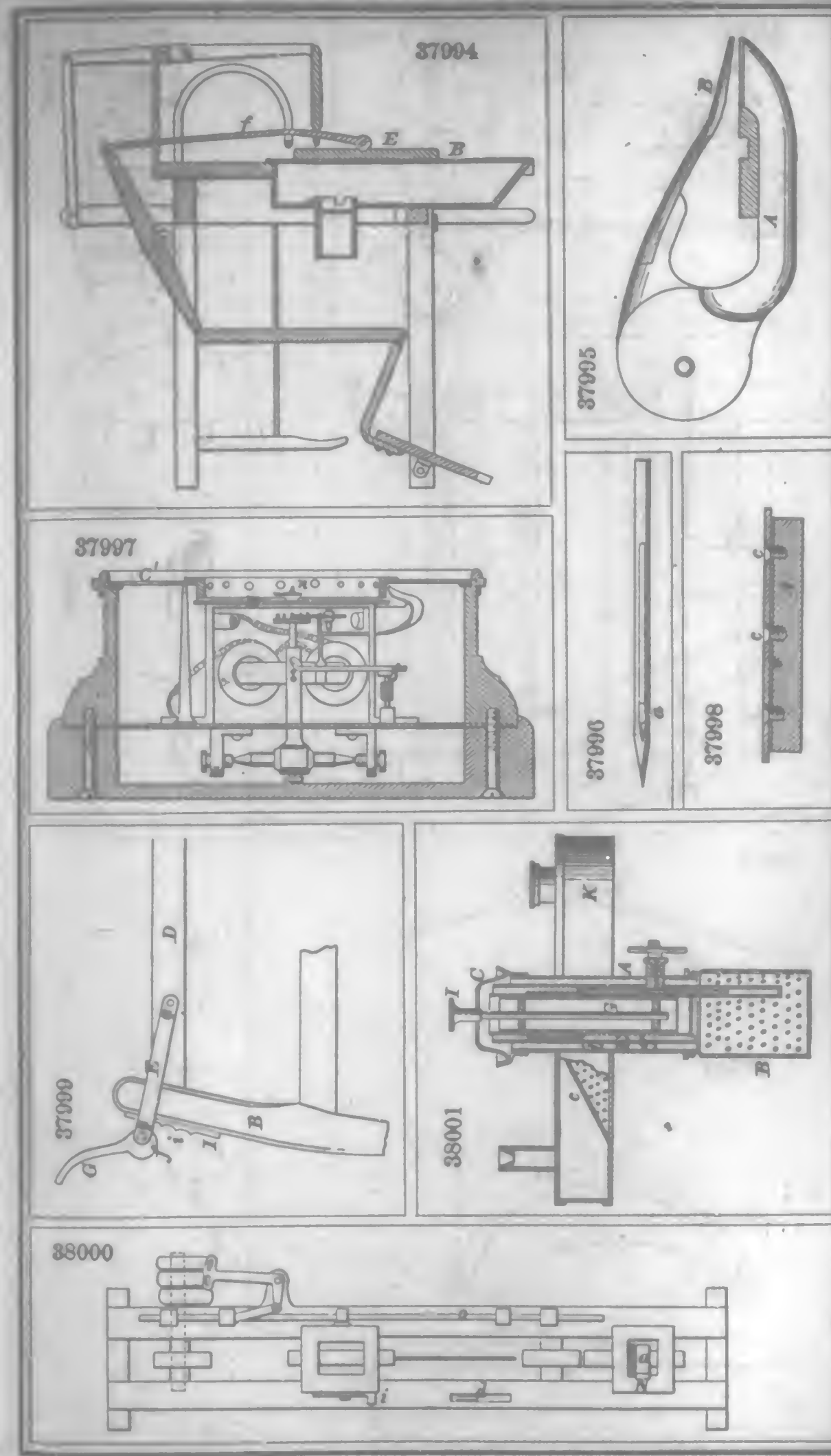
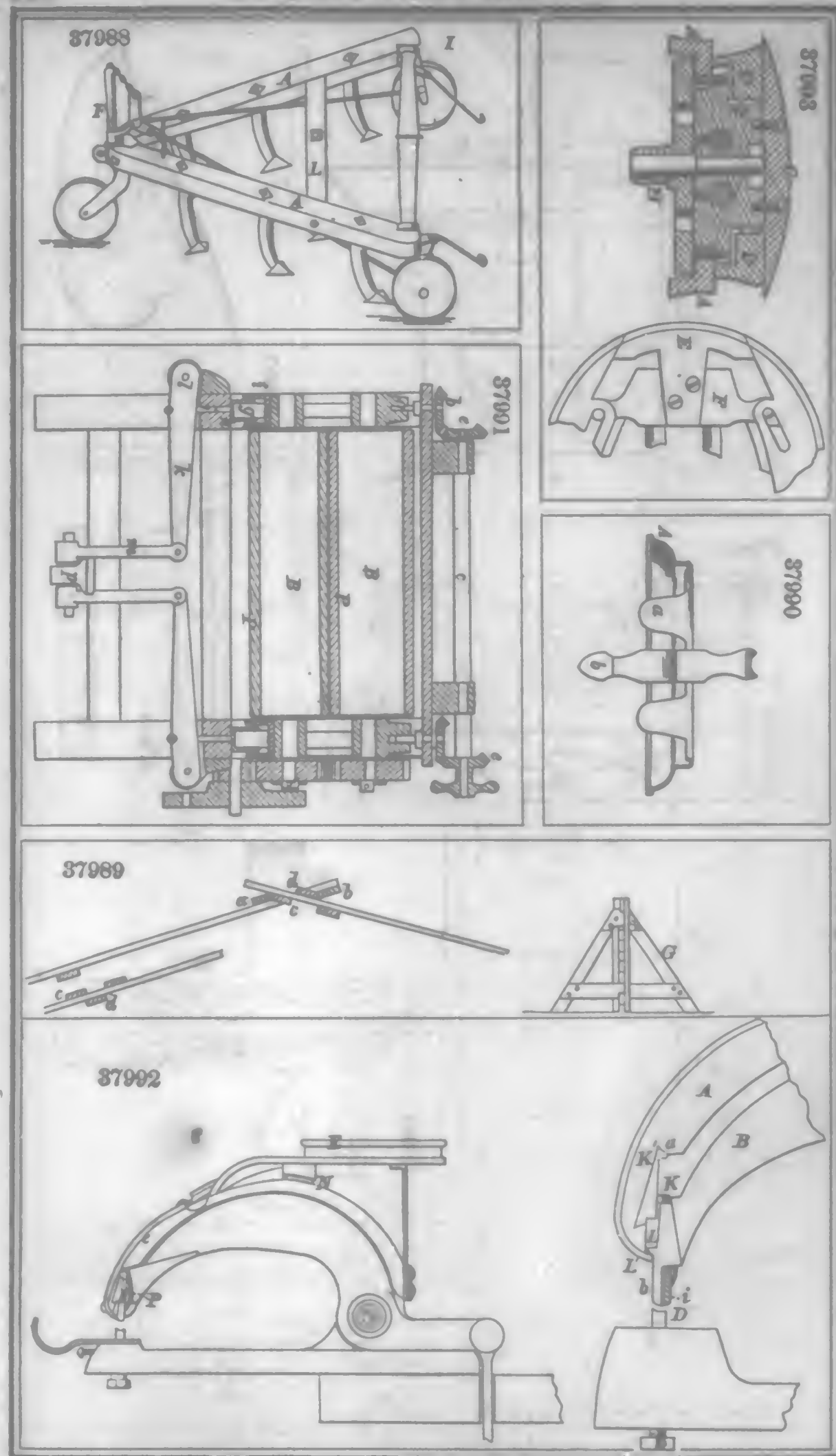
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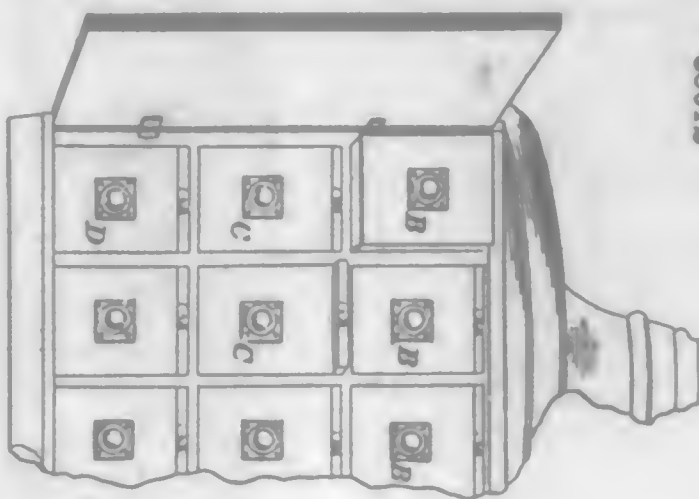
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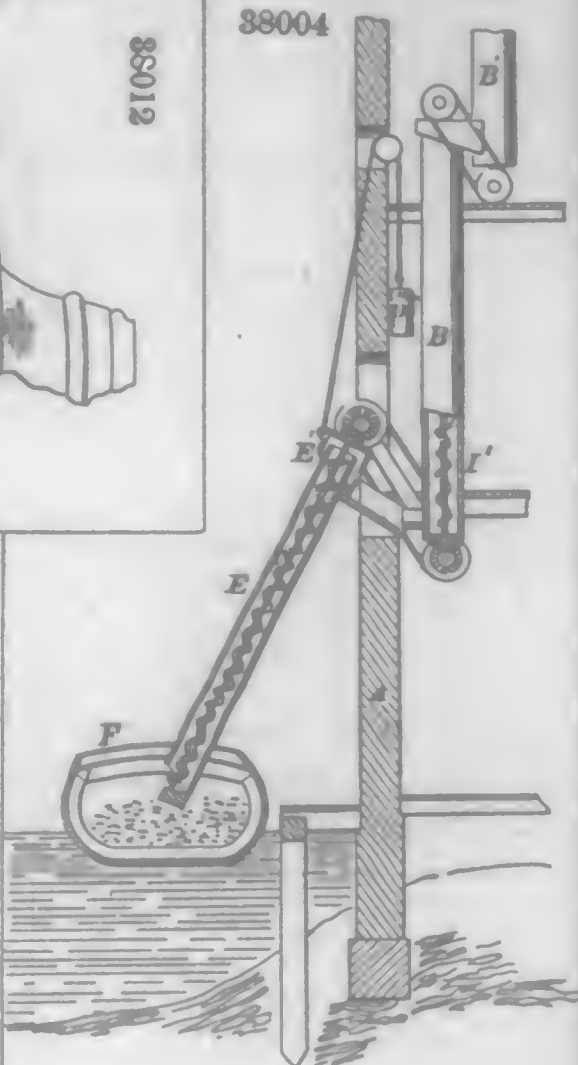
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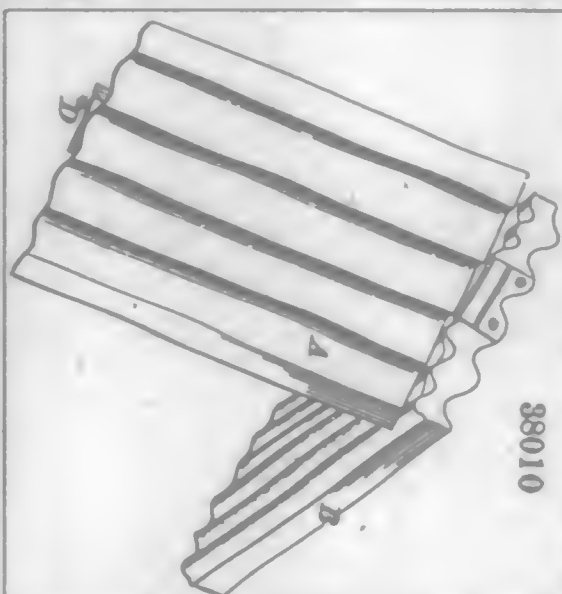
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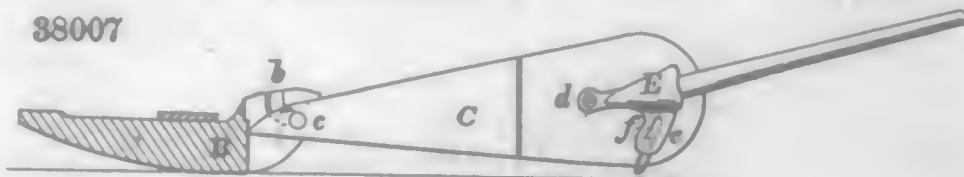
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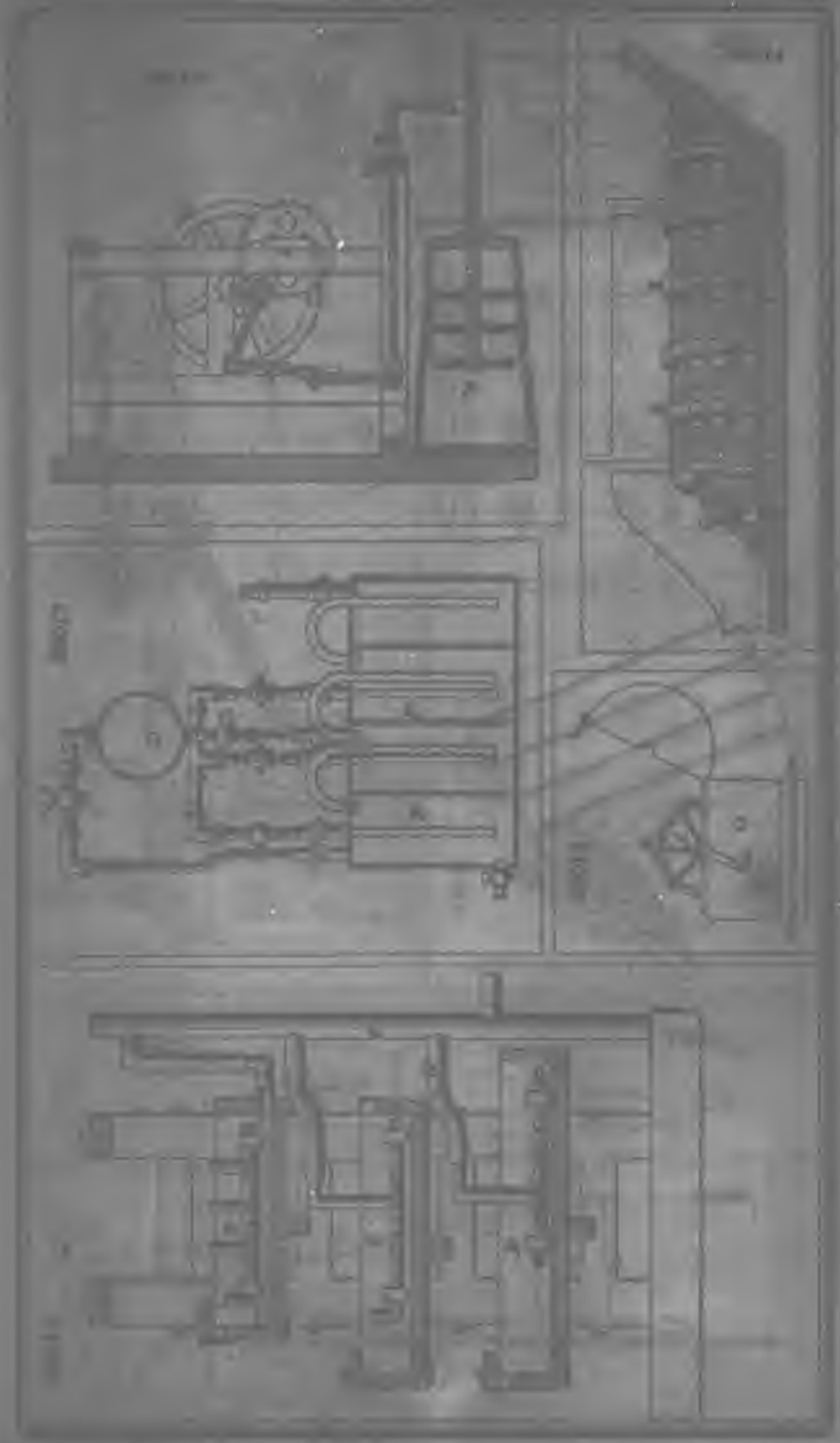
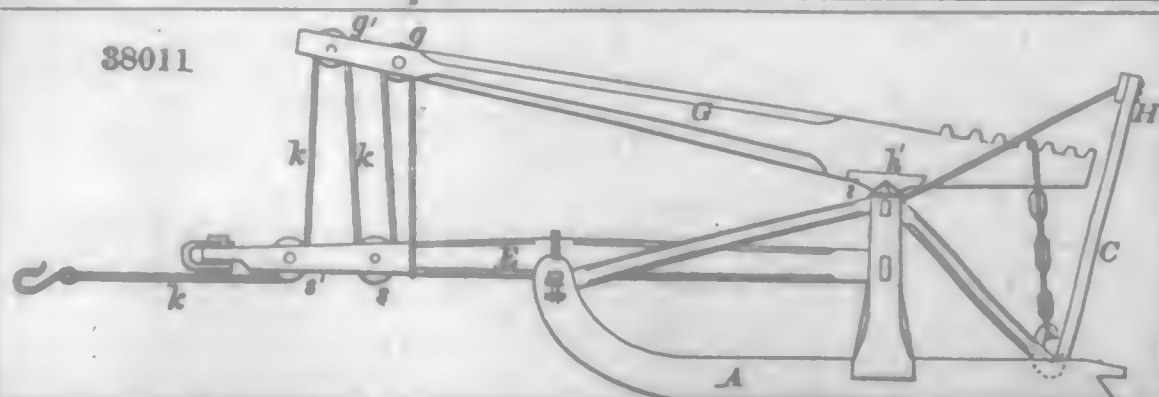
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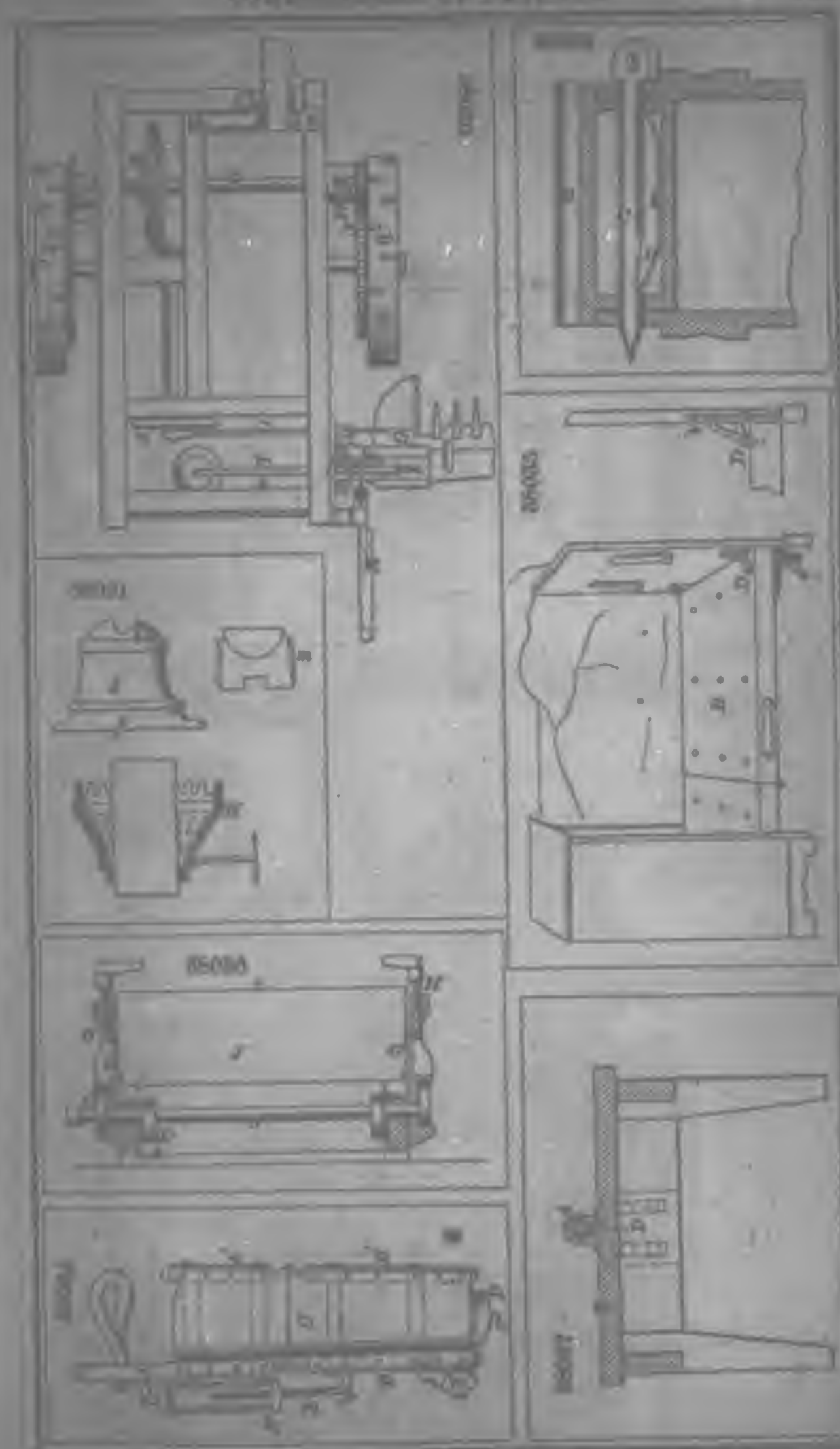
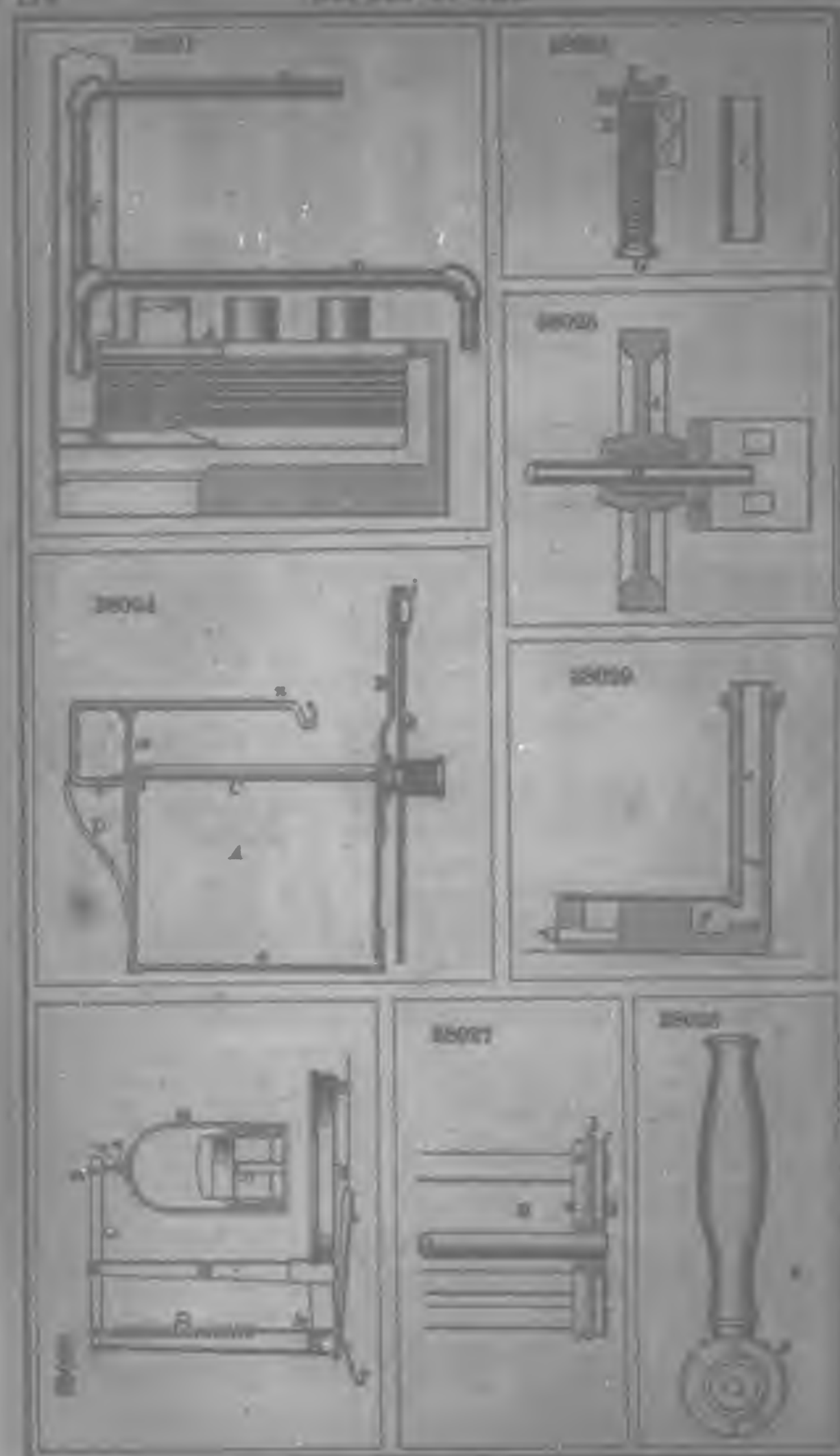


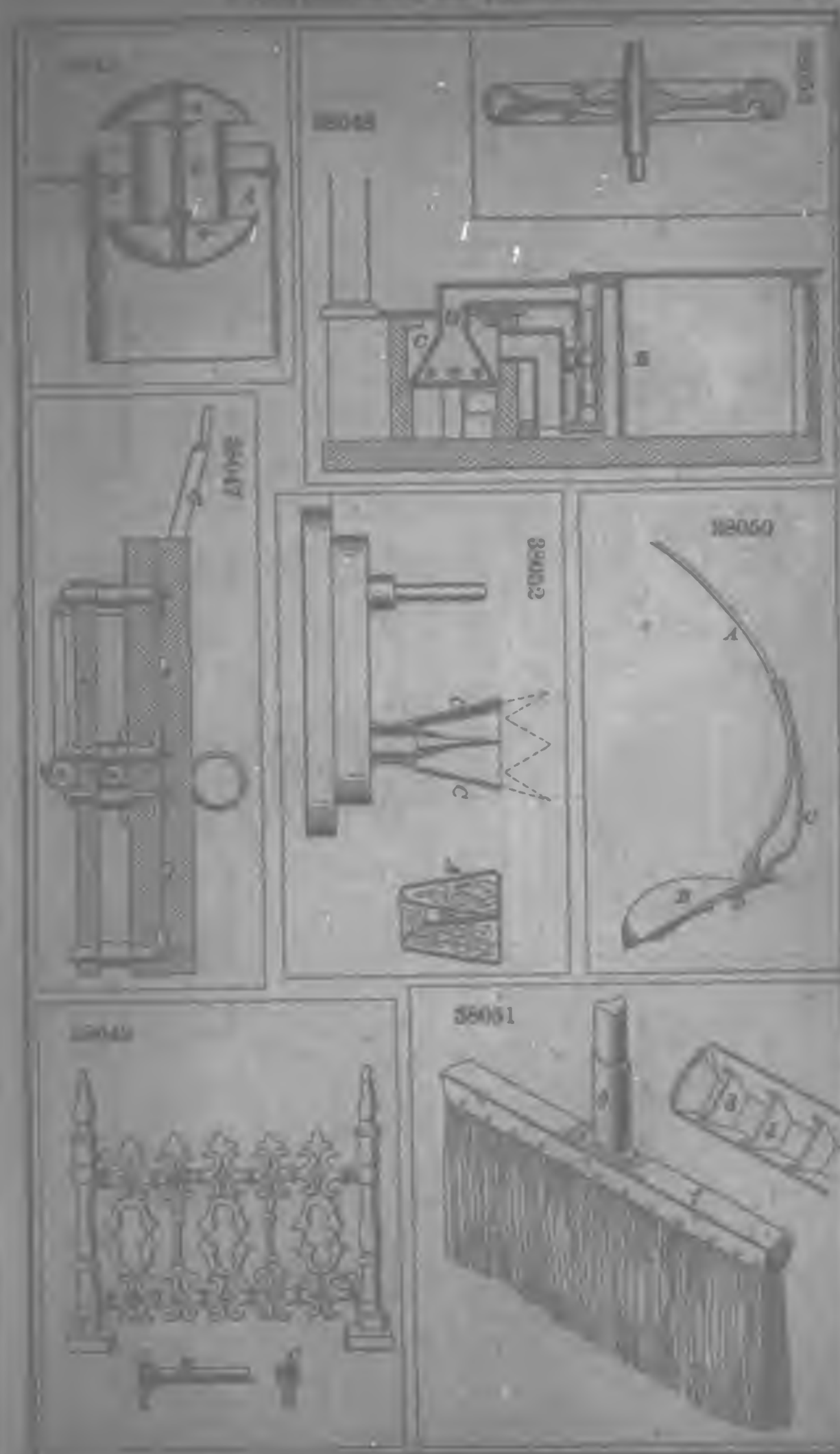
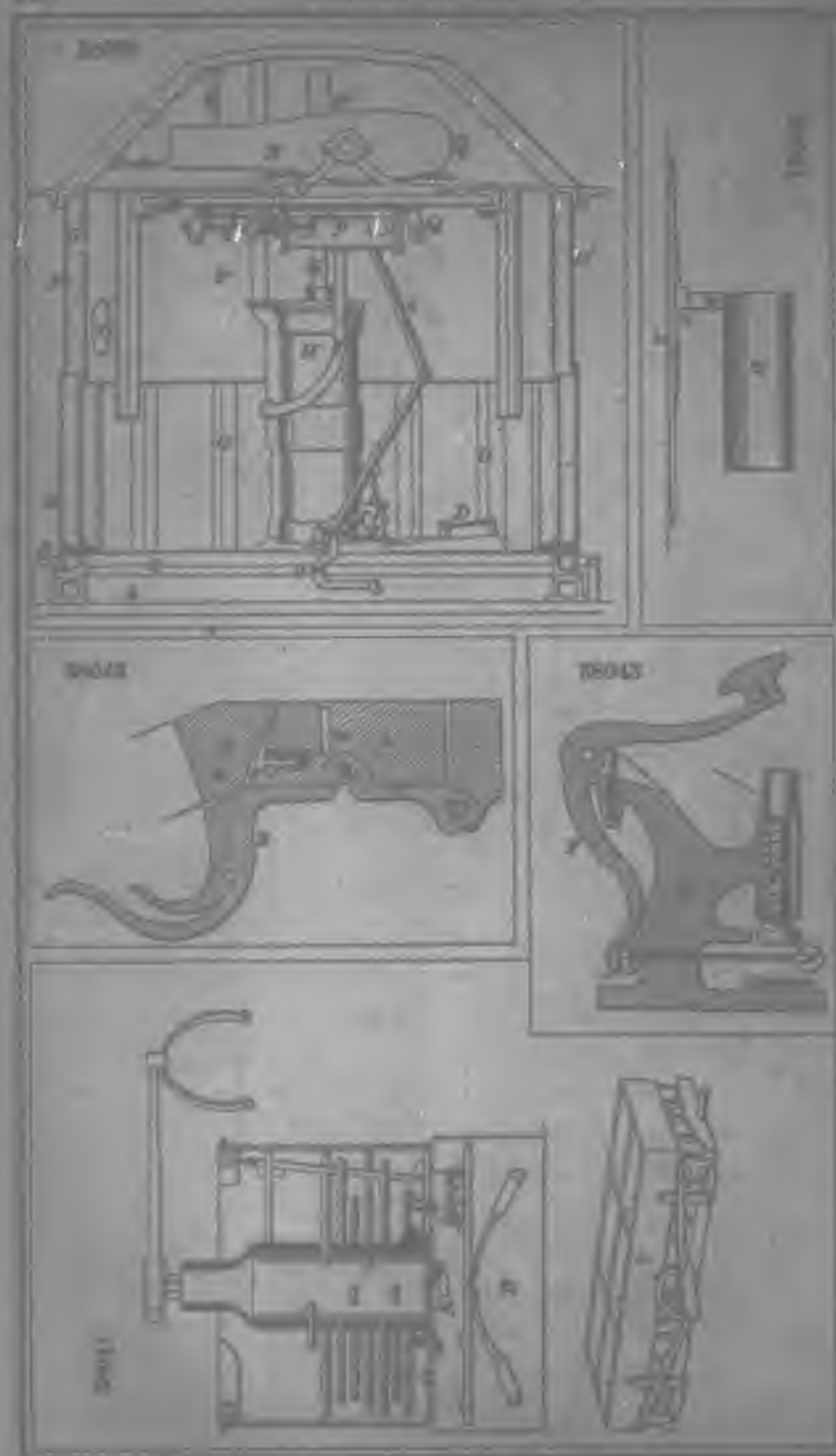
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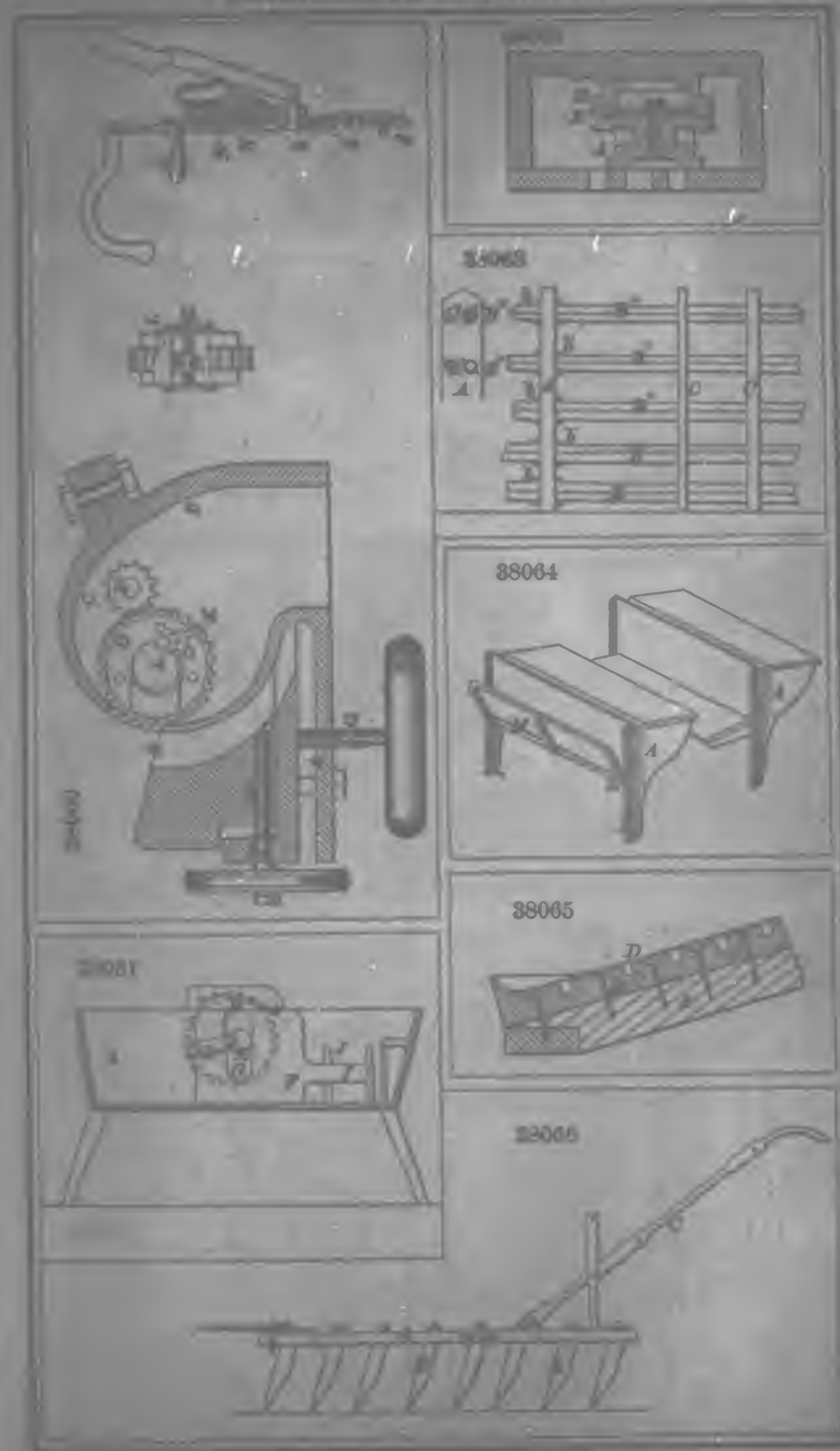
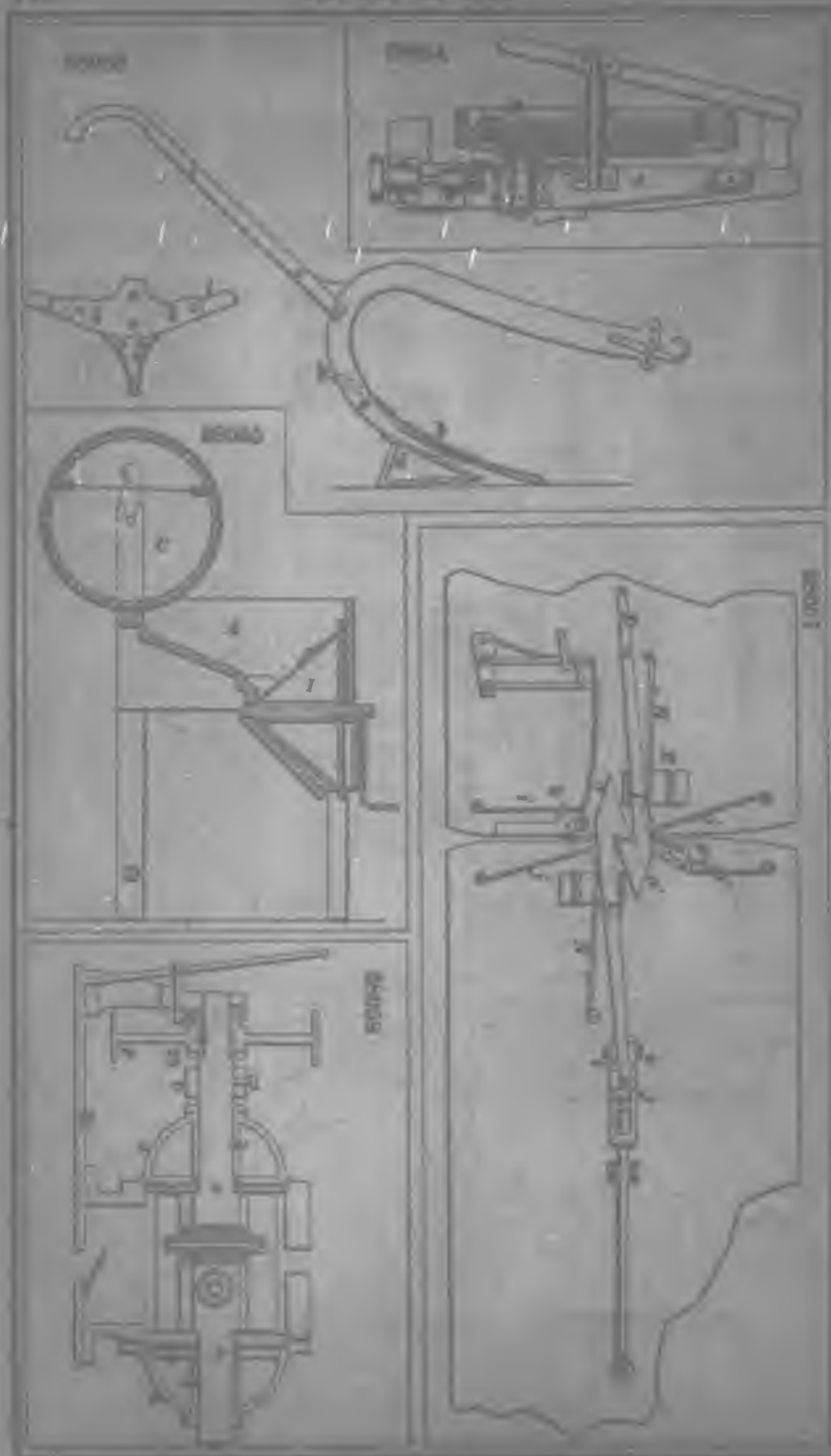


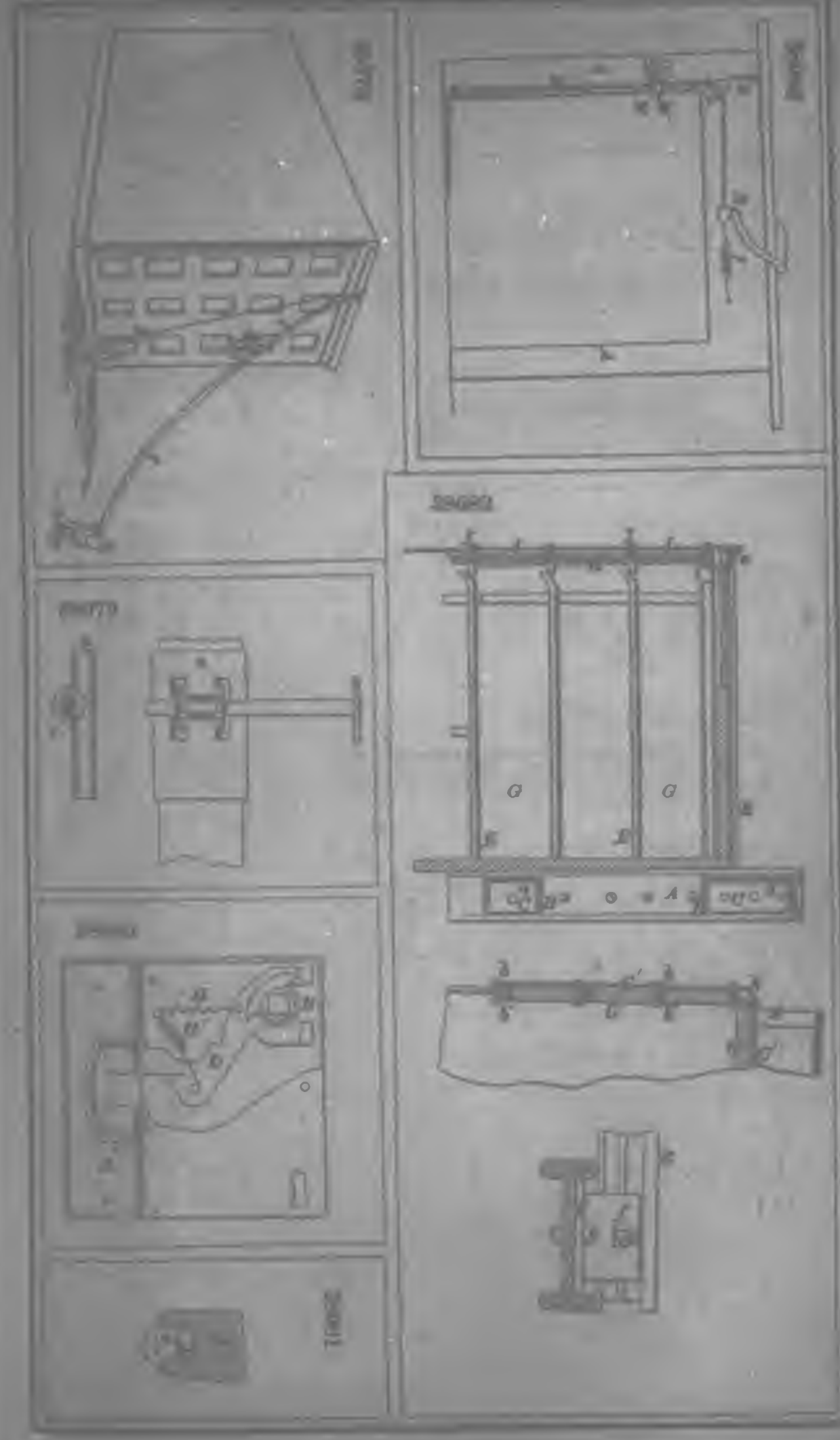
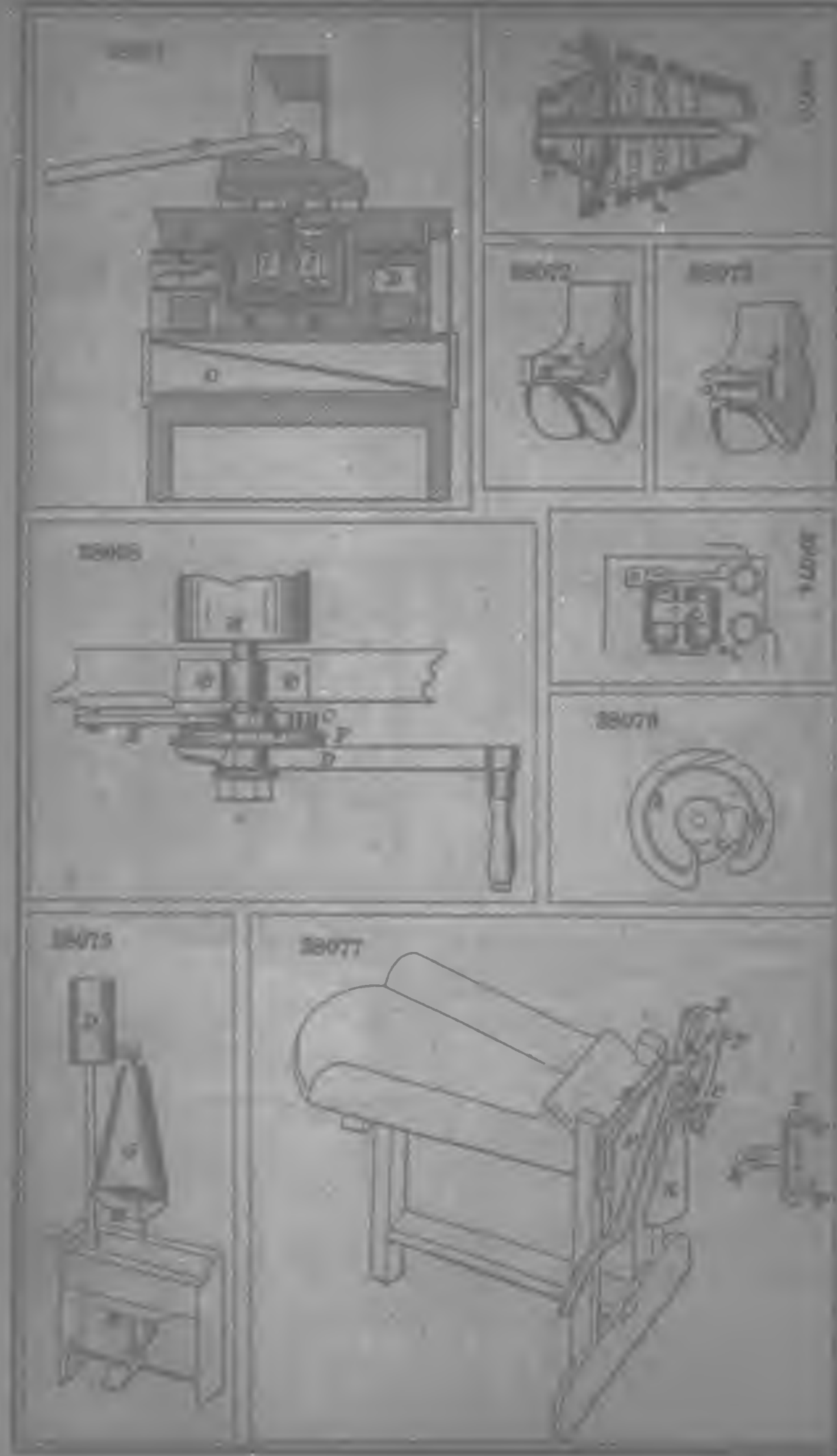
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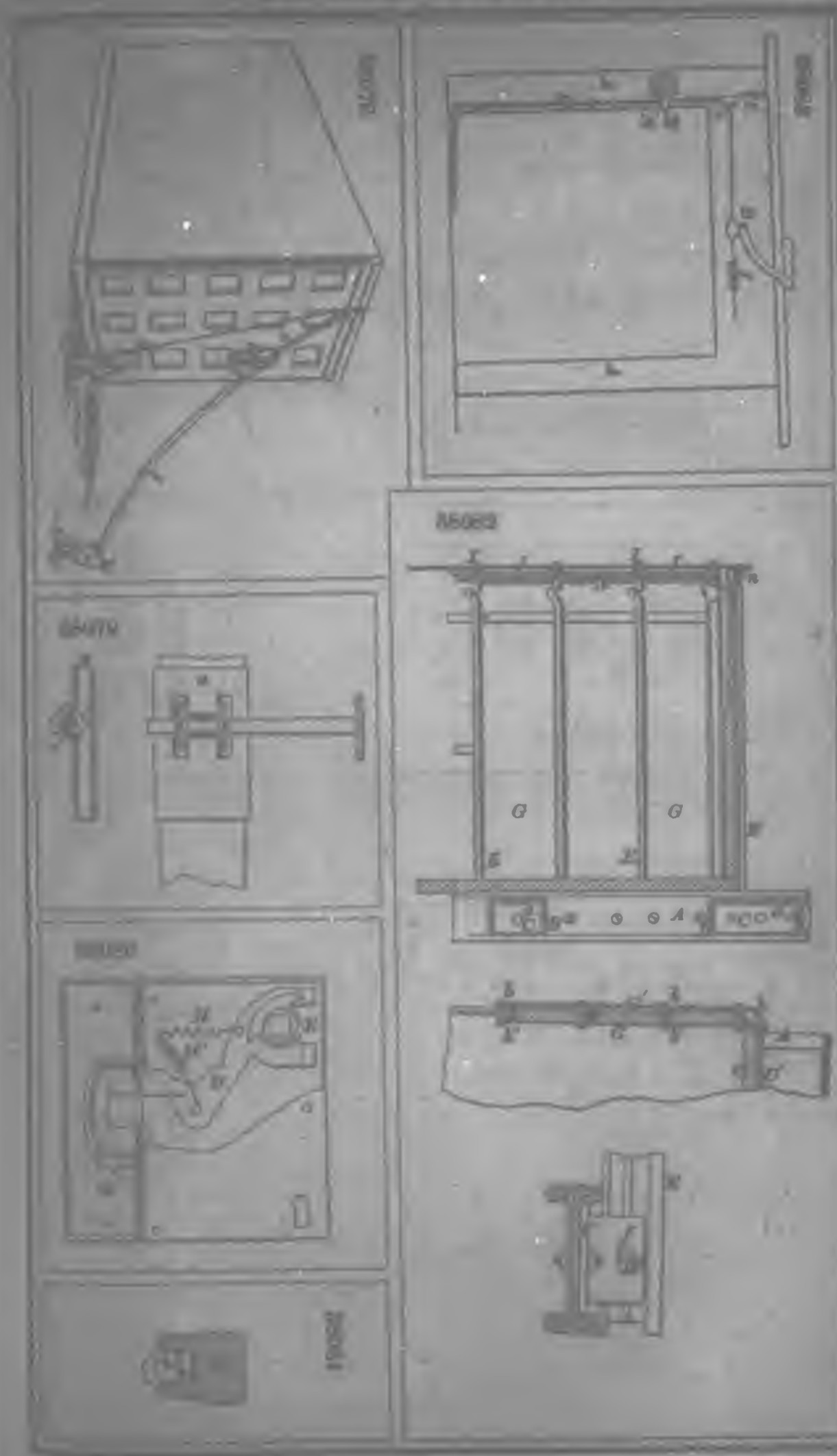
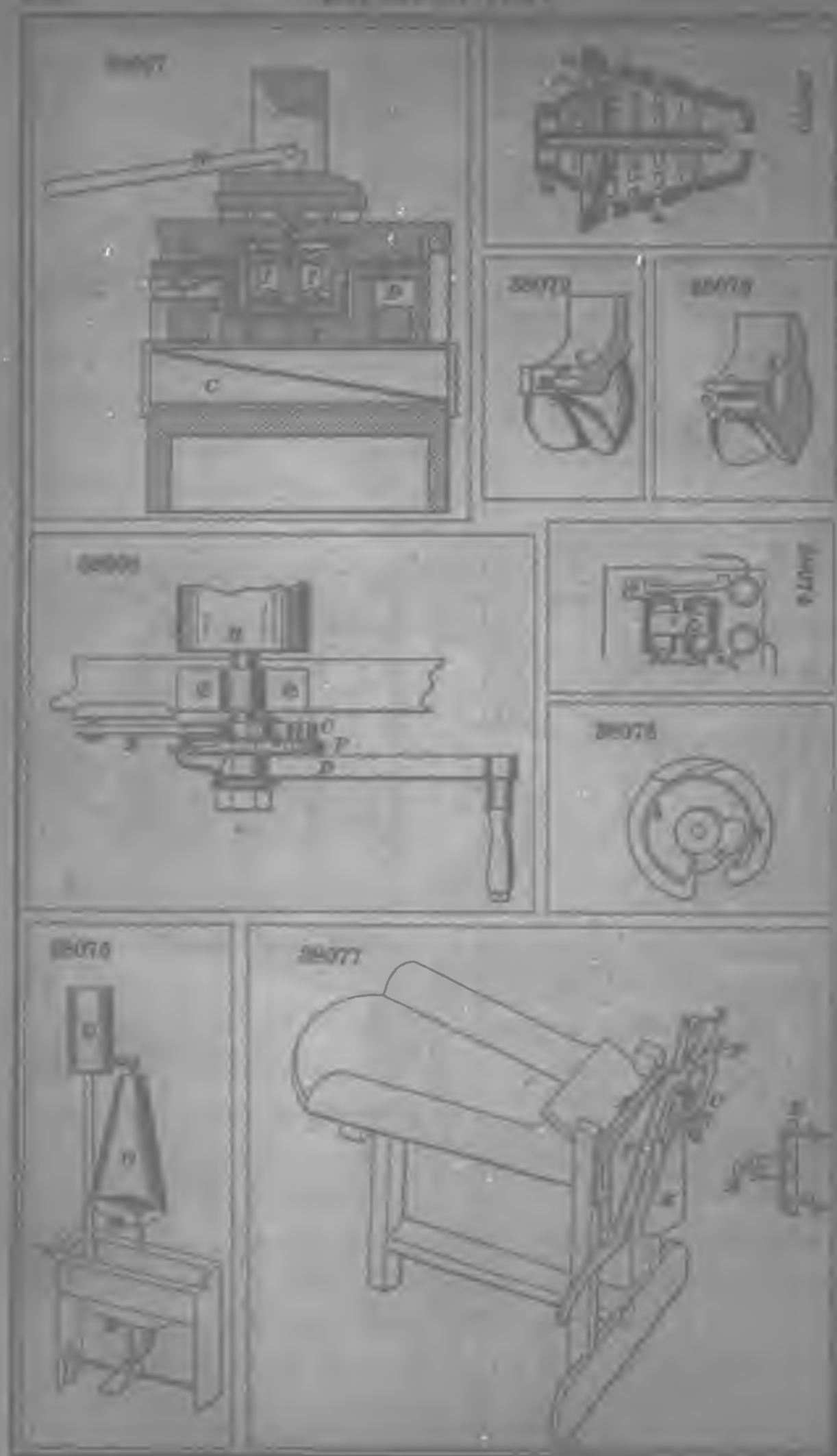


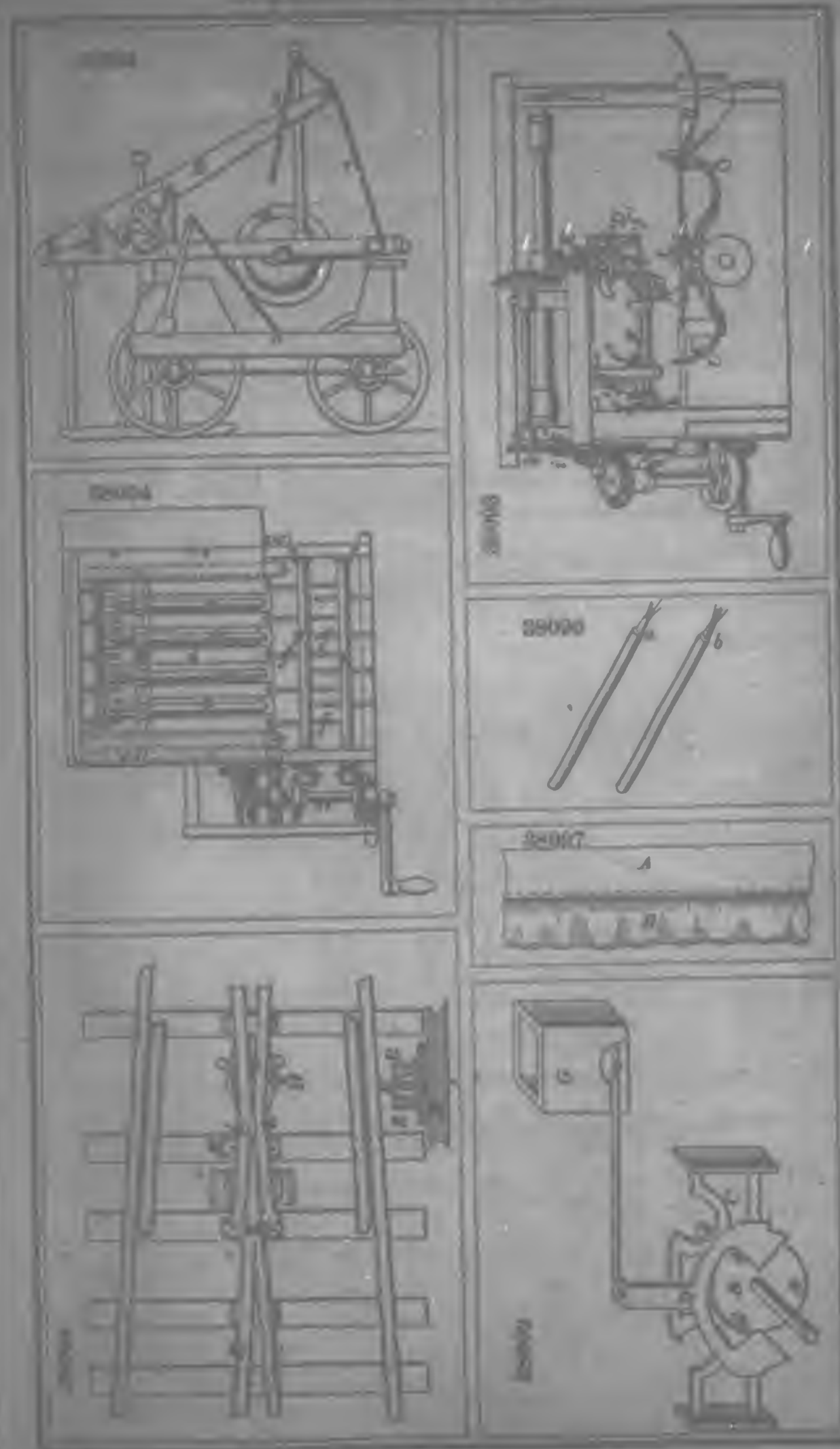
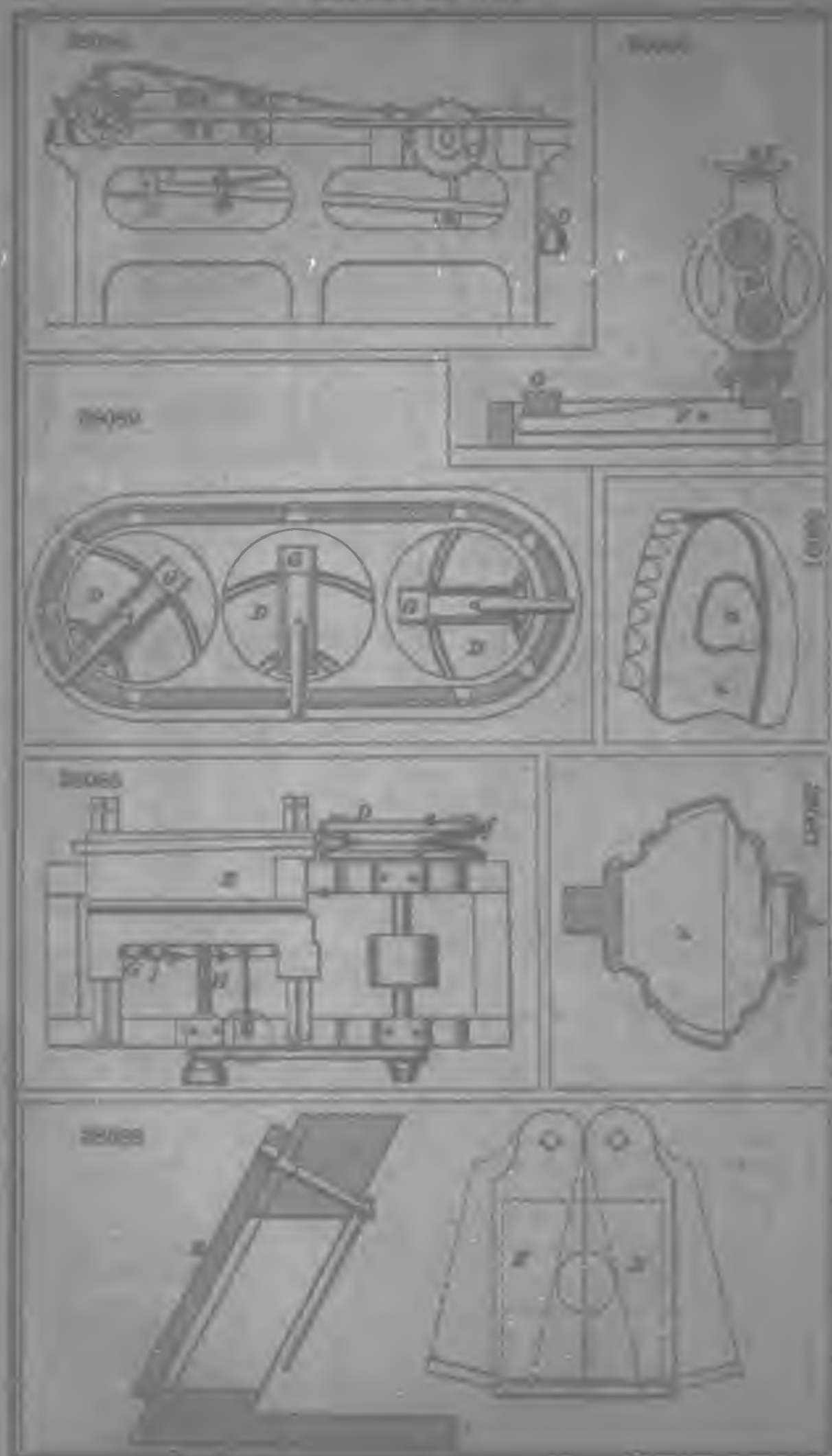


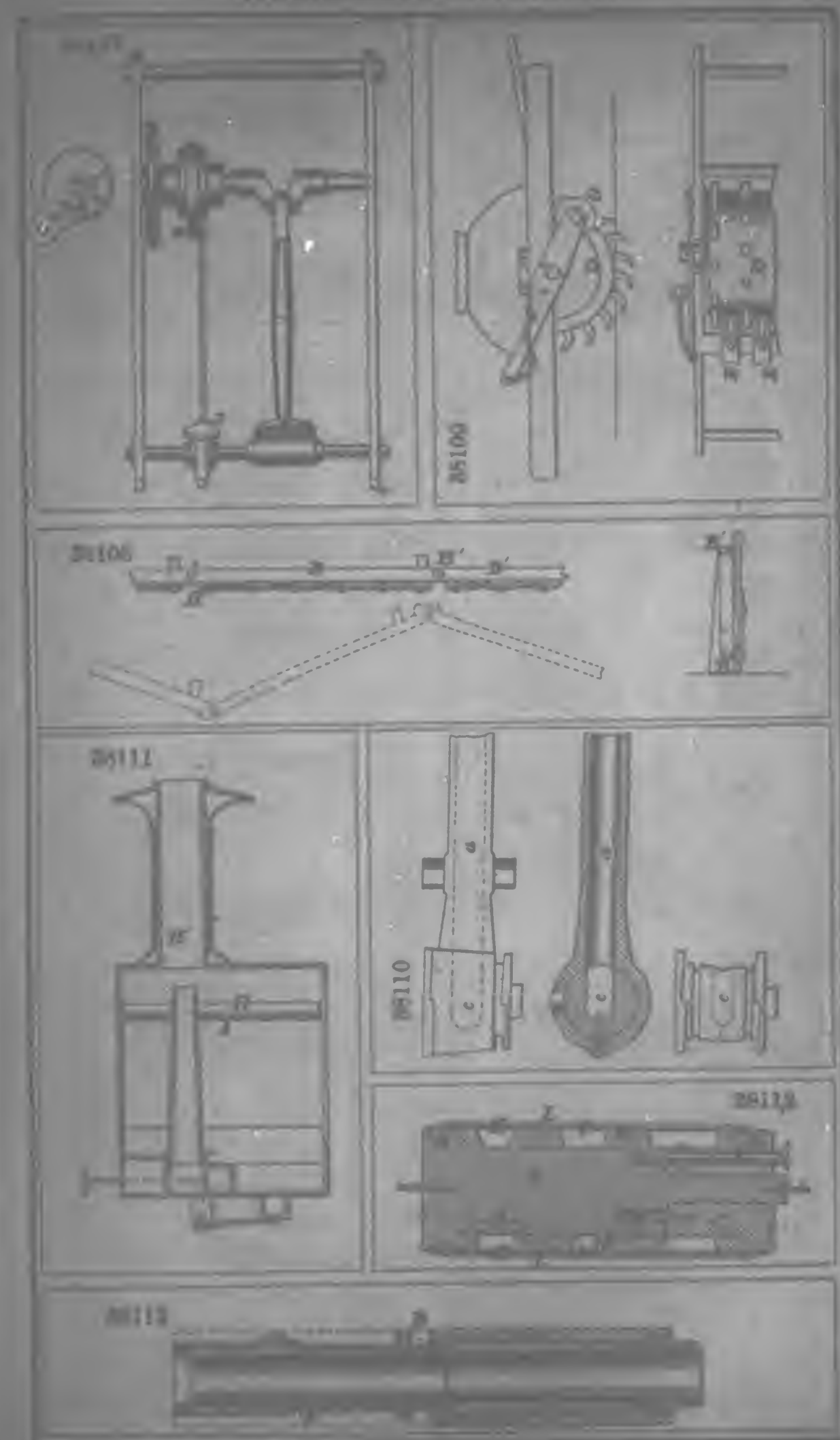
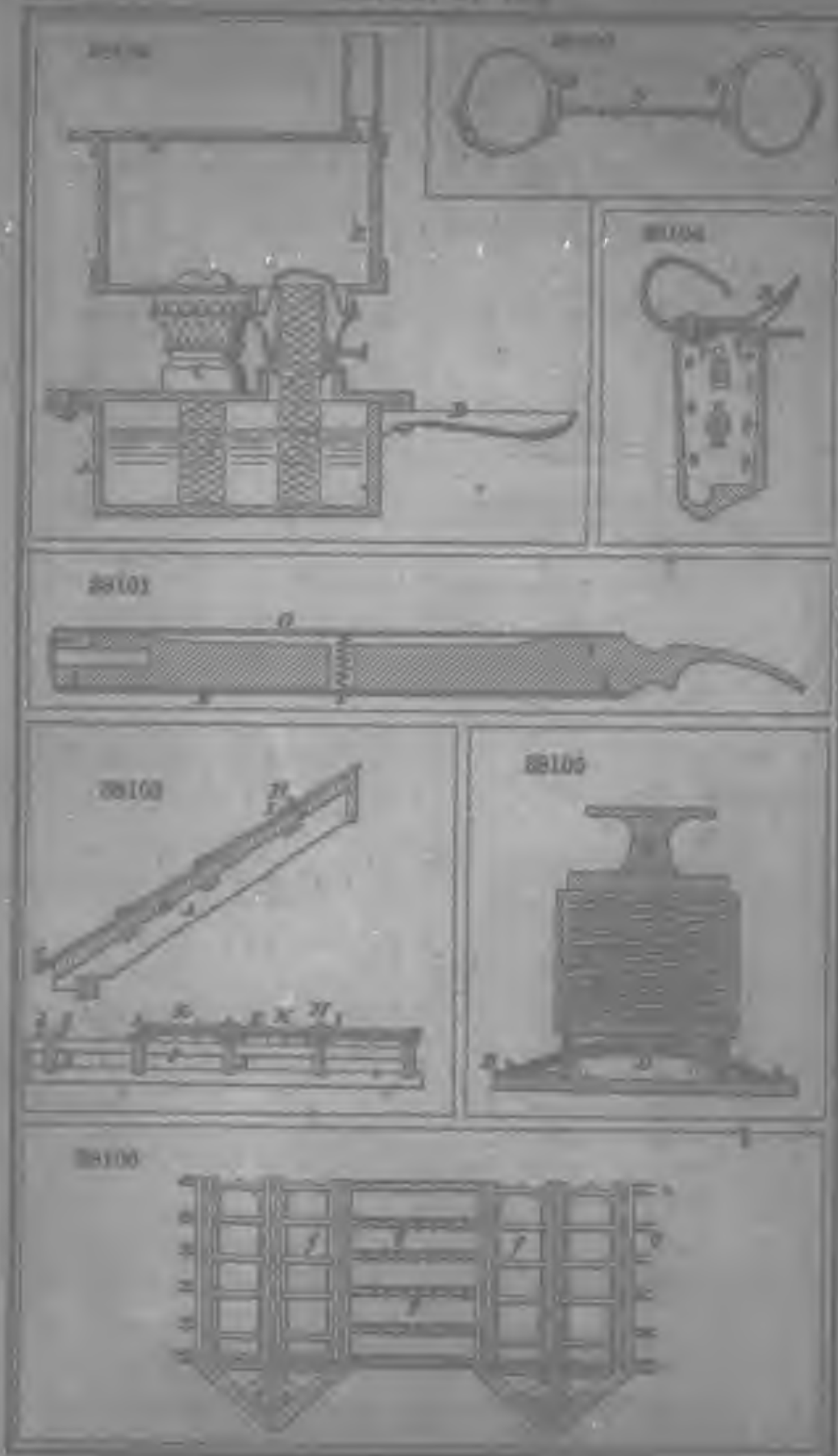


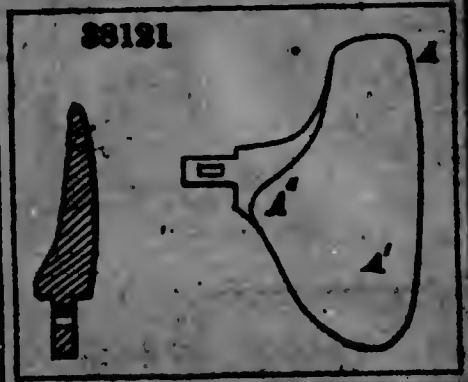
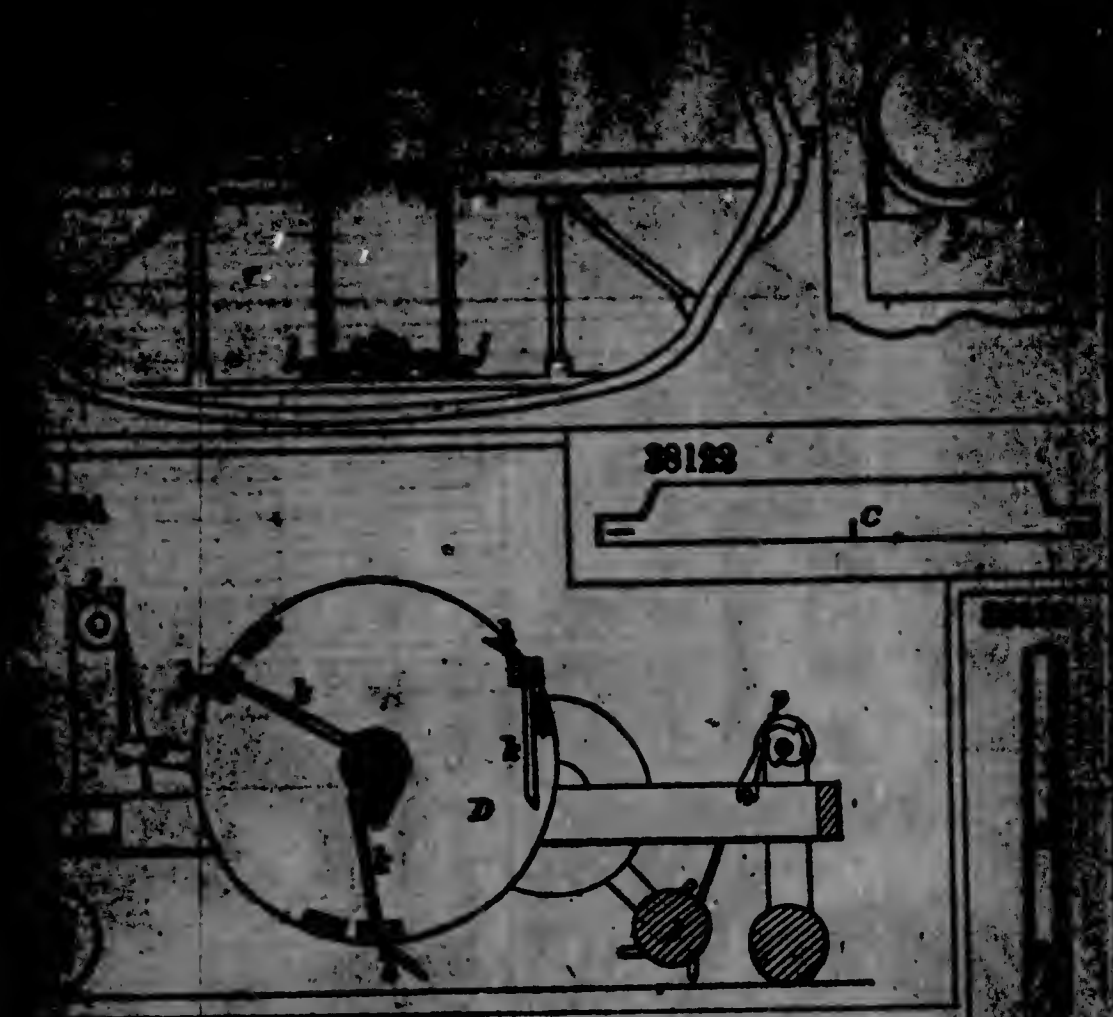
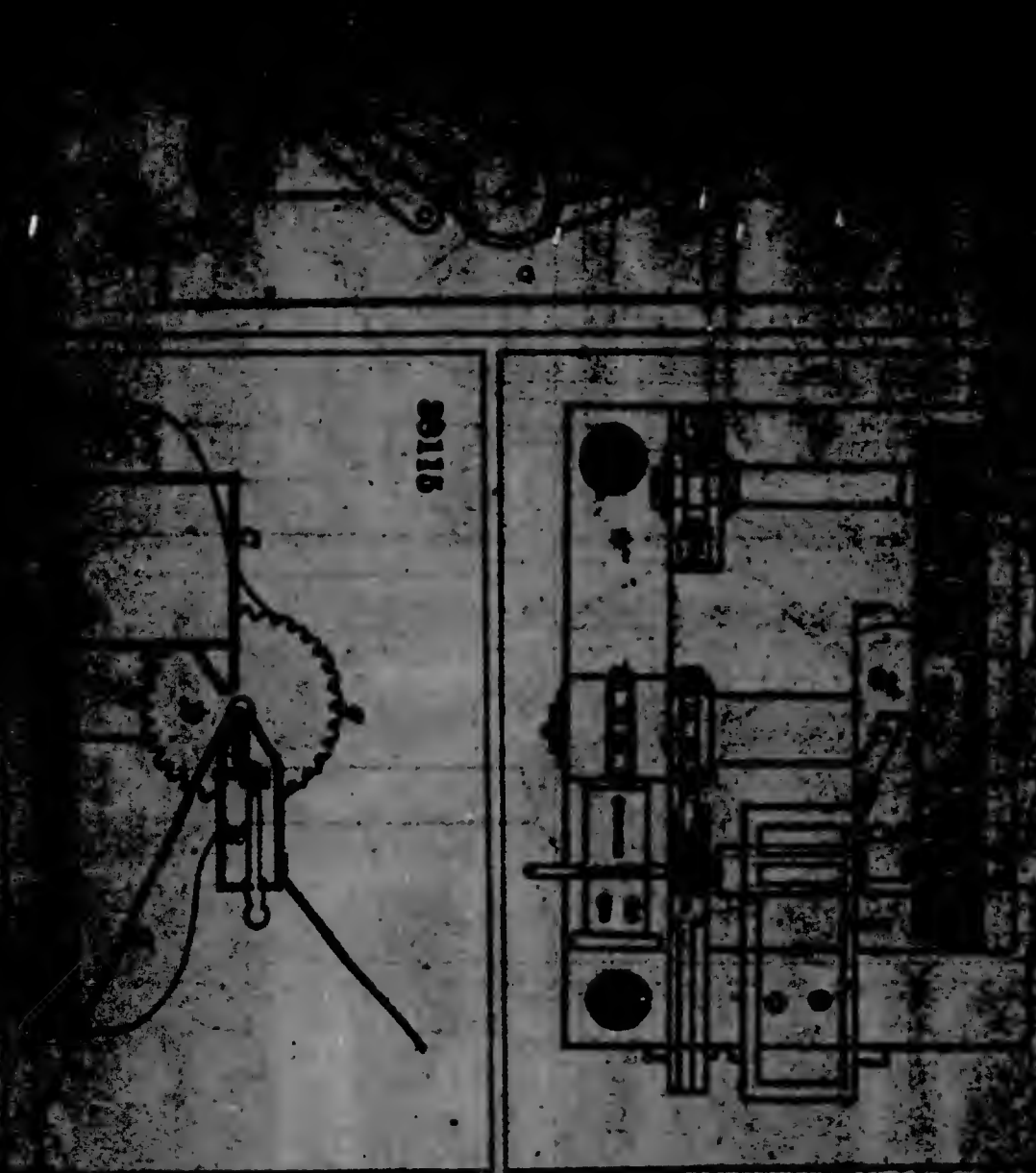




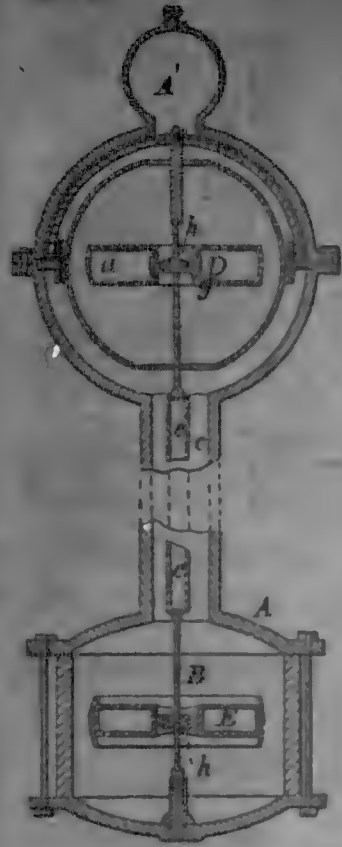




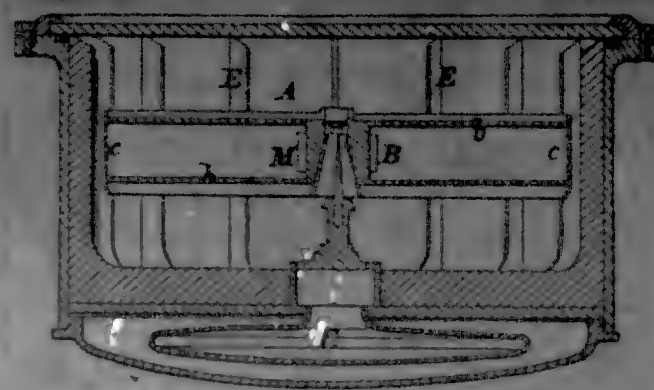




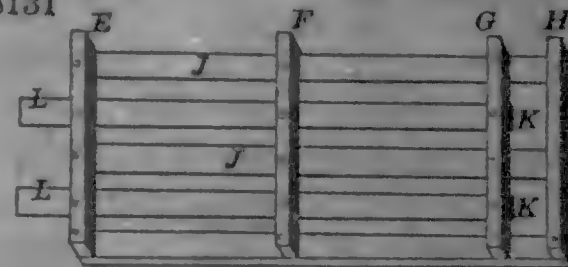
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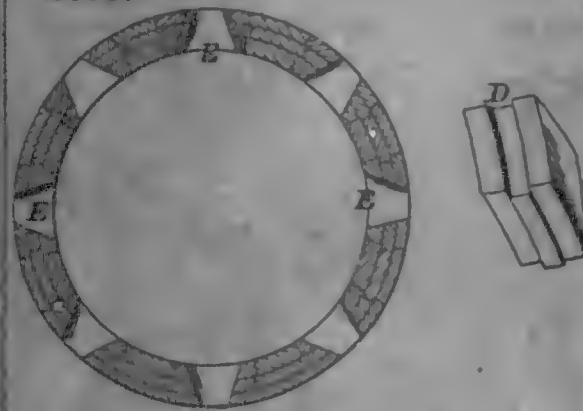
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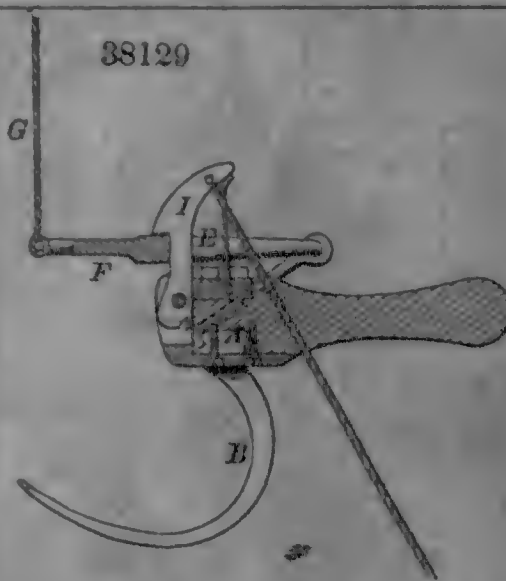
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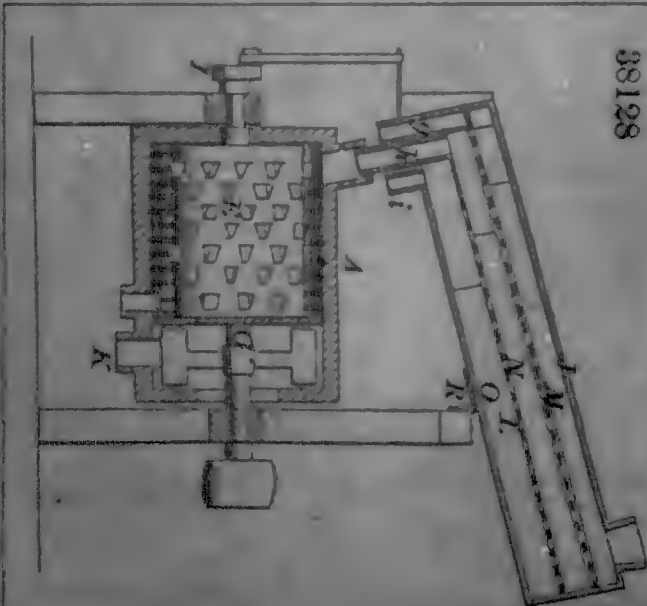
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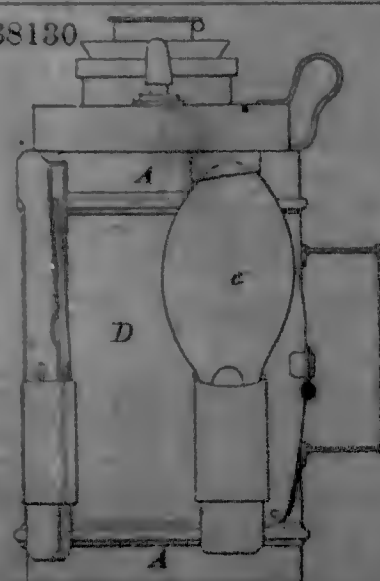
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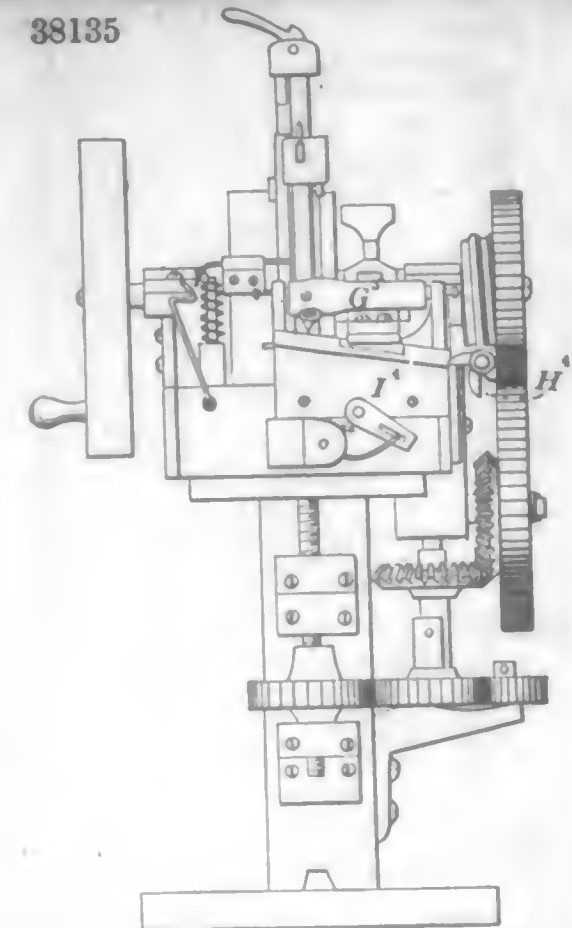
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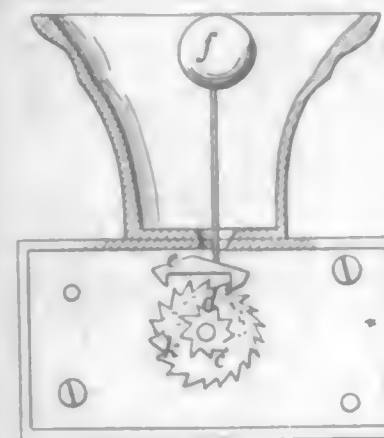
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38136



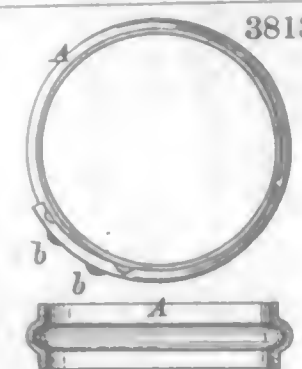
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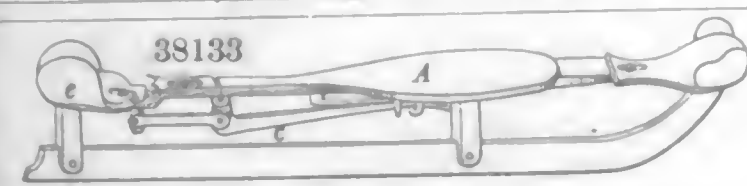
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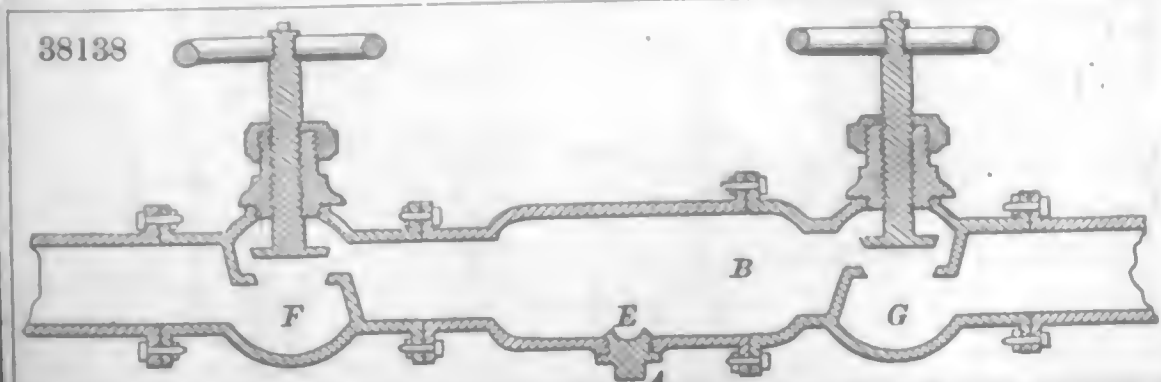
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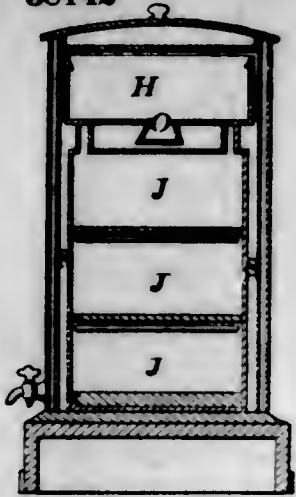
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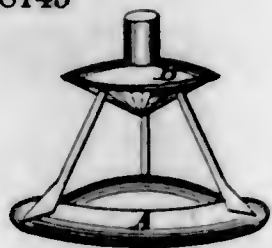
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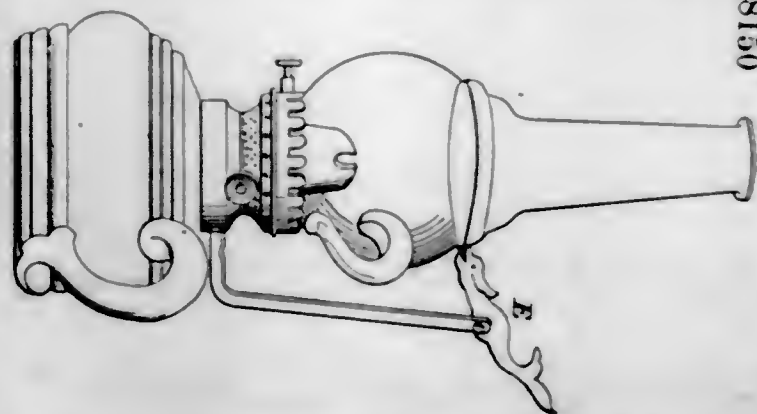
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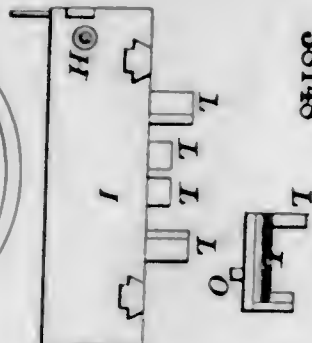
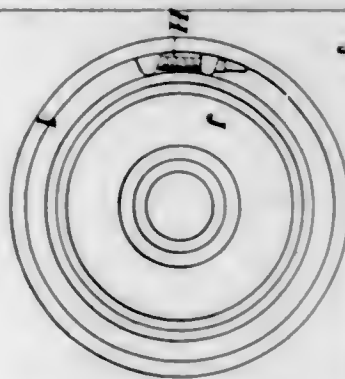
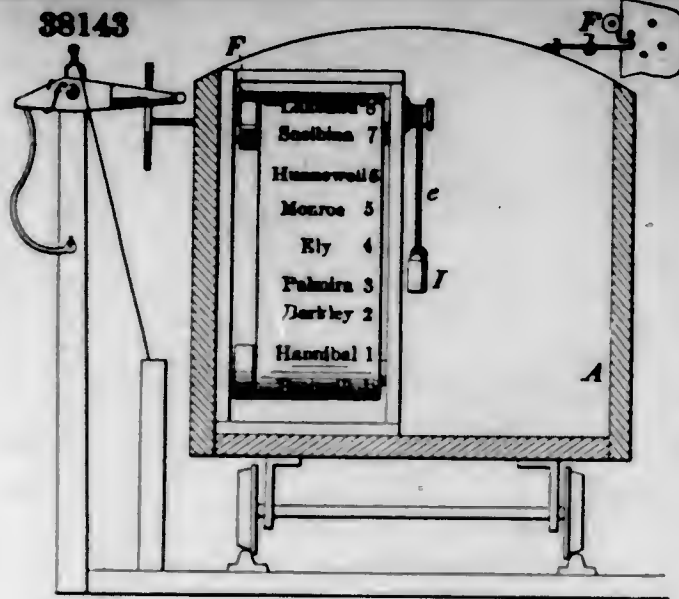


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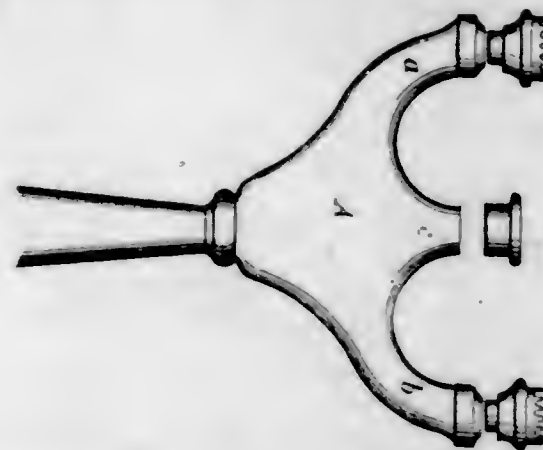


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38148

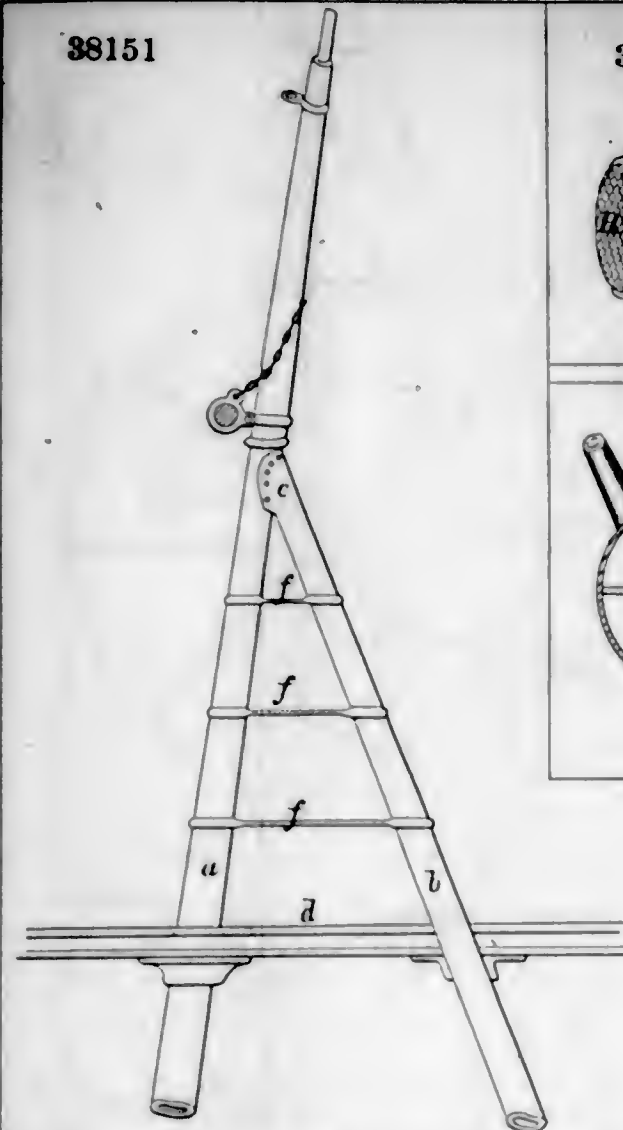


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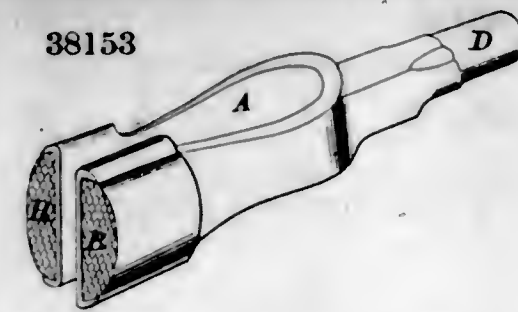
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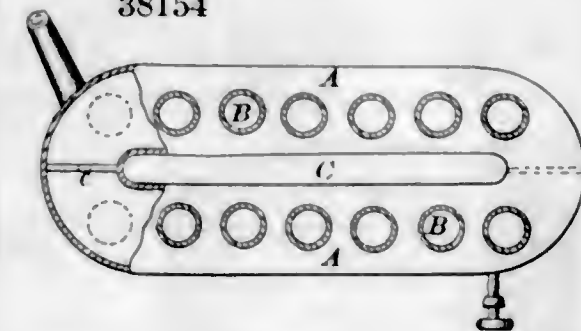
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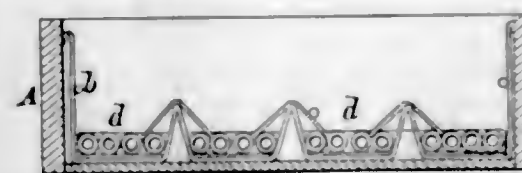
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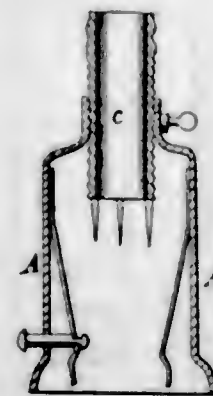
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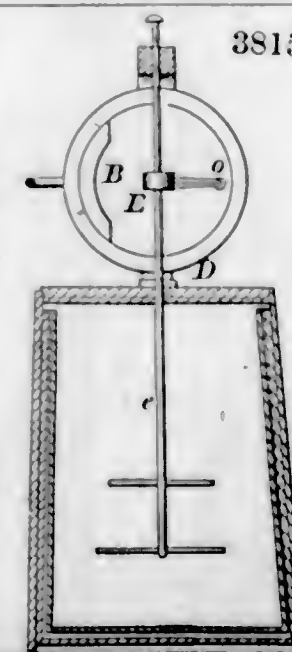
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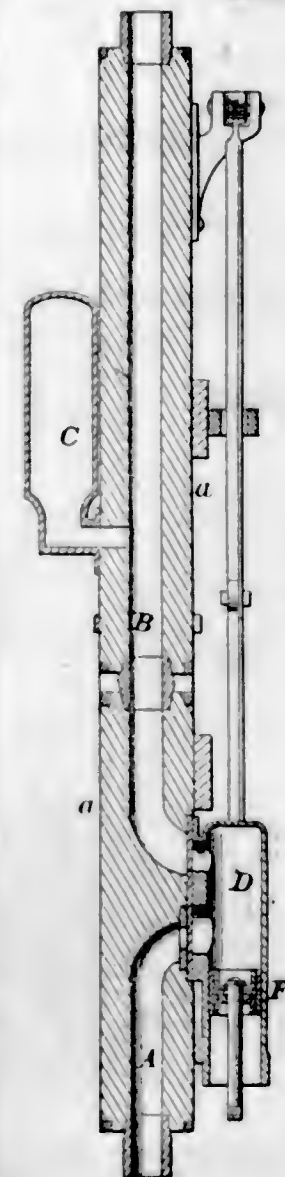
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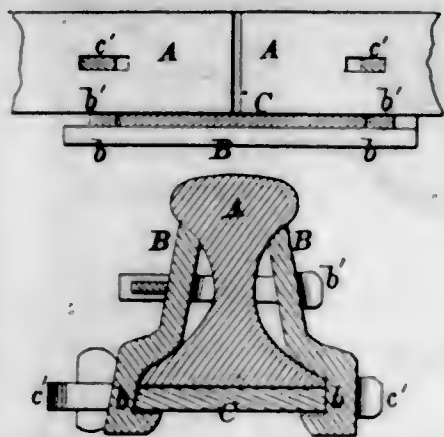
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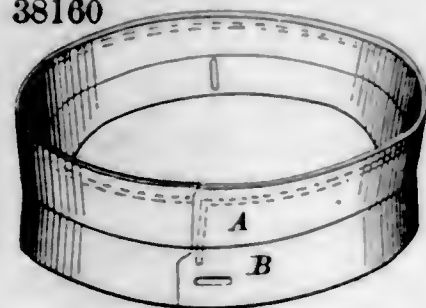
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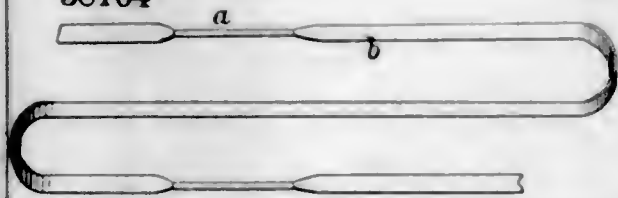
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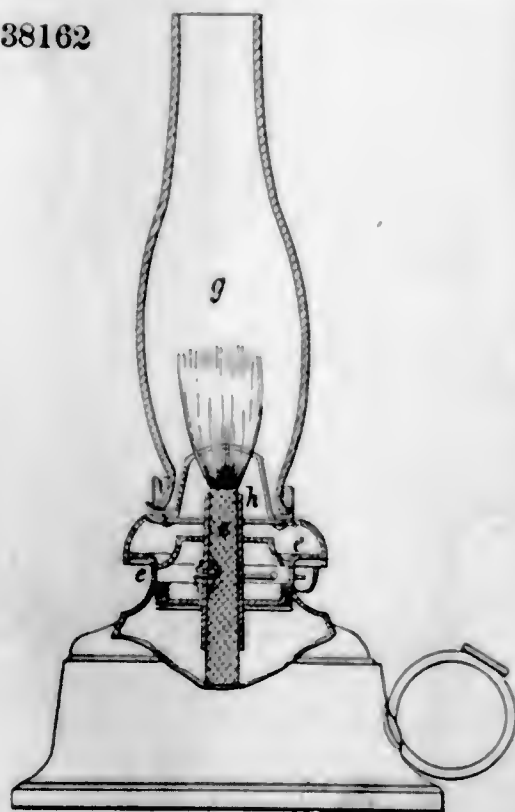
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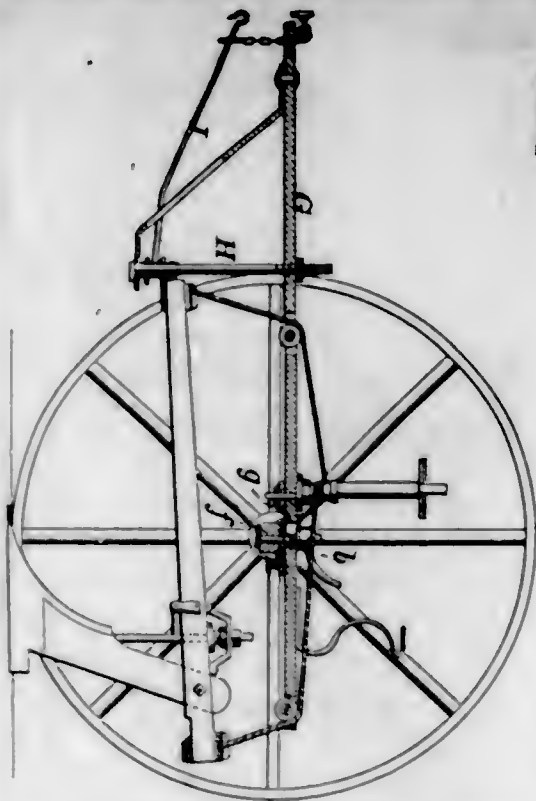
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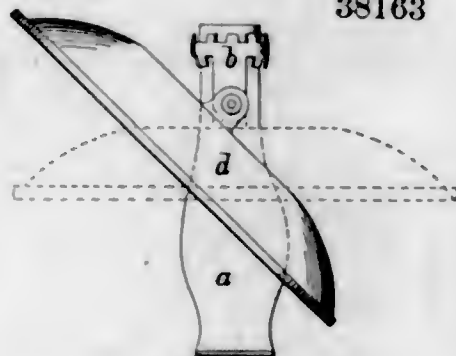
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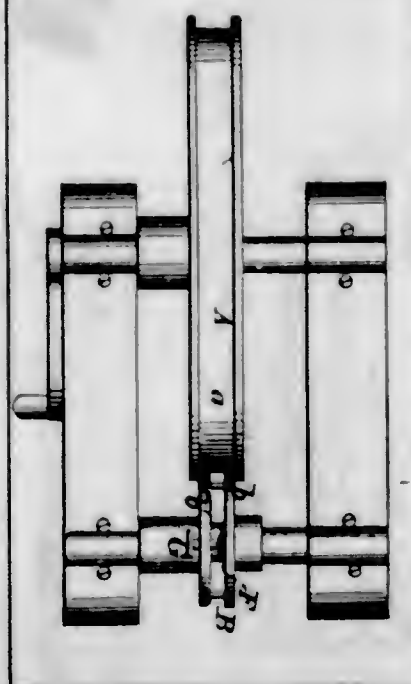
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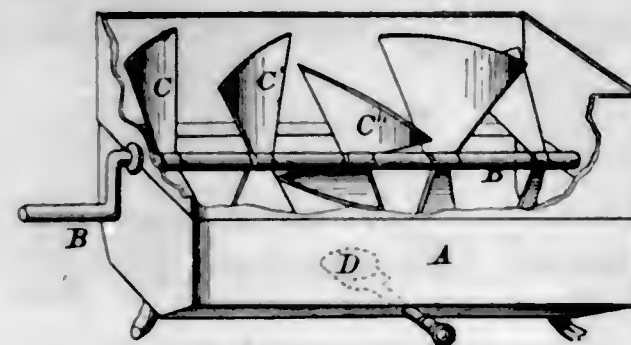
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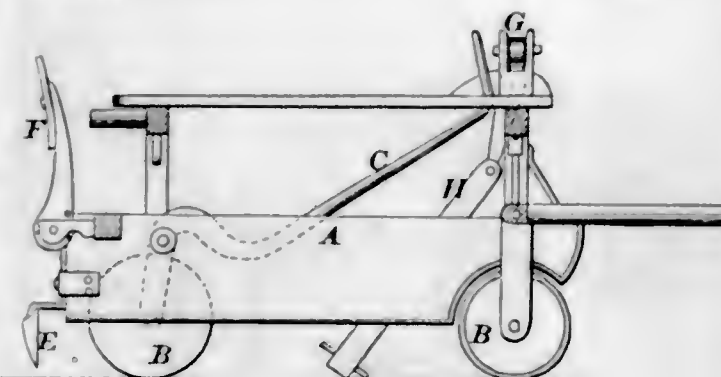
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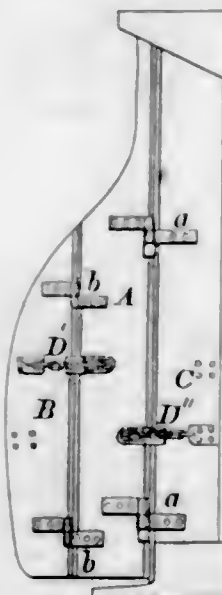
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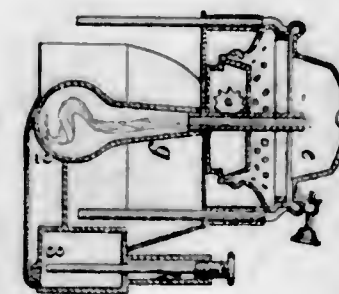
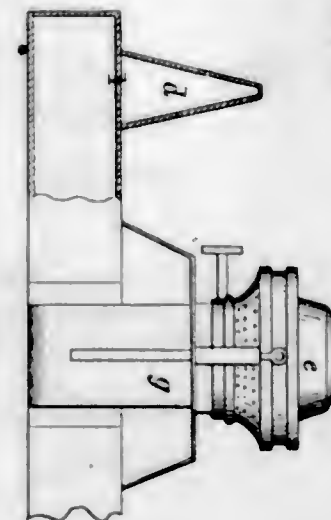
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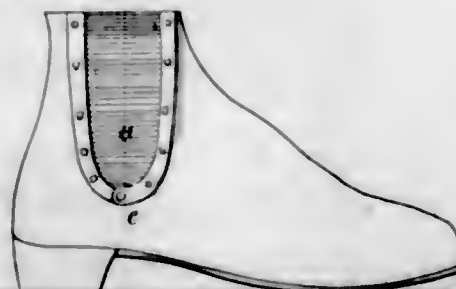
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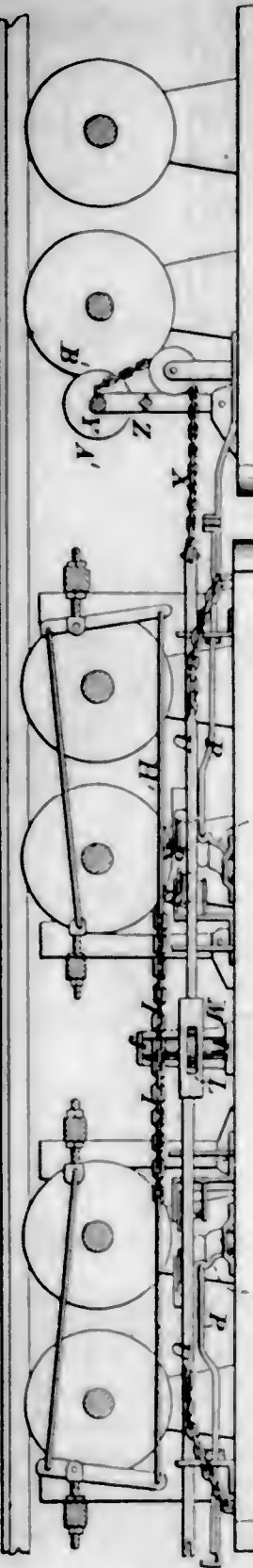
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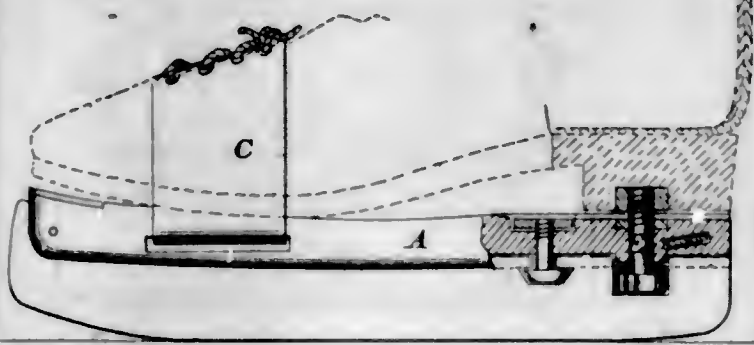
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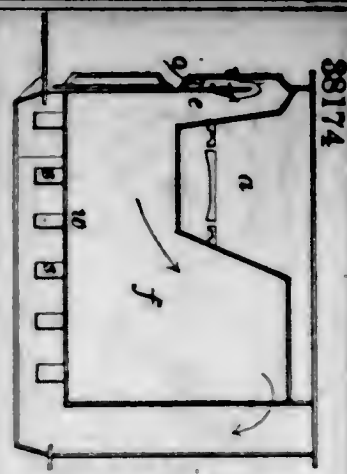
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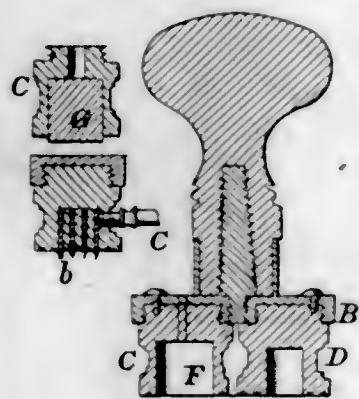
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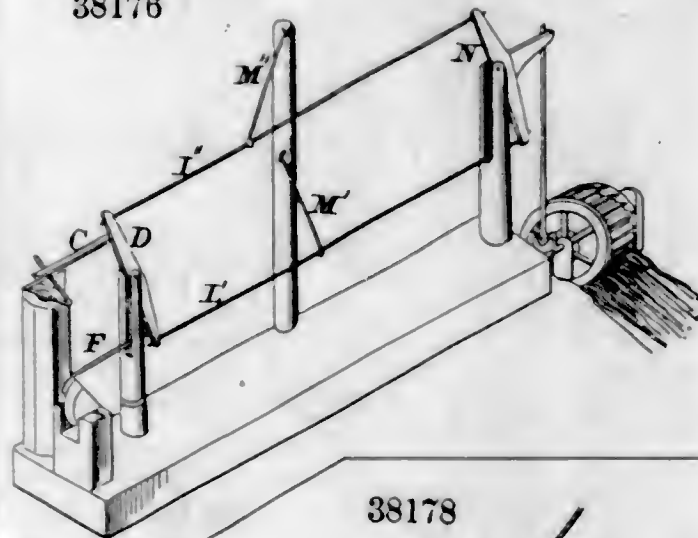
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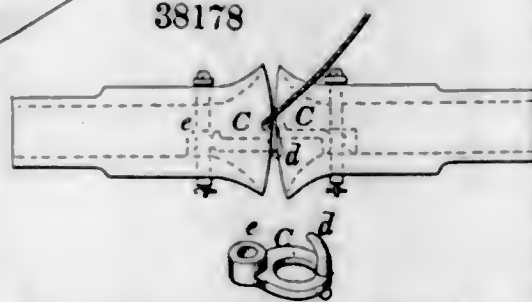
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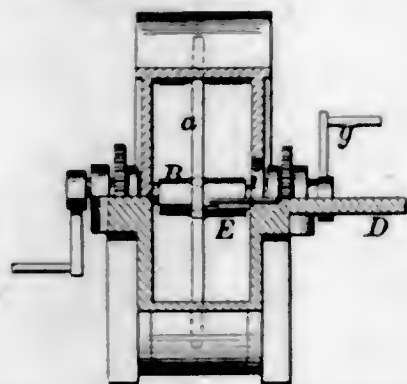
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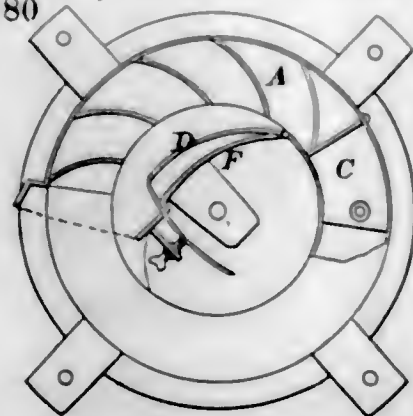
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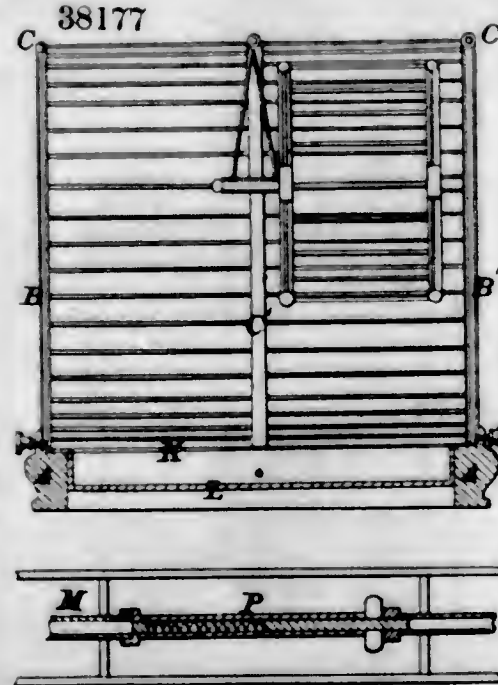
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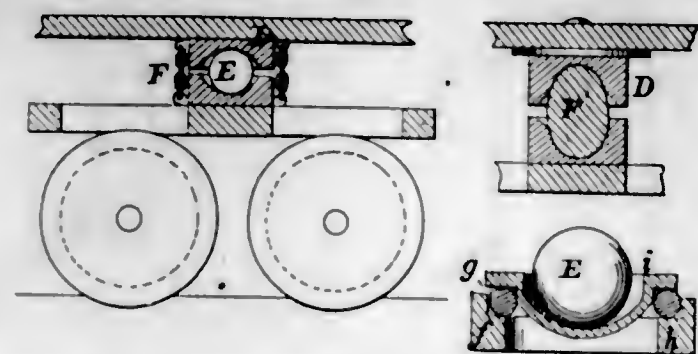
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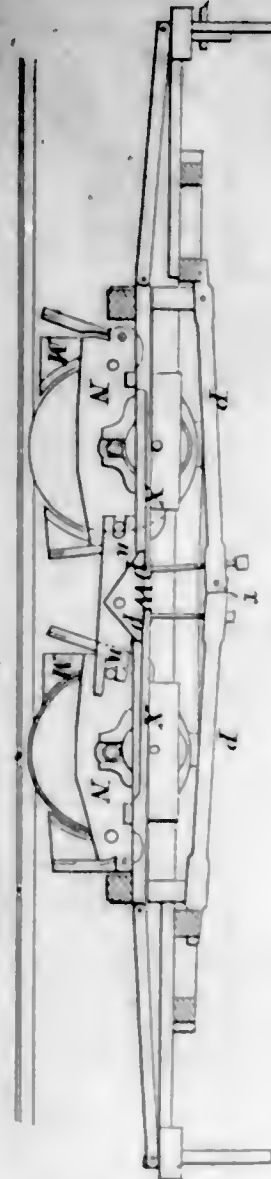
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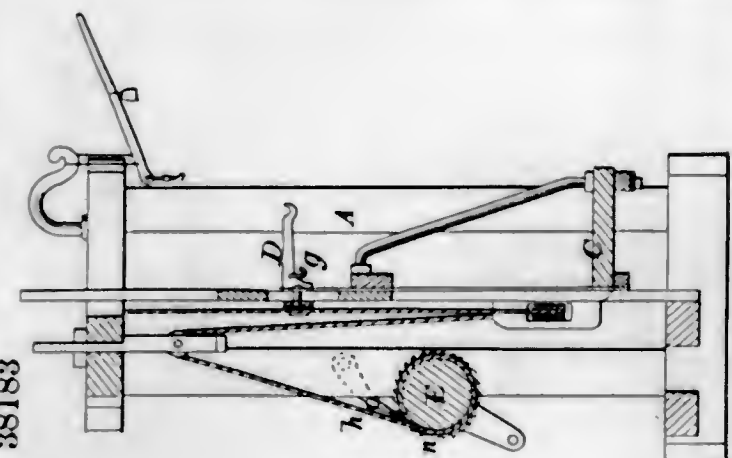
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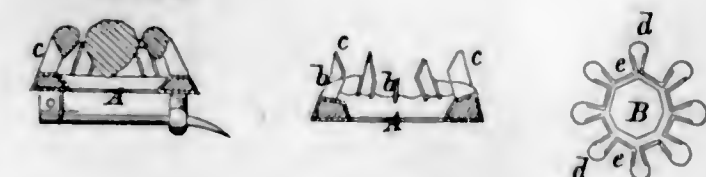
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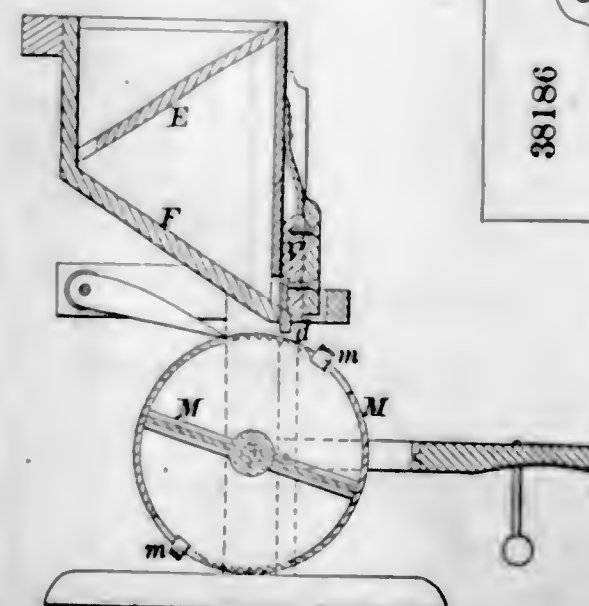
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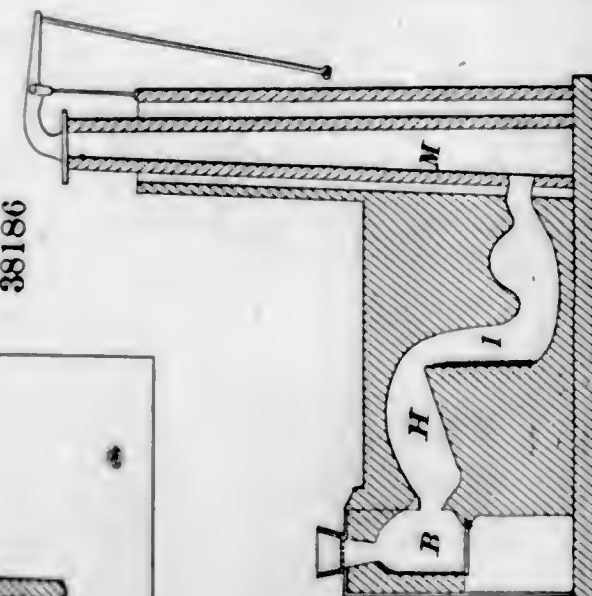
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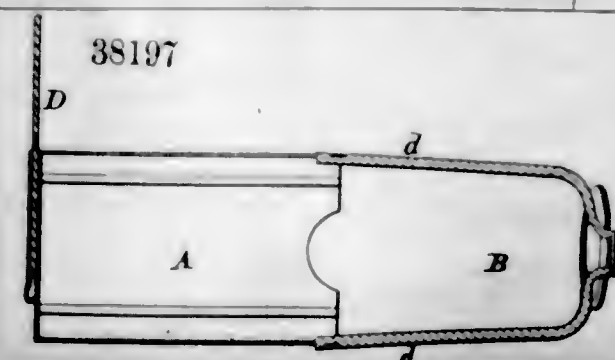
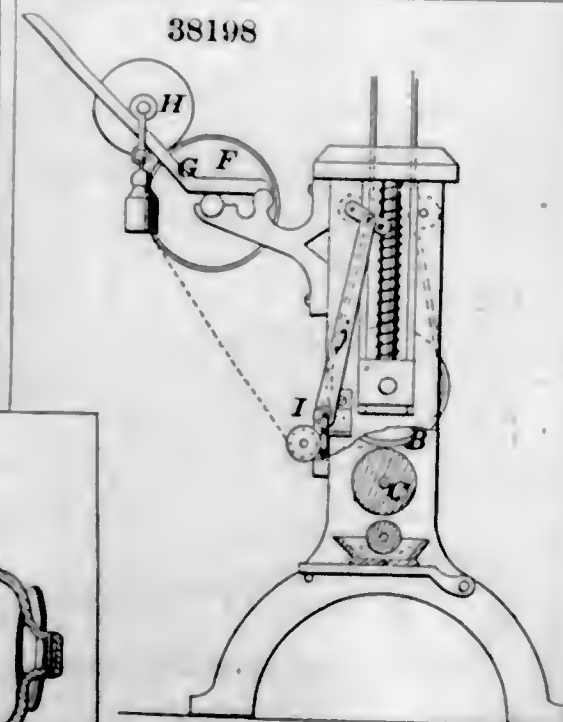
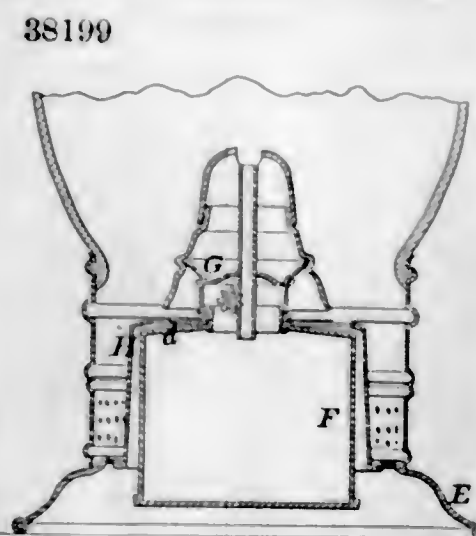
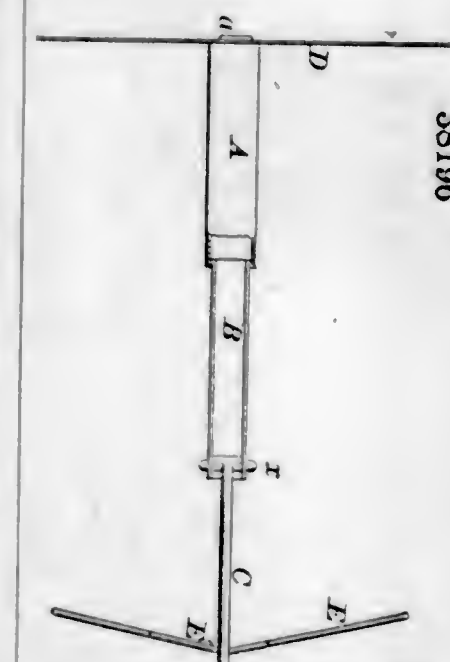
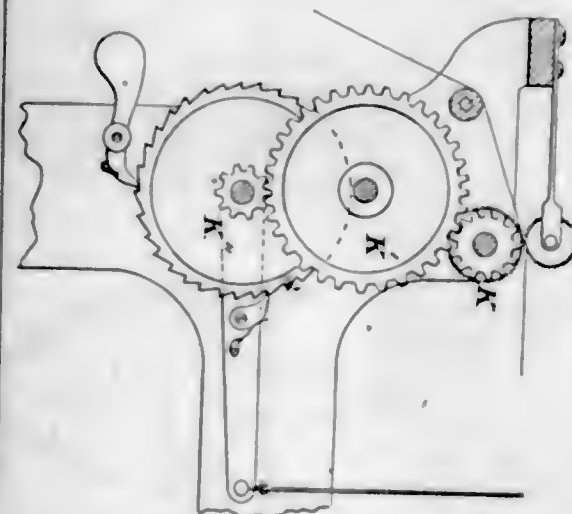
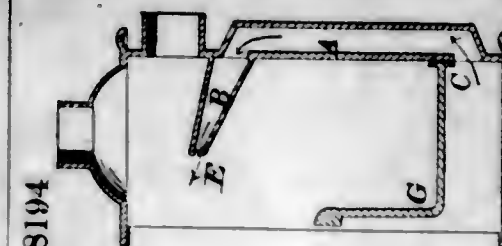
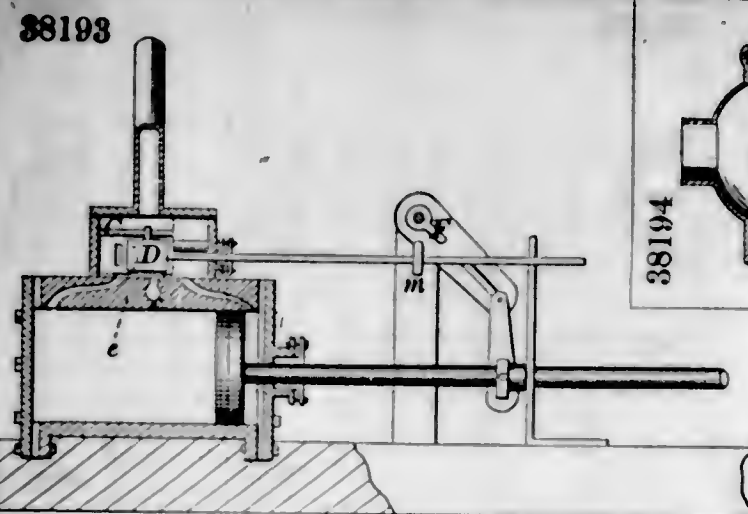
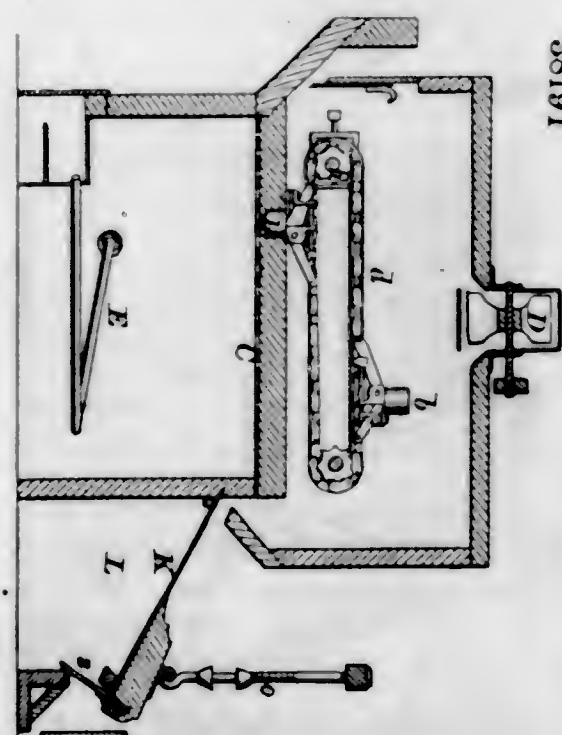
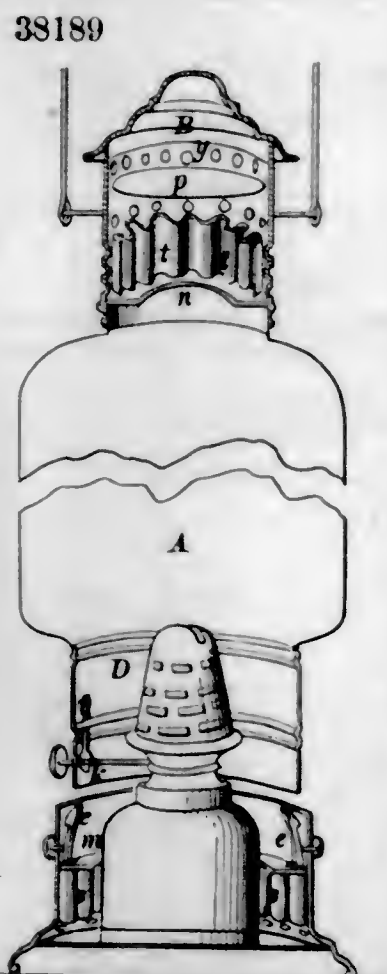
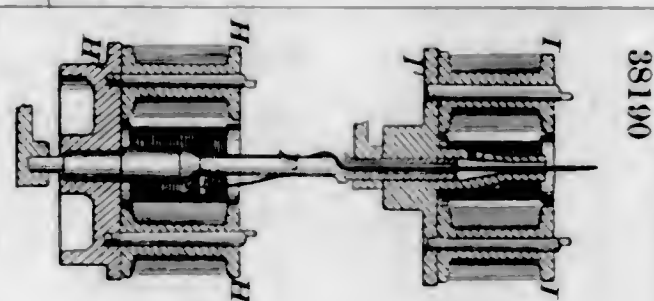
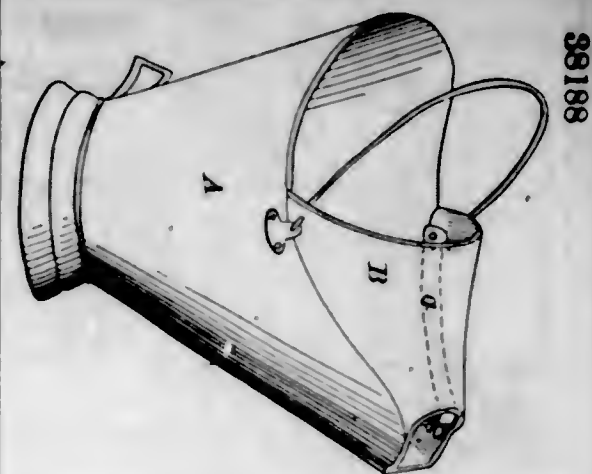
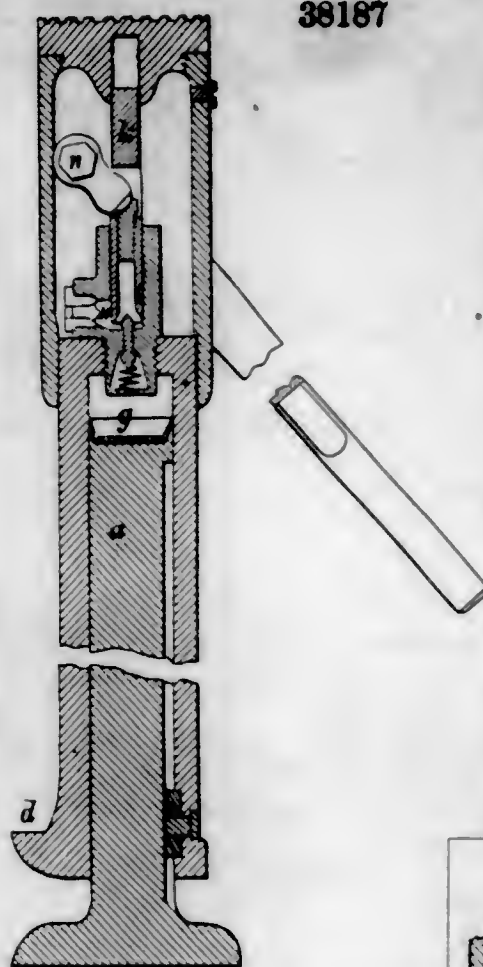


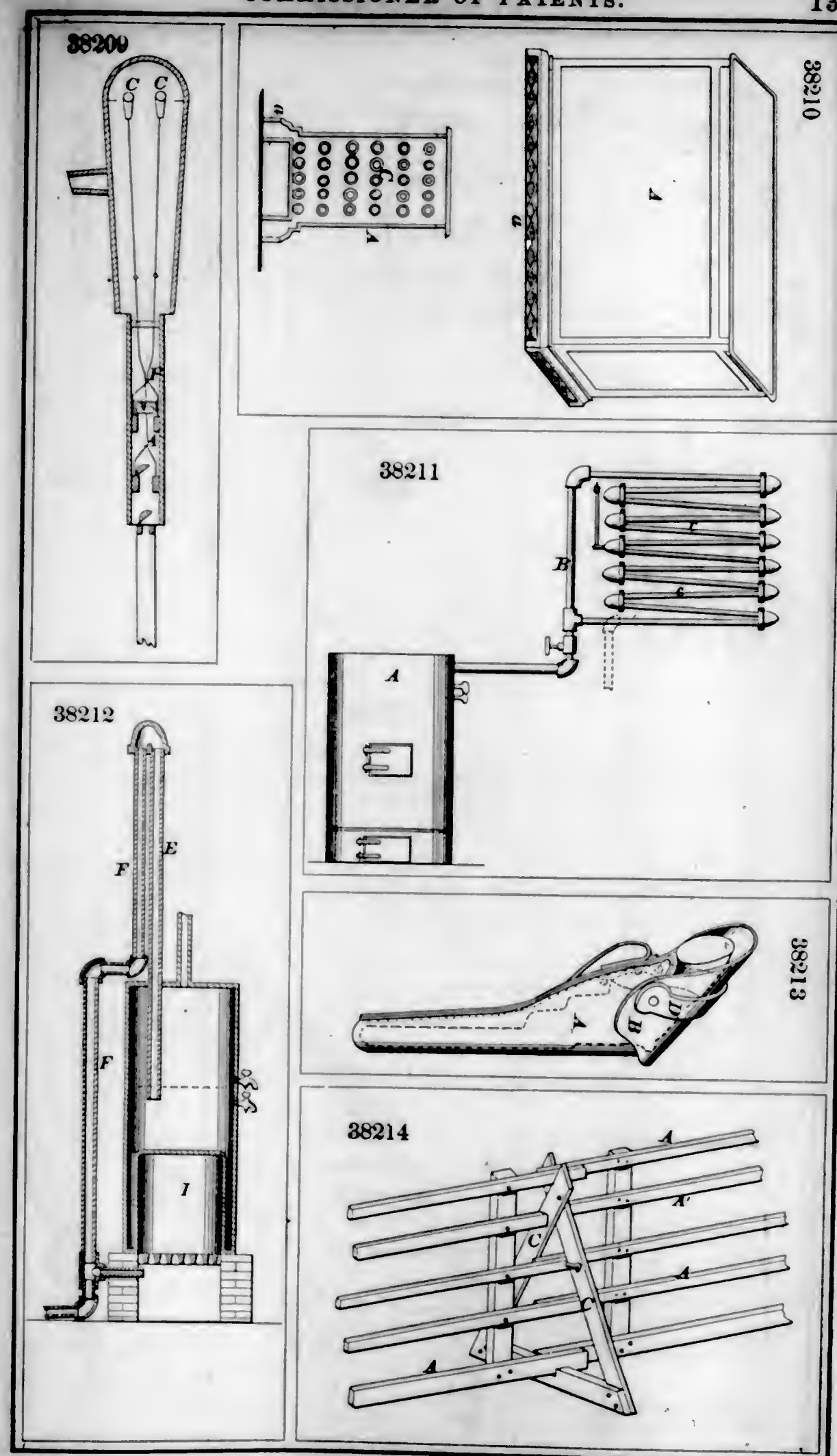
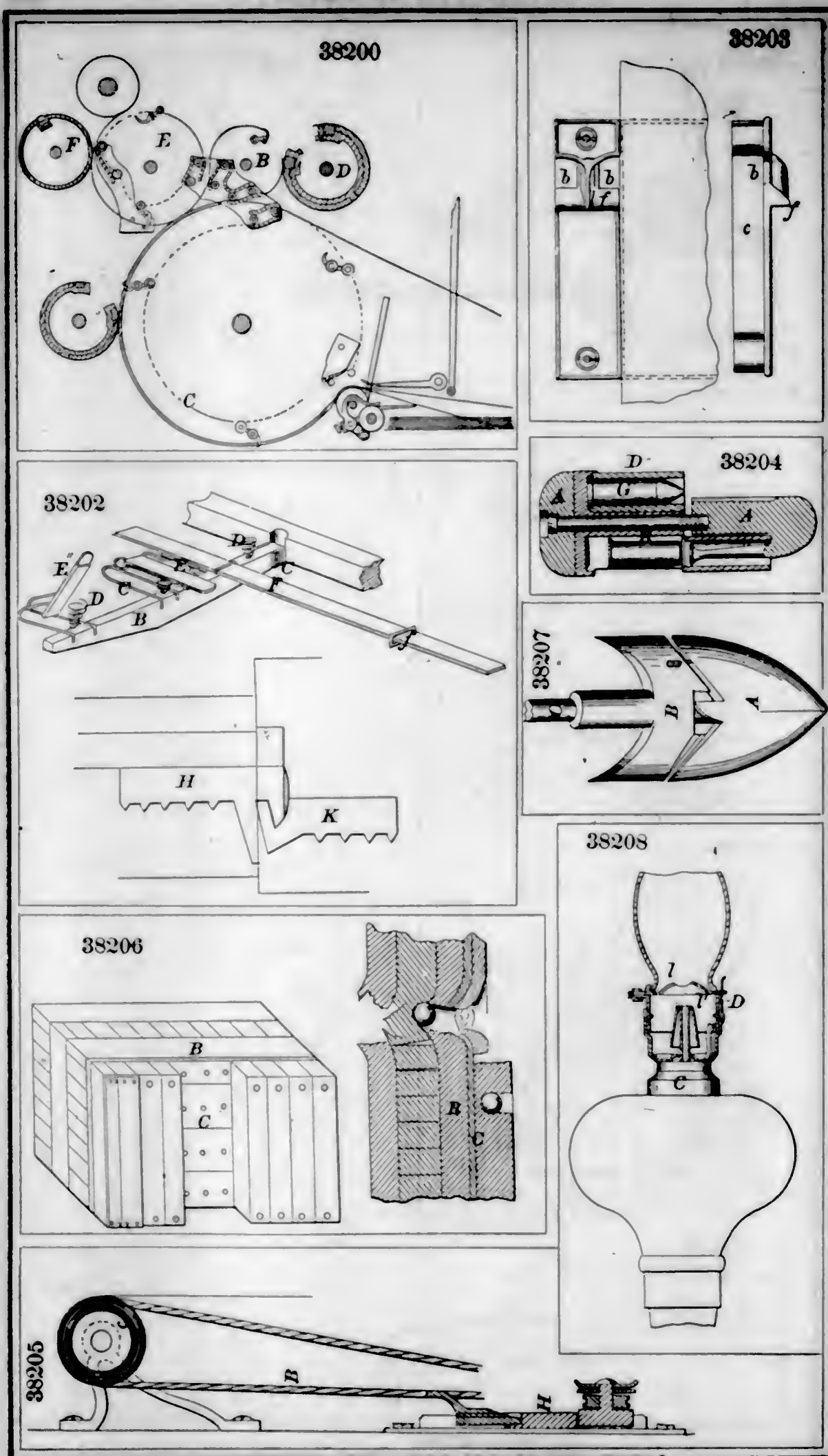
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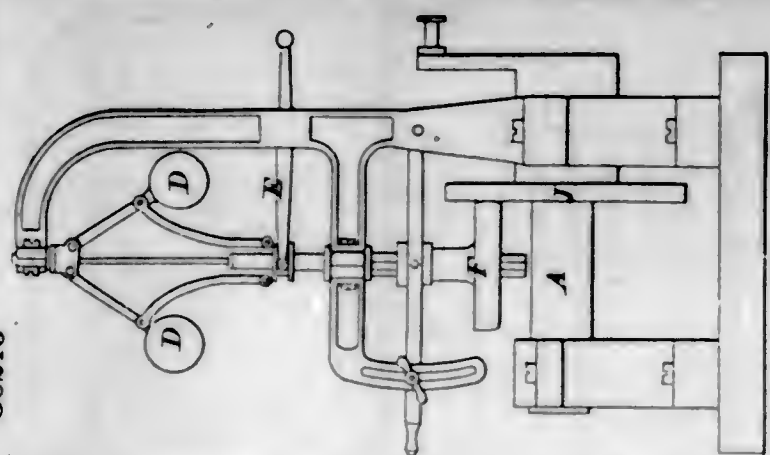
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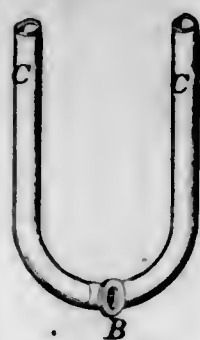




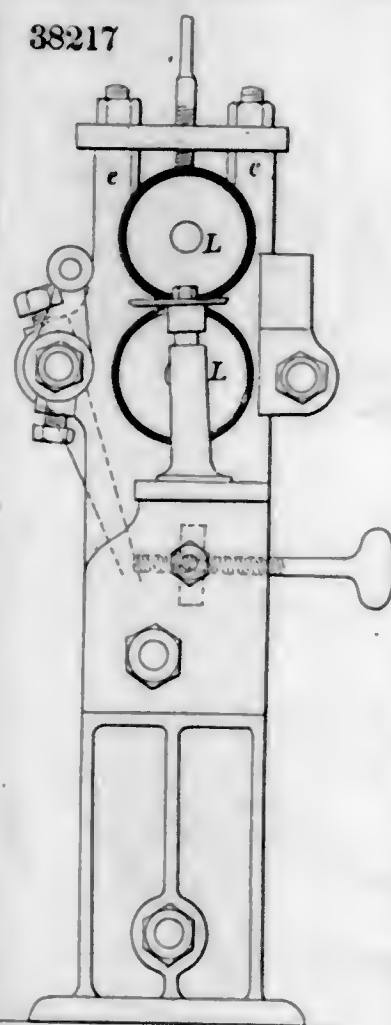
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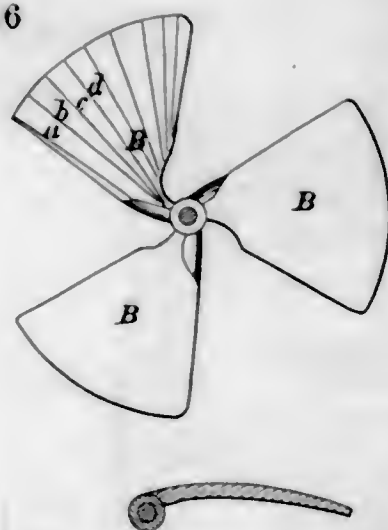
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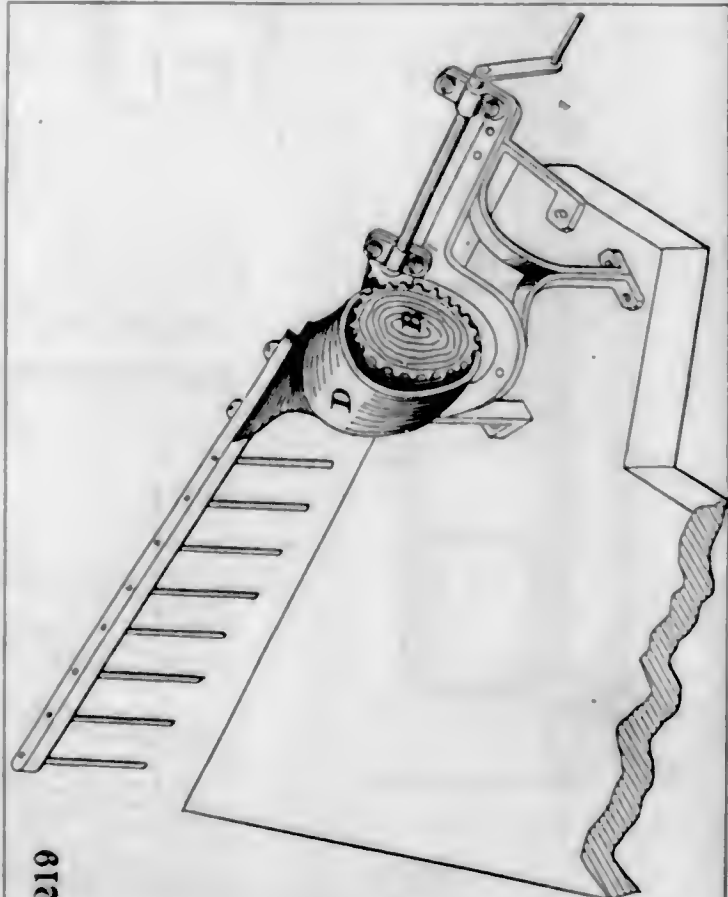
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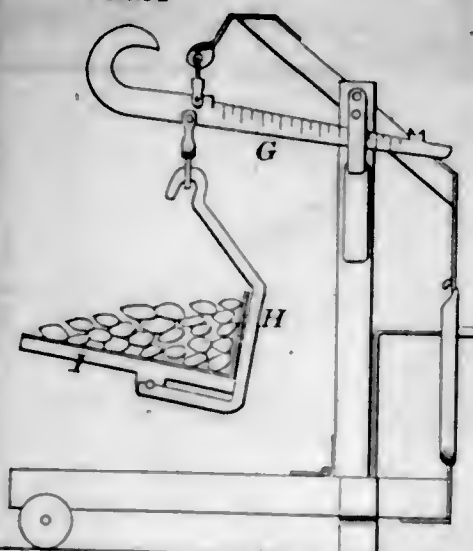
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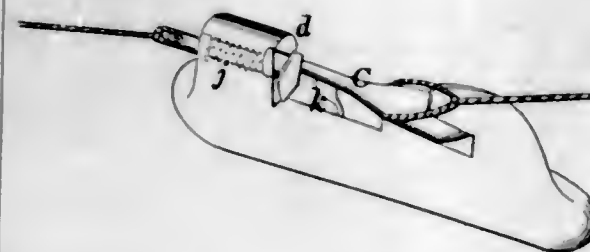
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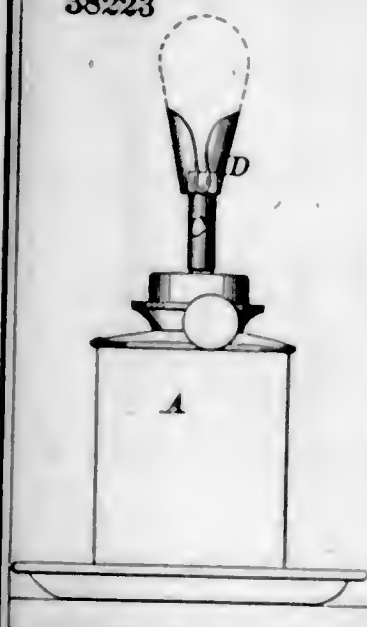
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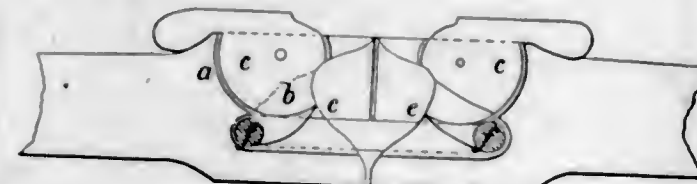
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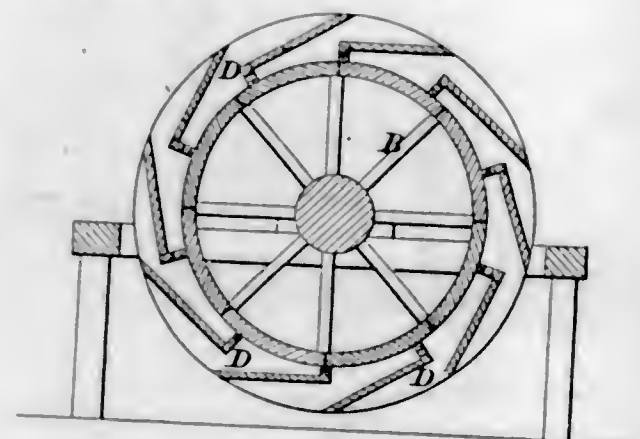
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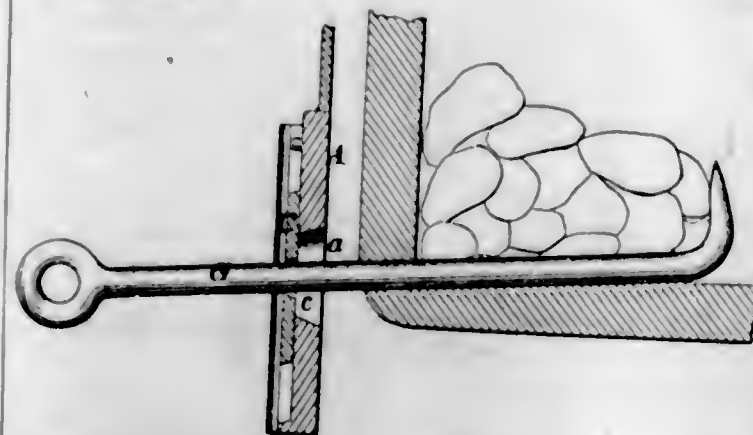
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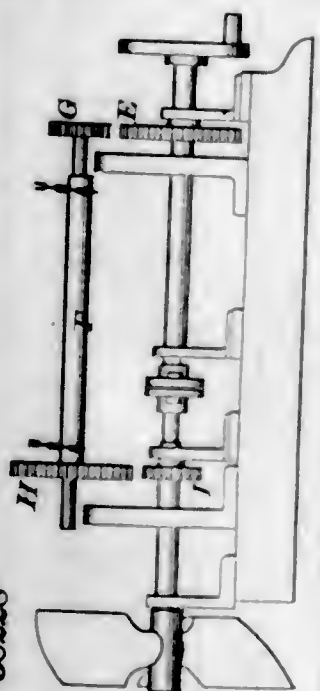
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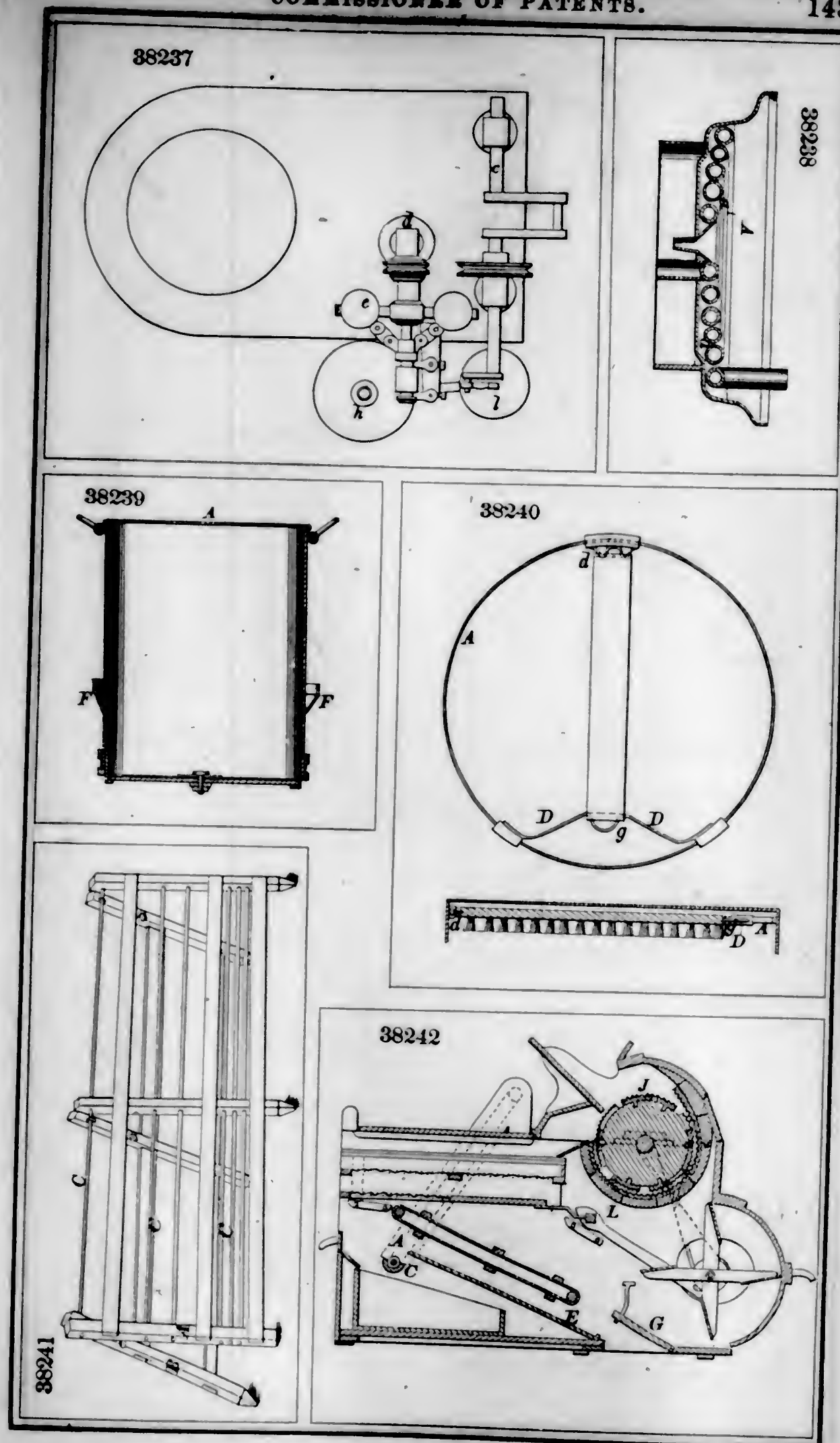
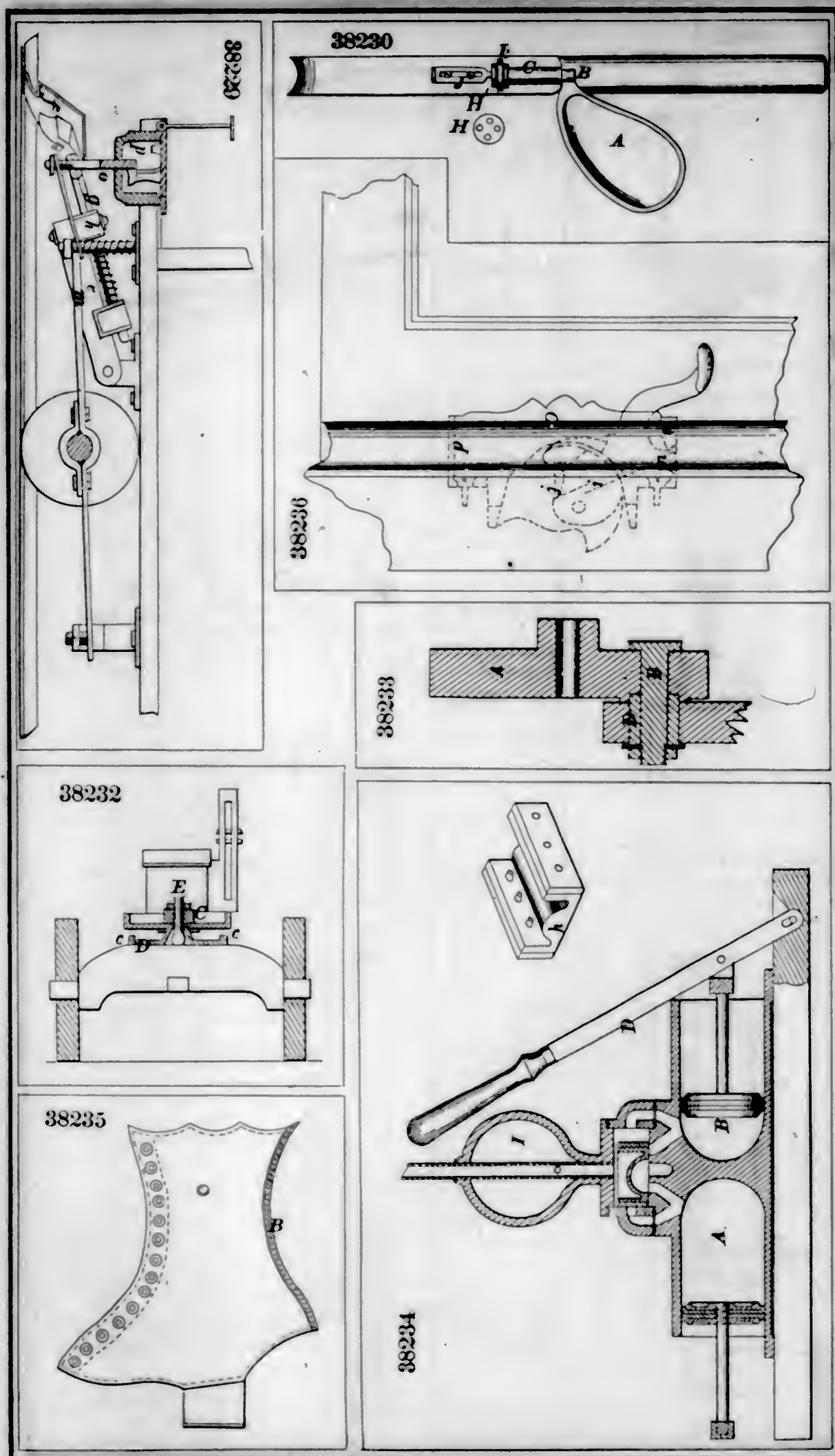


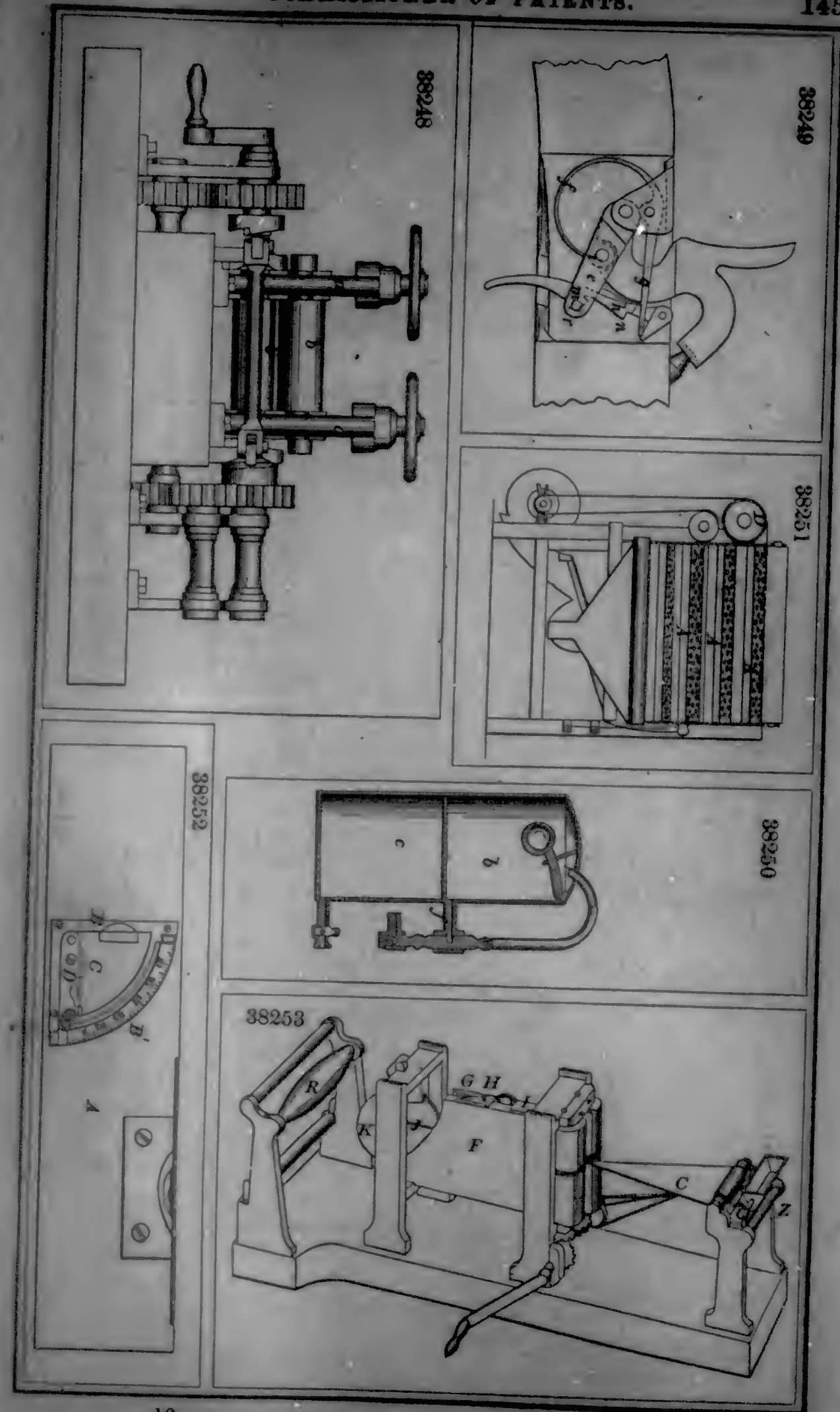
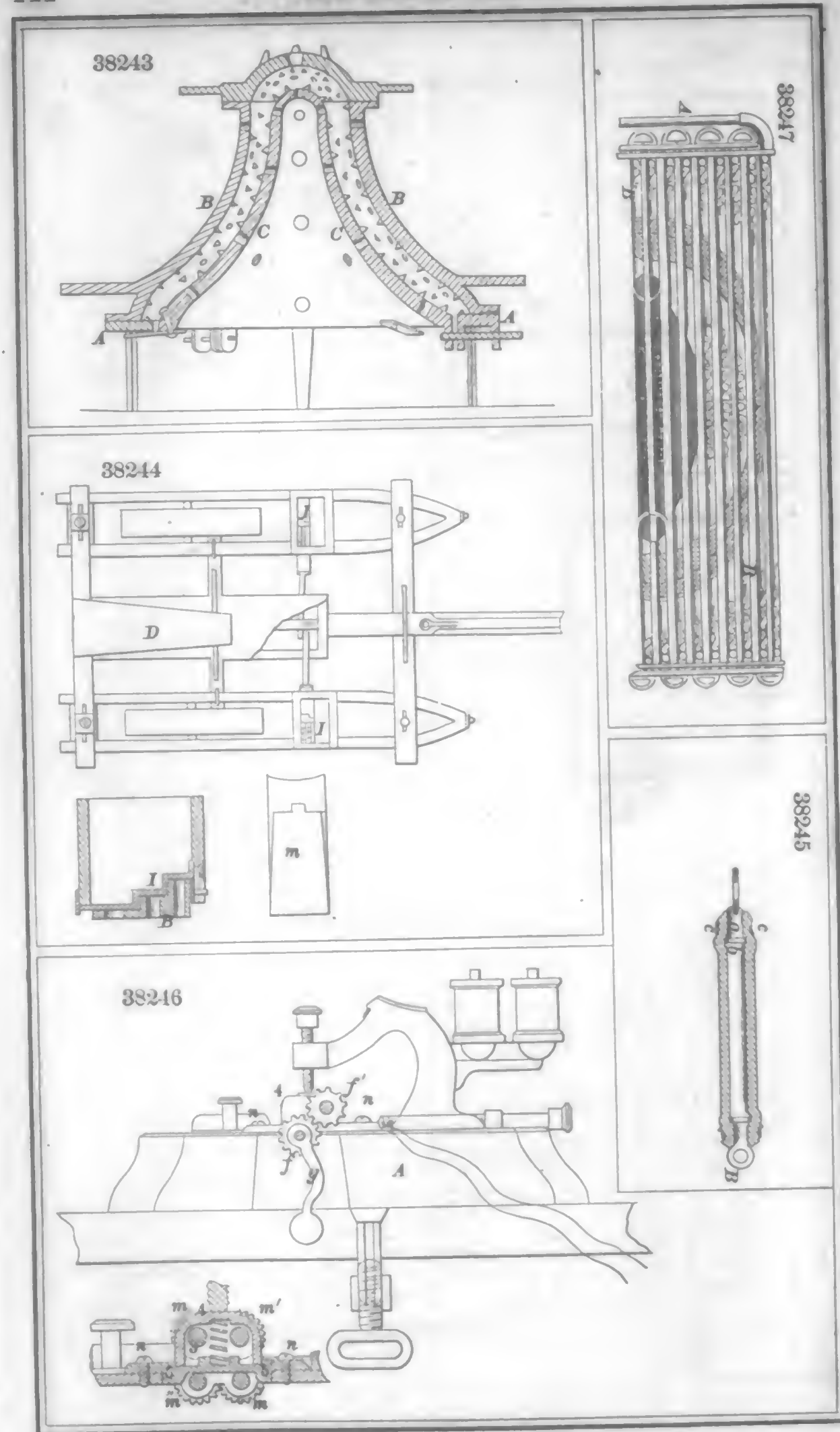
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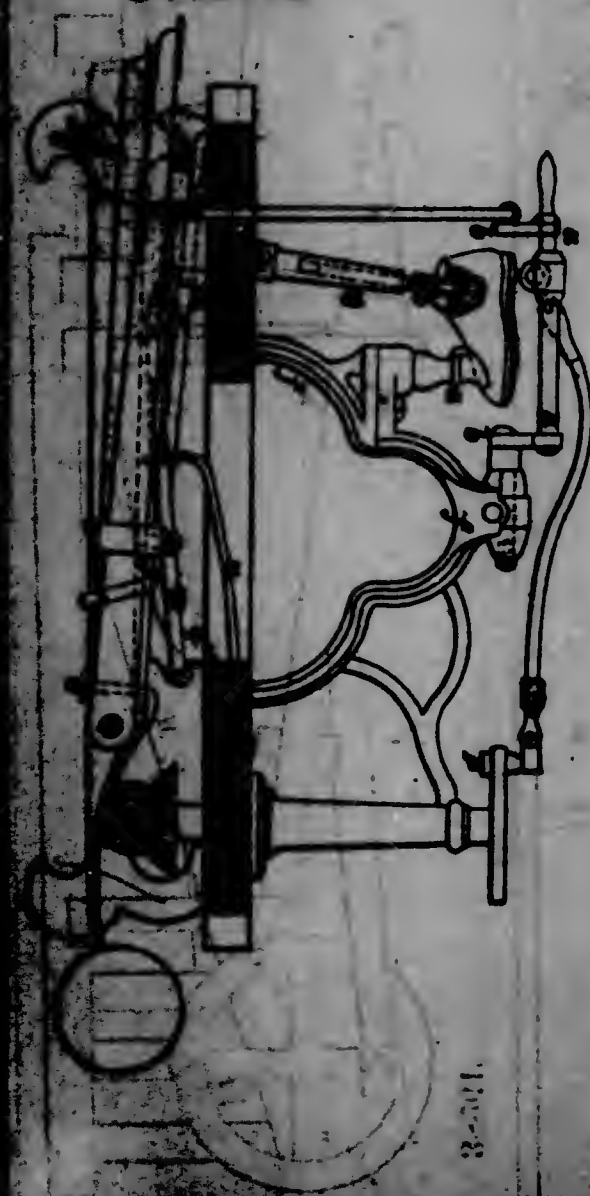
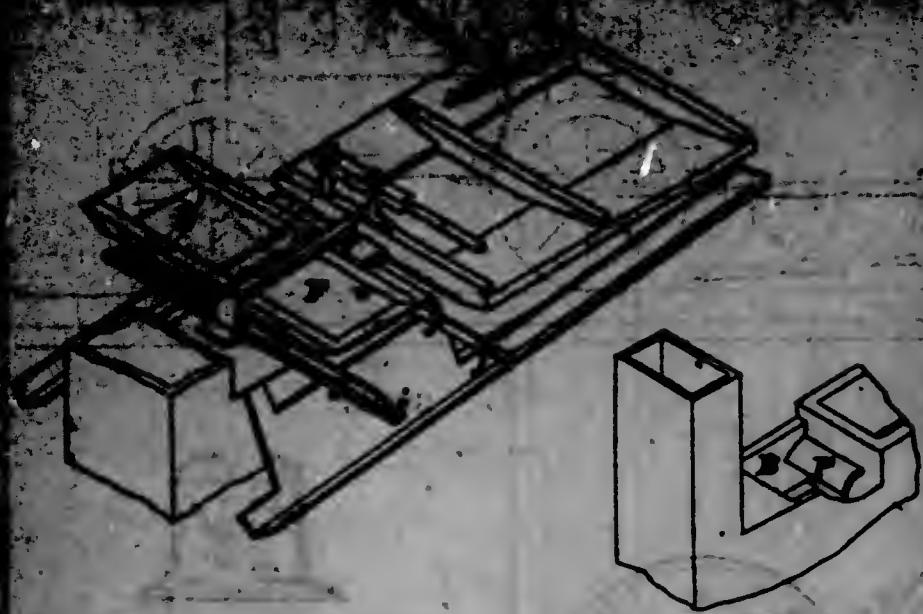


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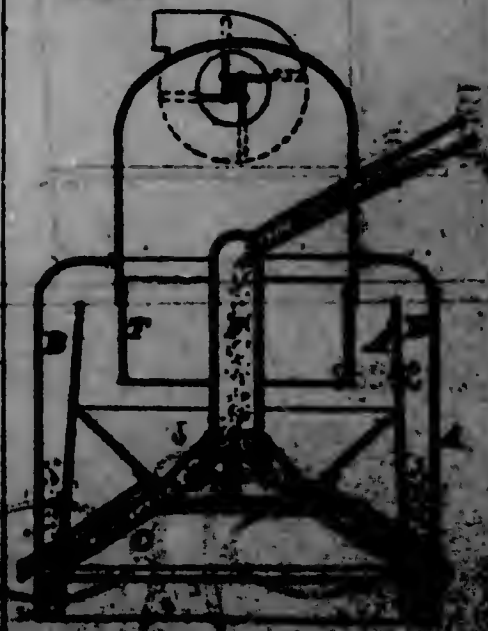


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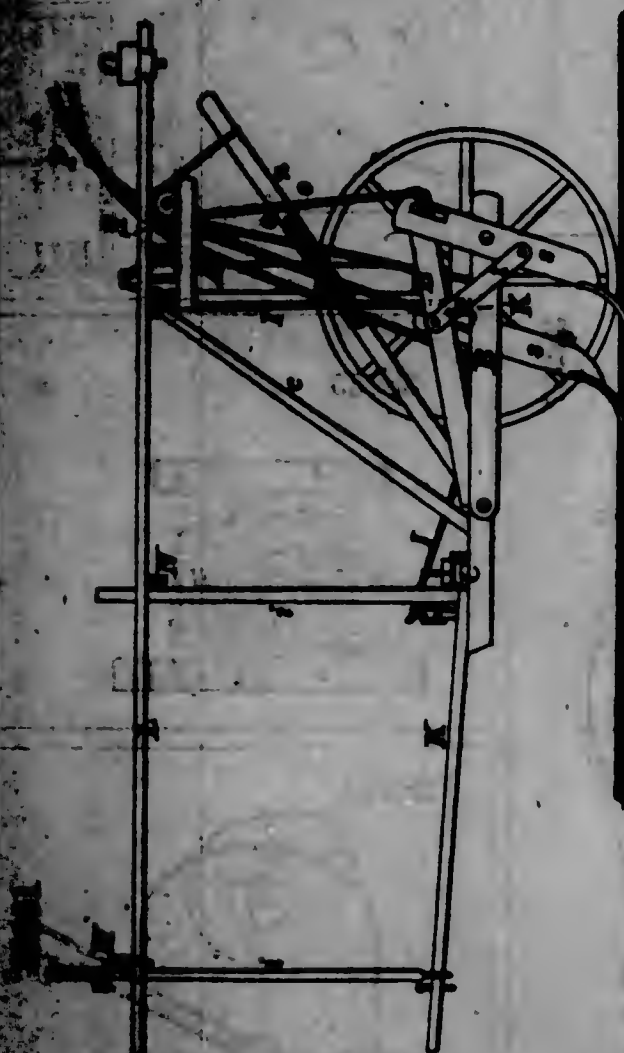
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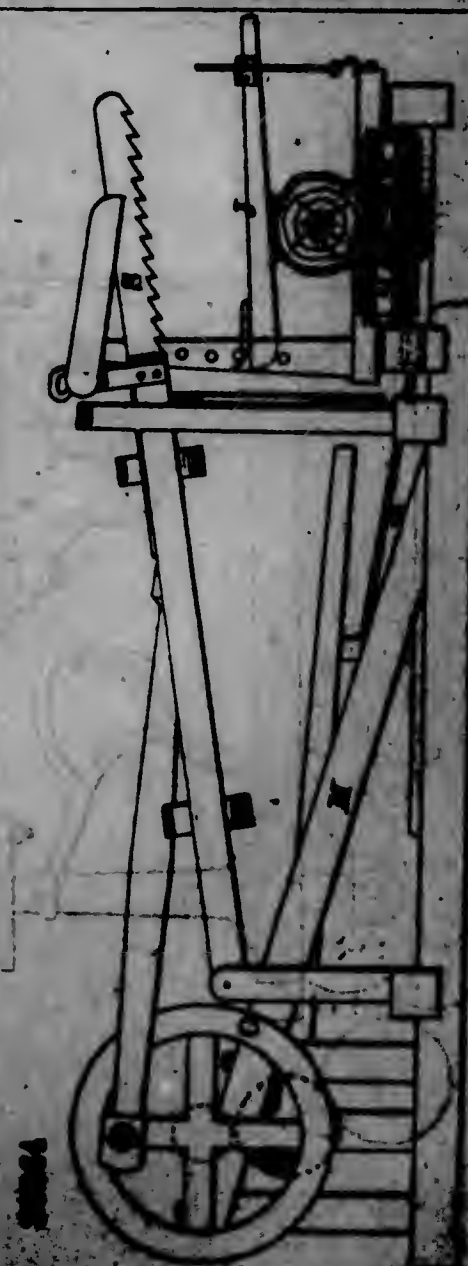
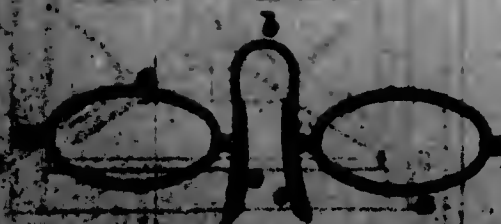
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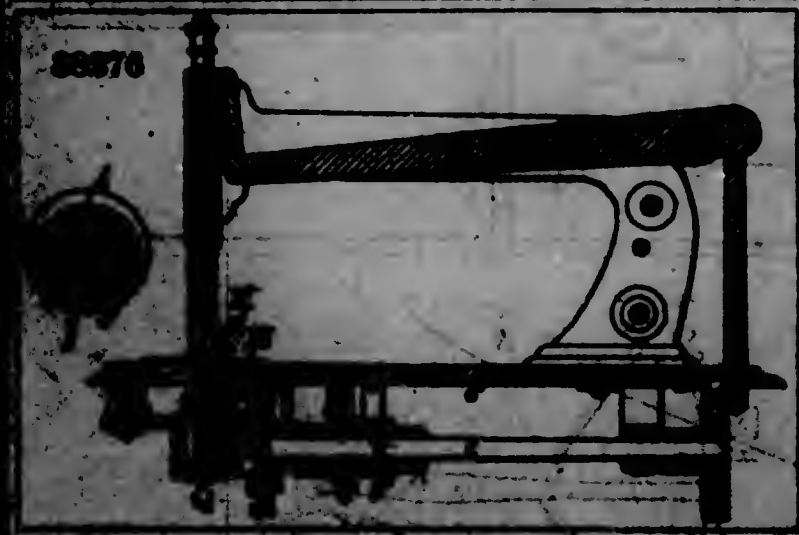
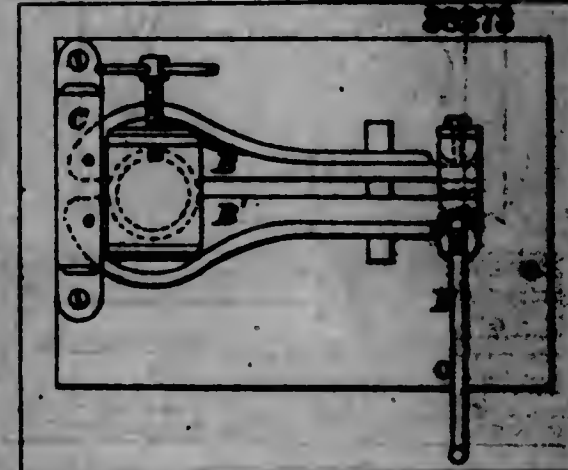
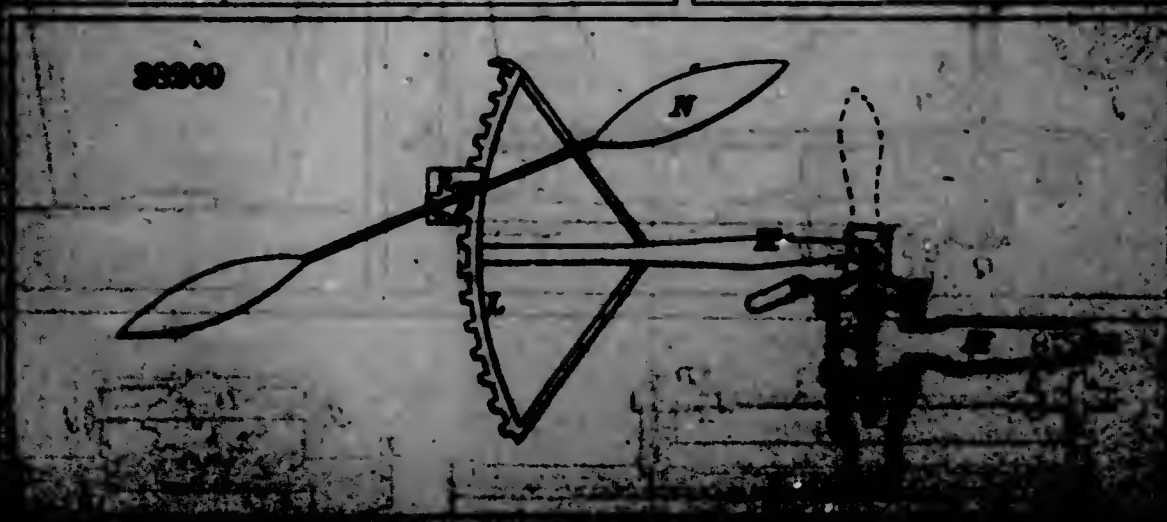
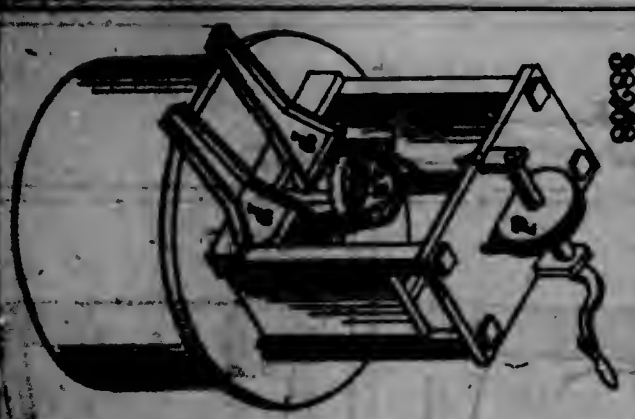
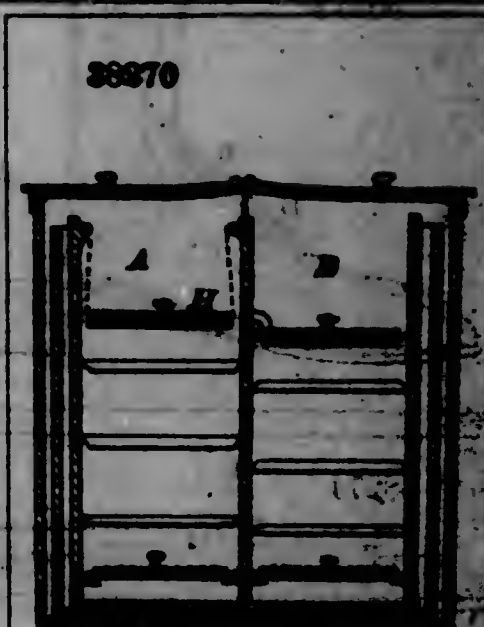
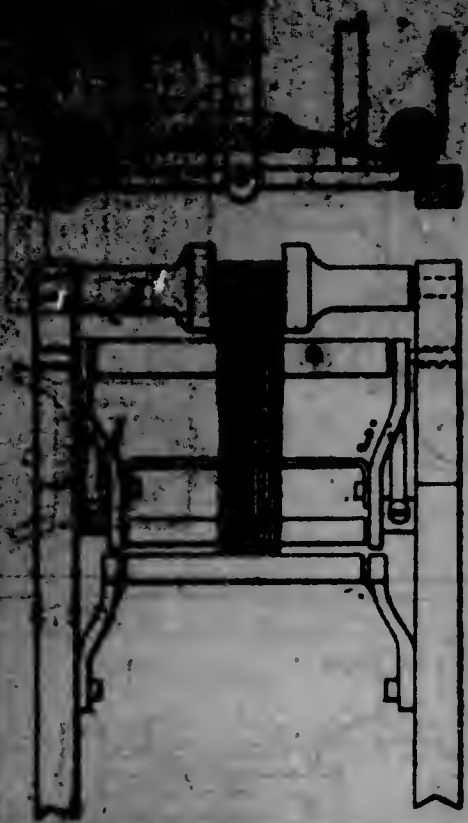
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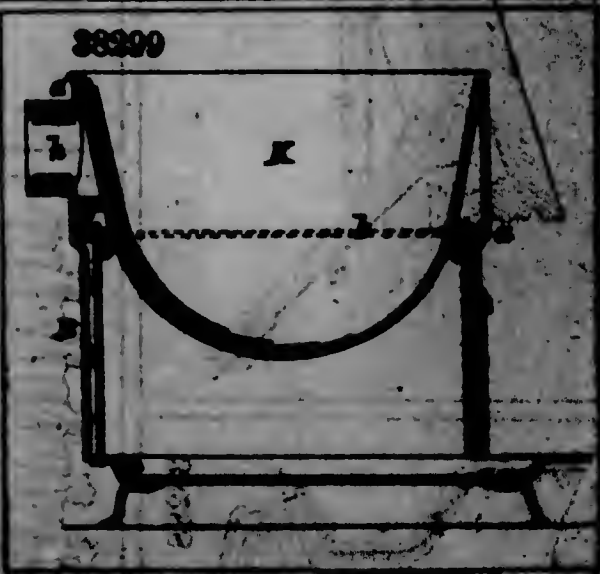
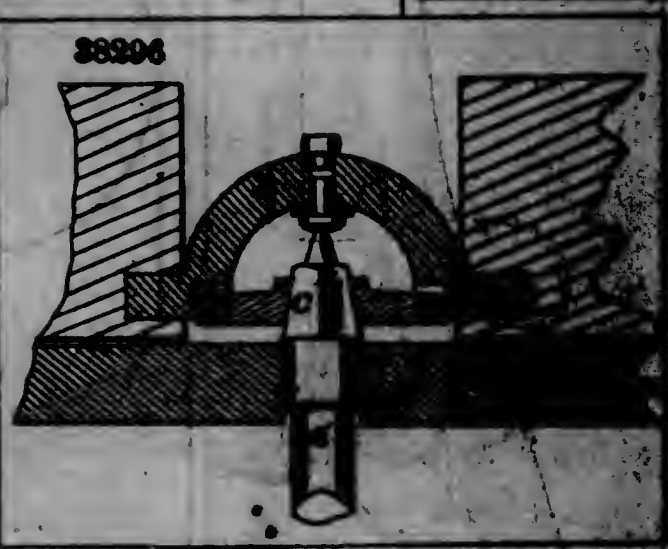
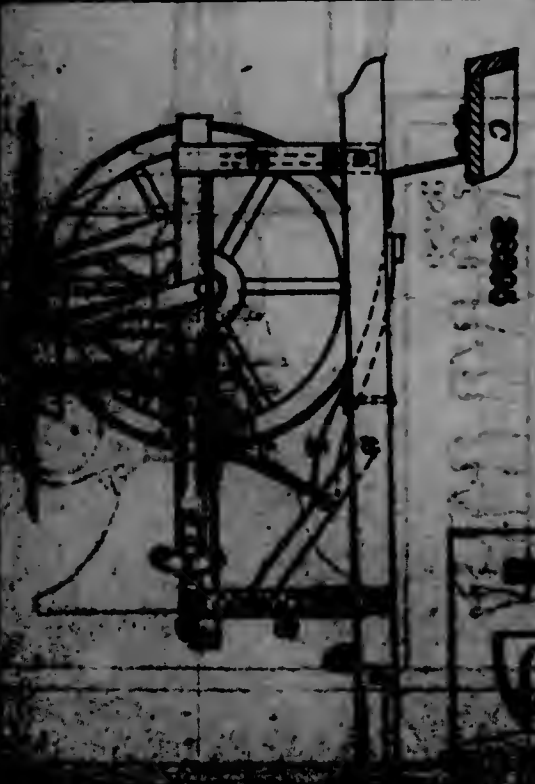
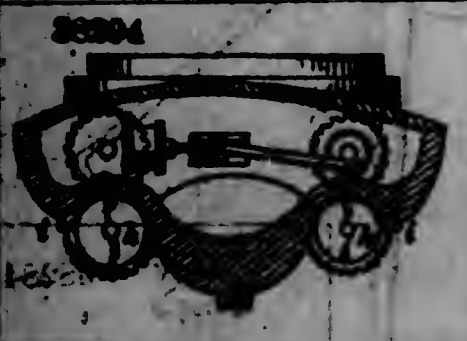
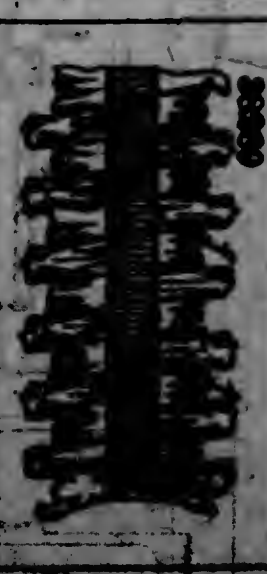
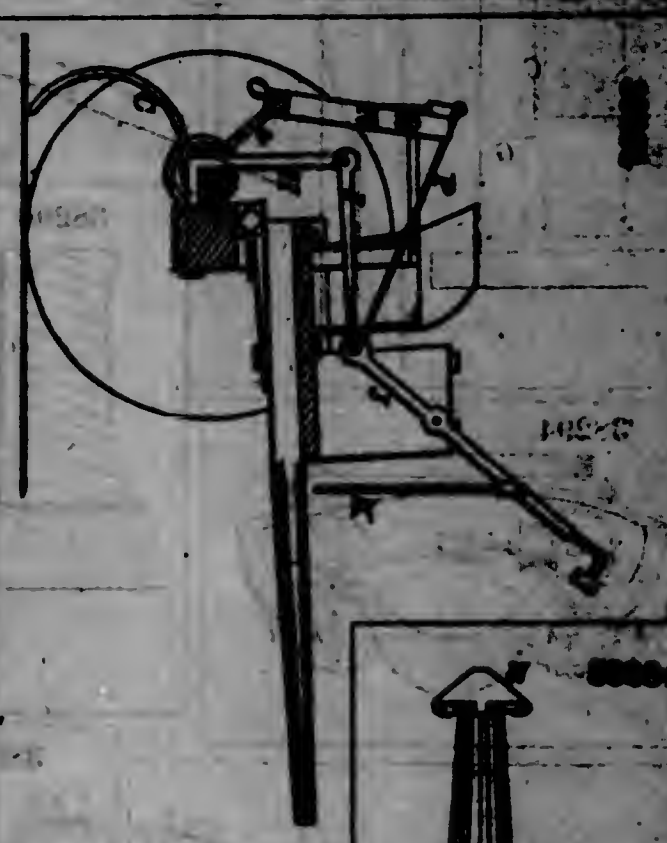


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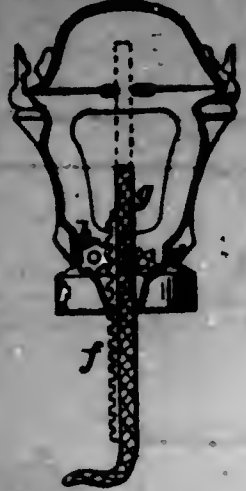


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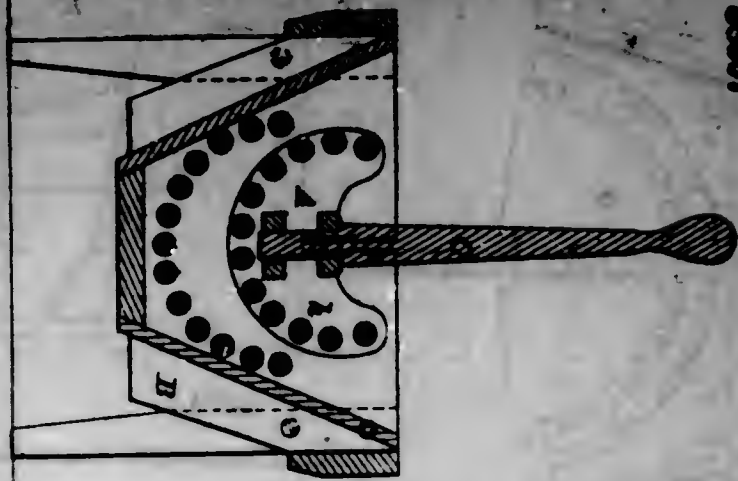




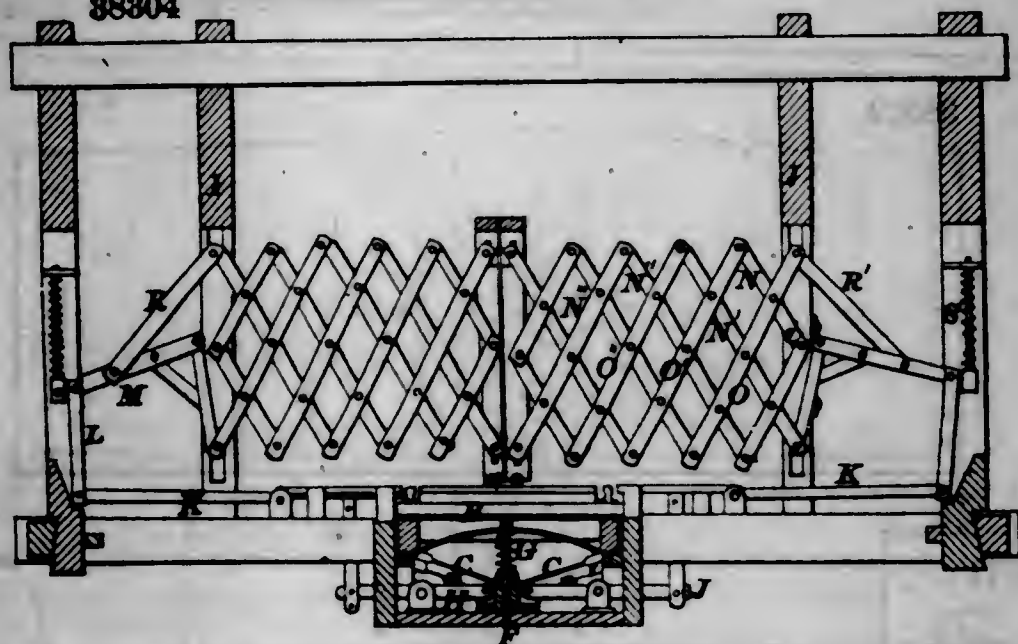
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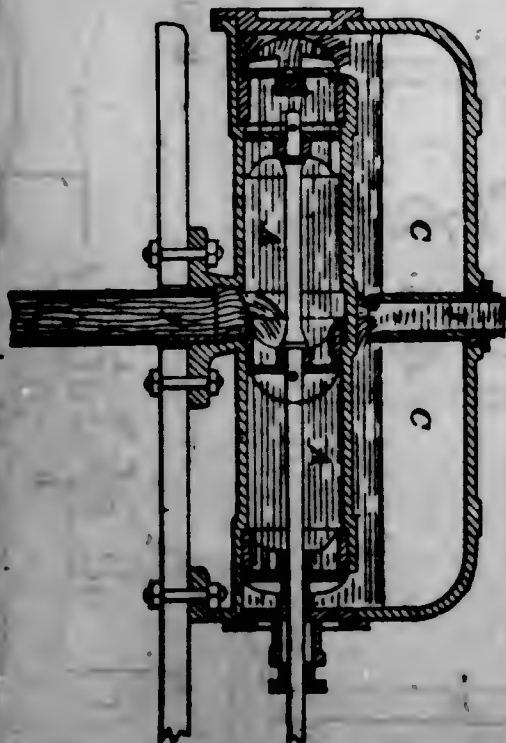
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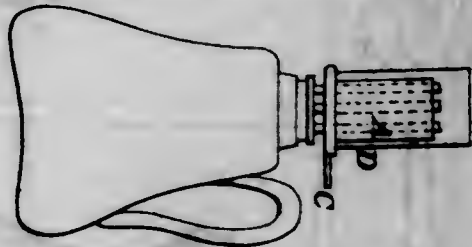
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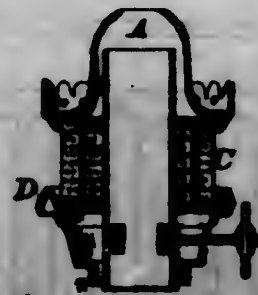
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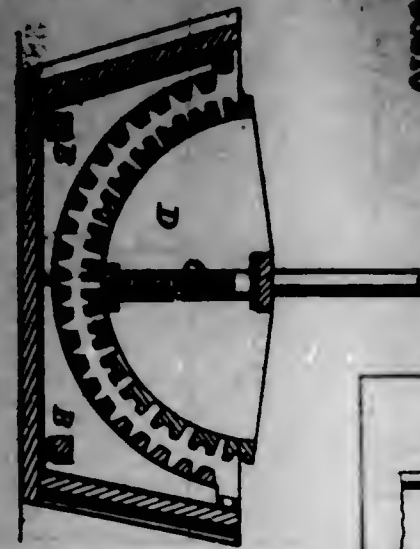
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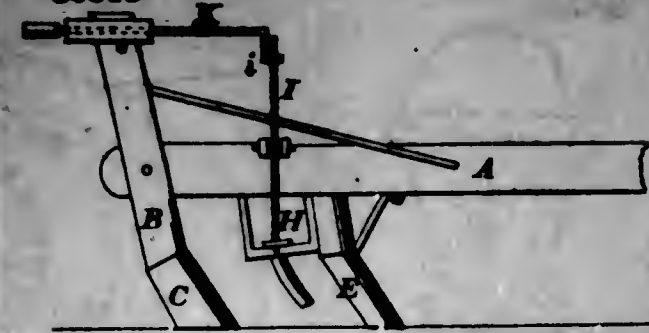


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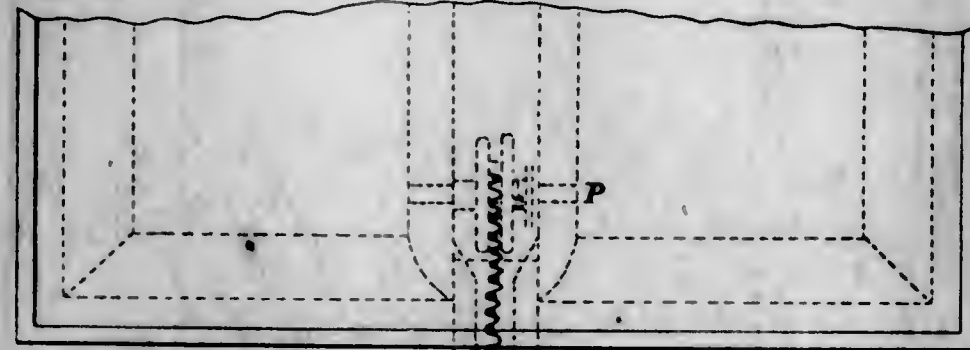
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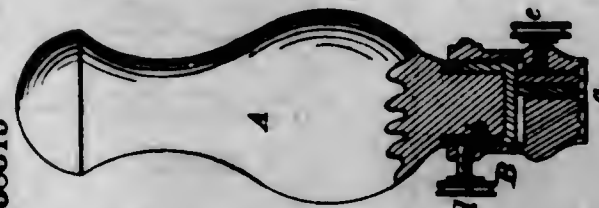
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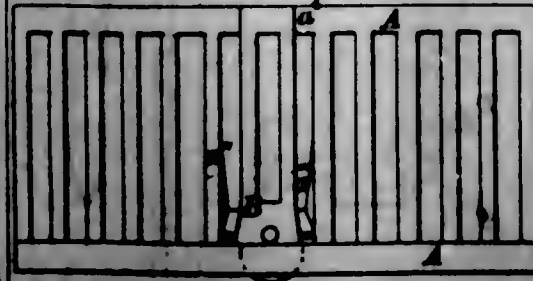
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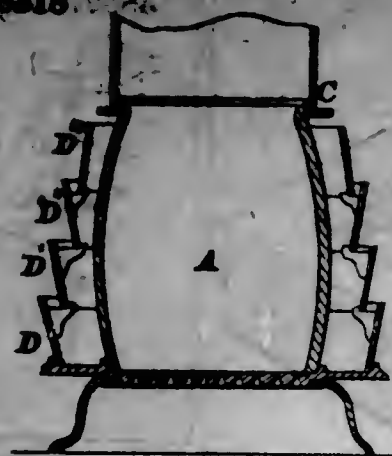
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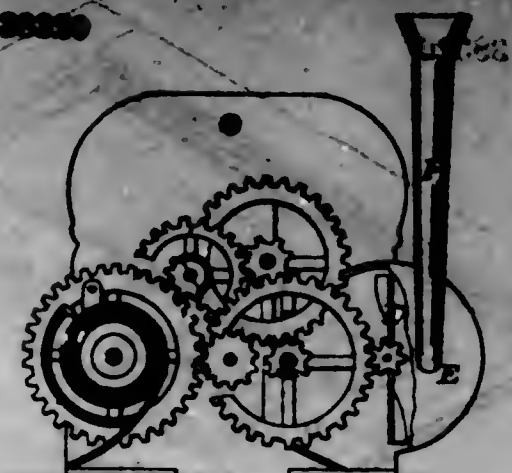
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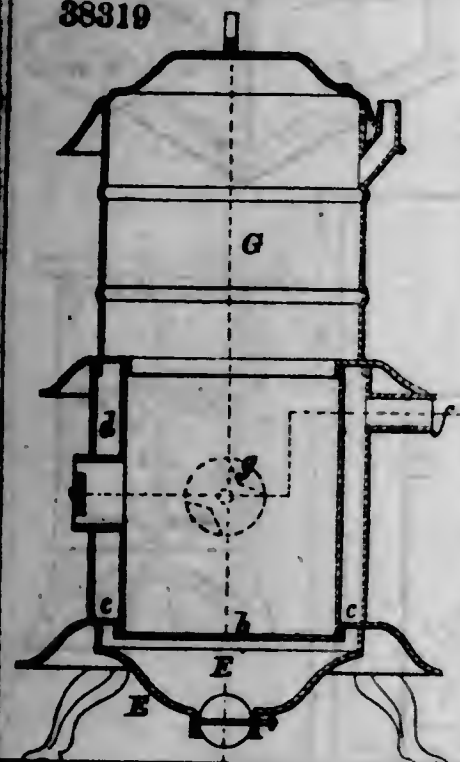
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38319



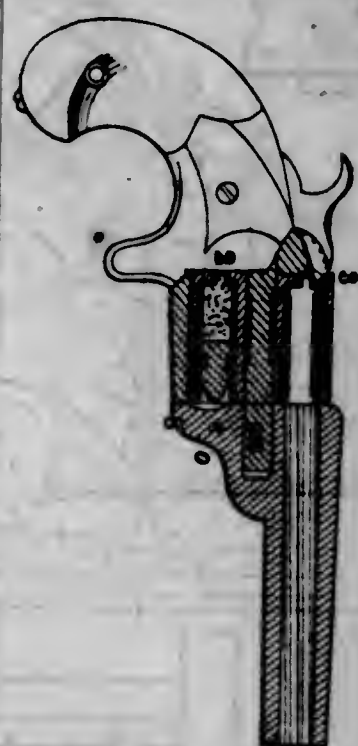
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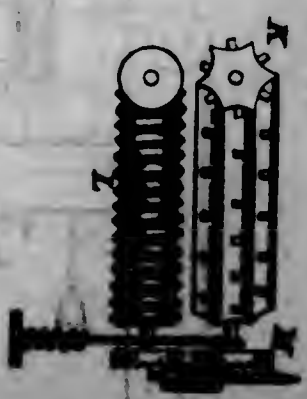
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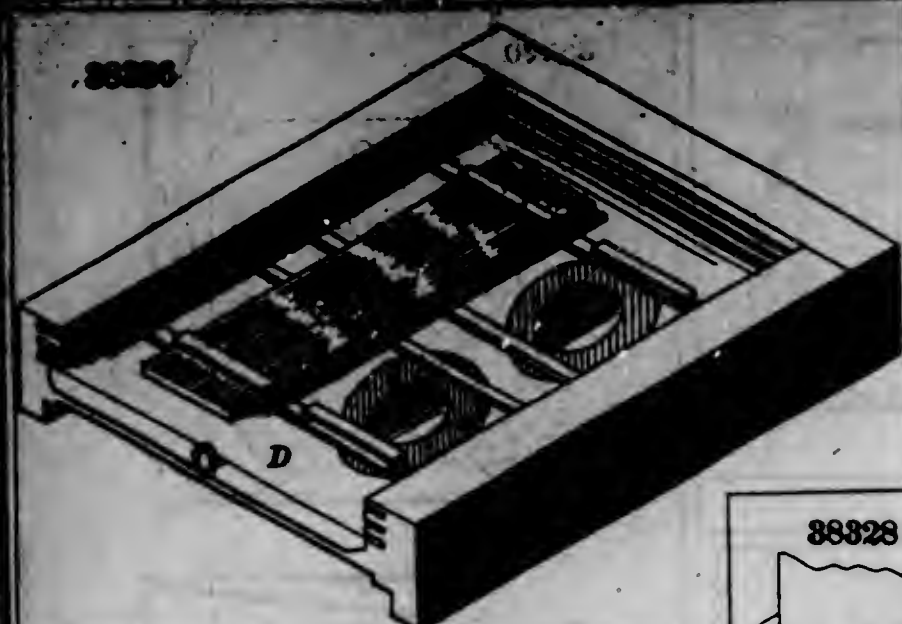
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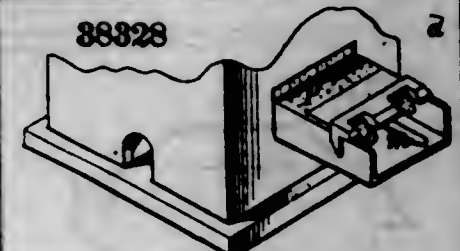
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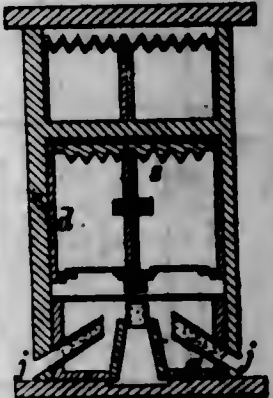
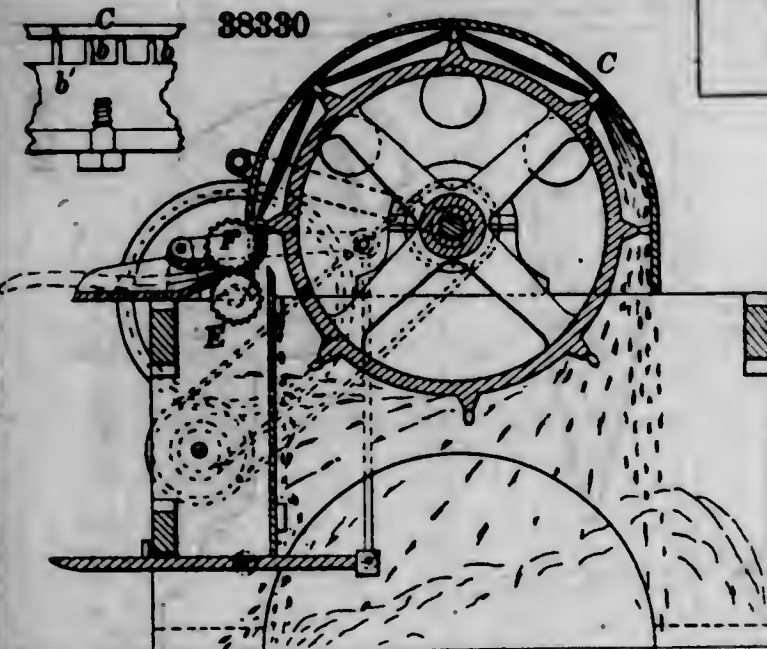
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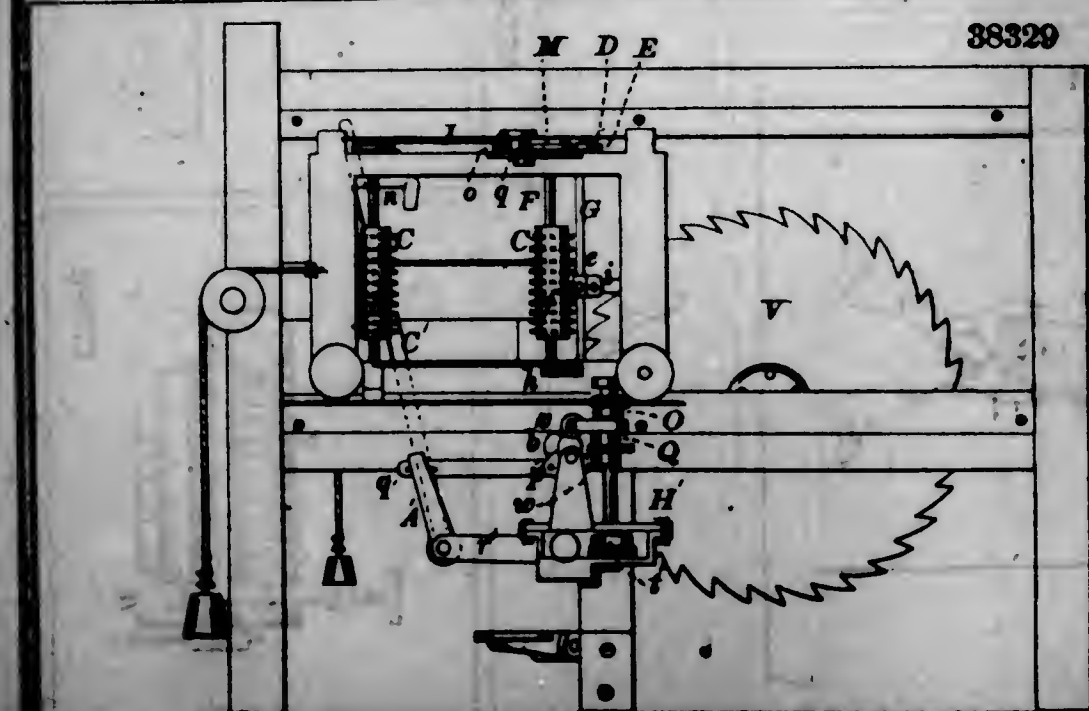
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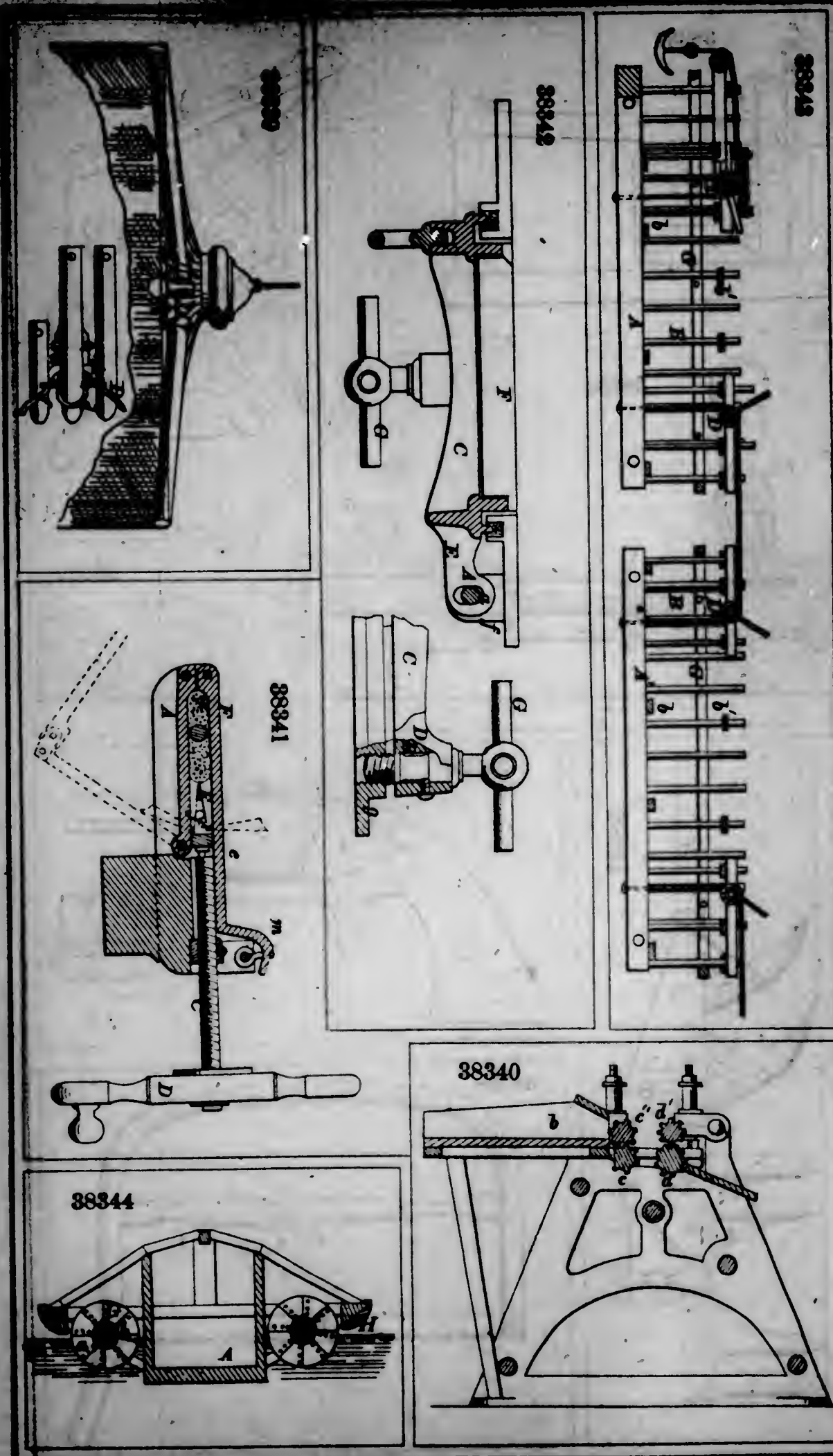
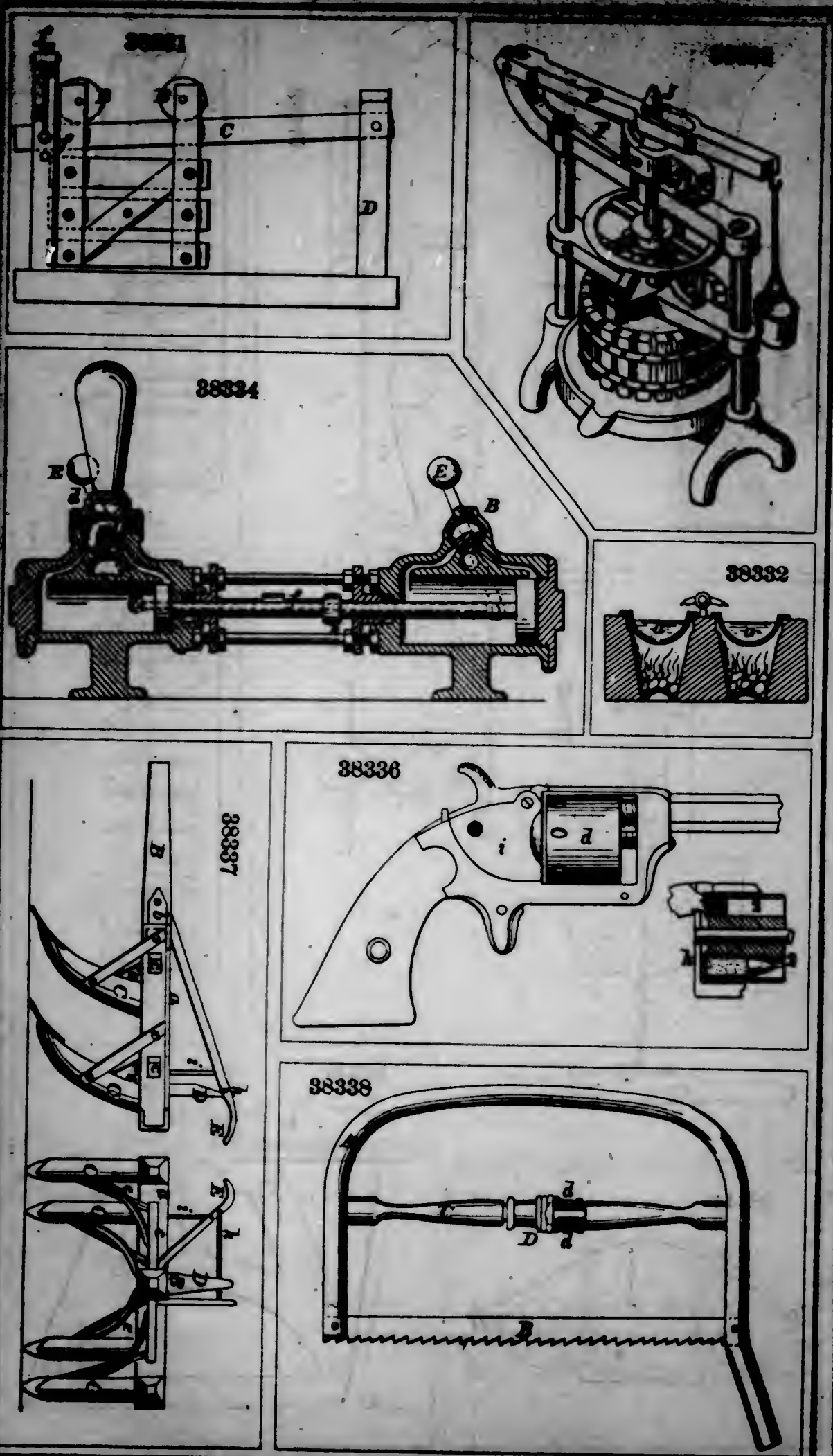


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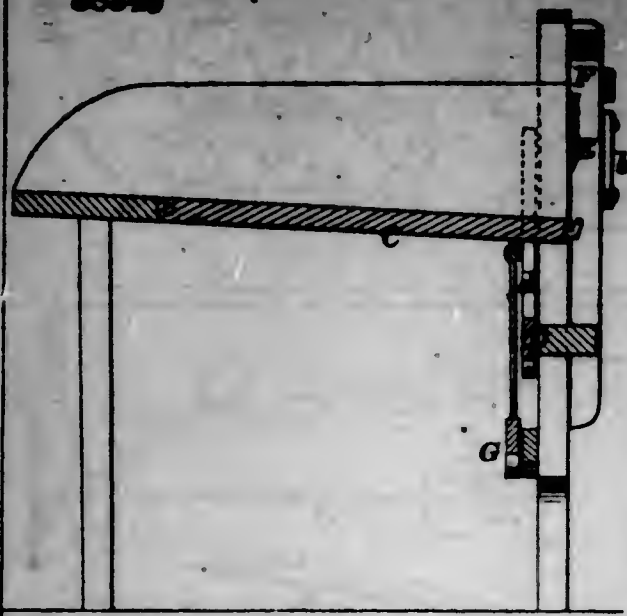


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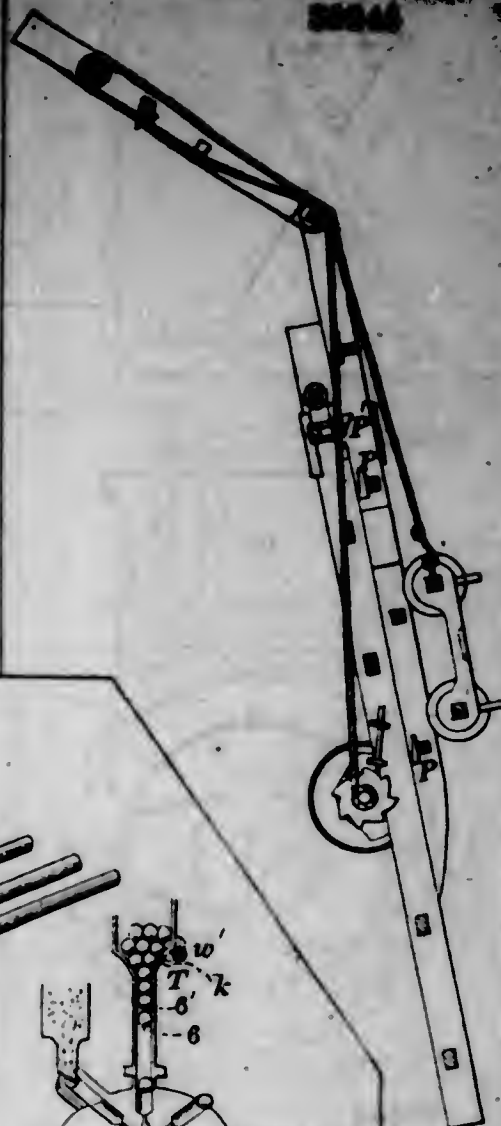




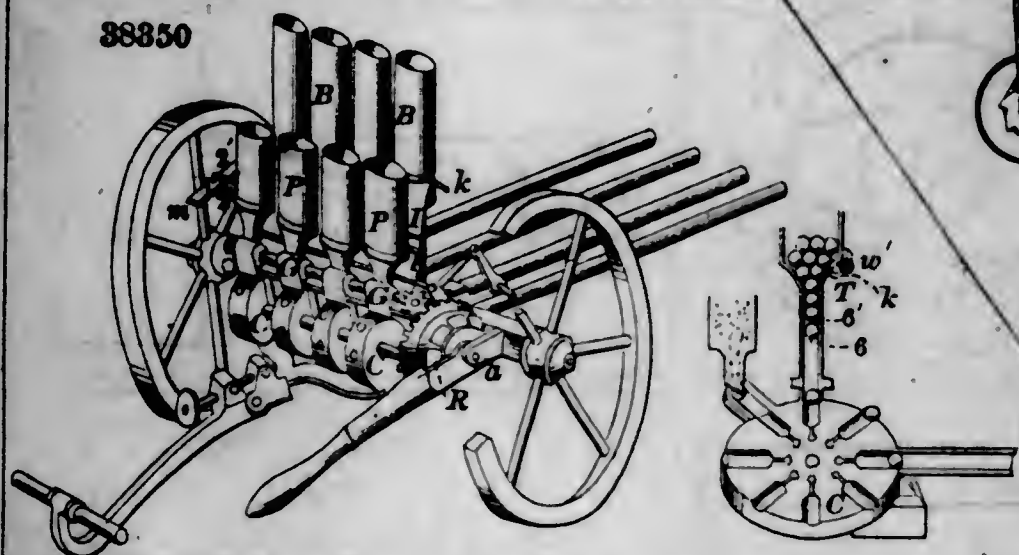
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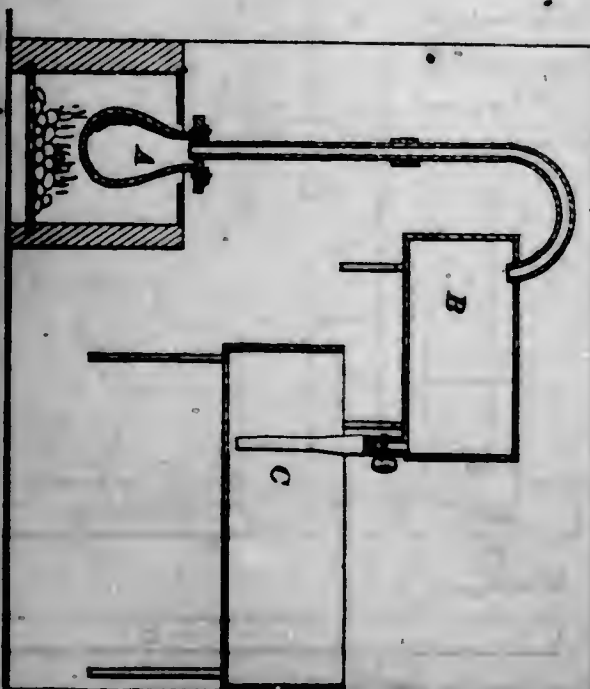
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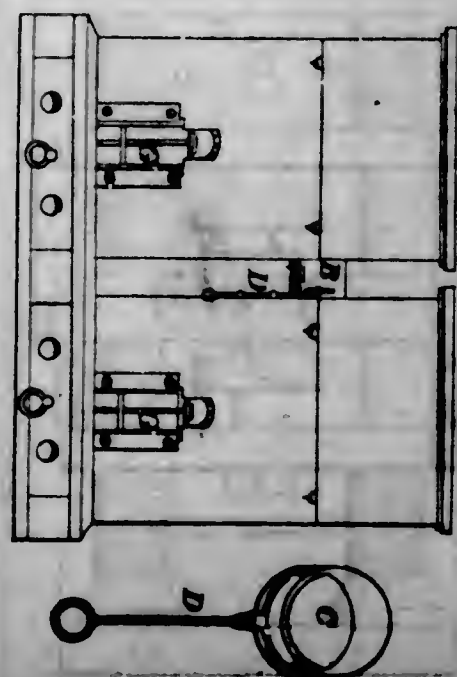
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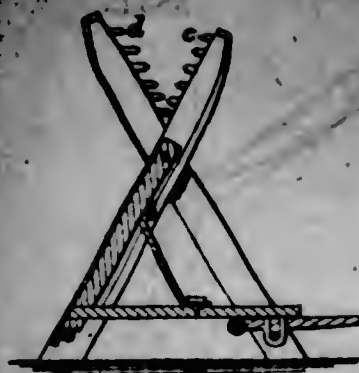
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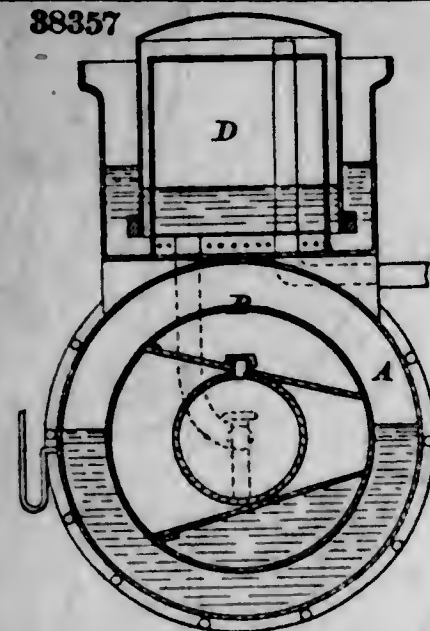
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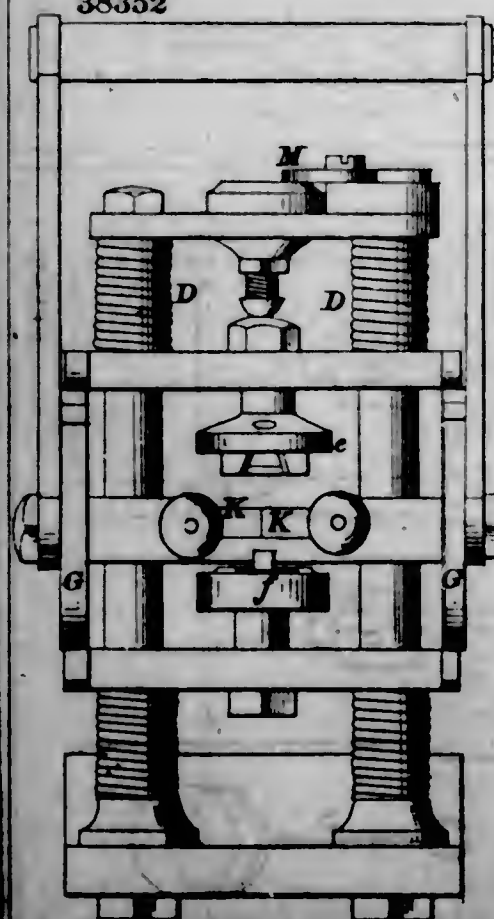
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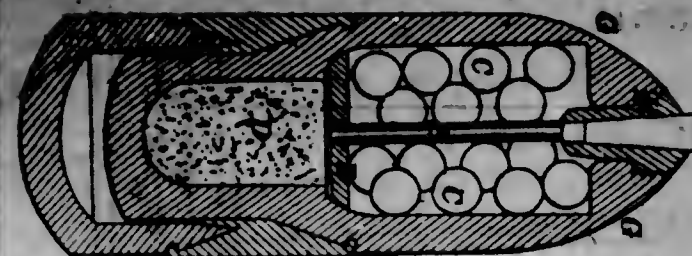
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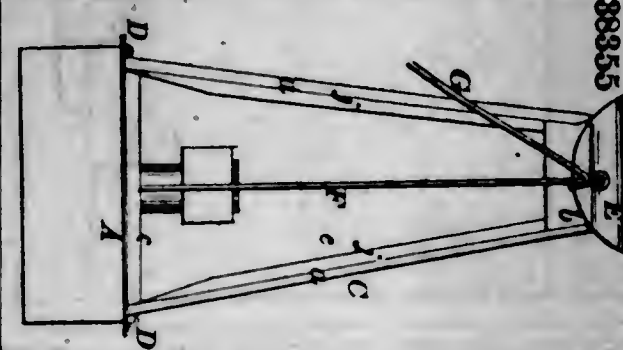
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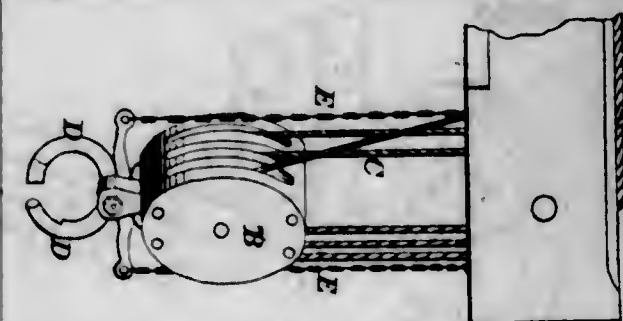
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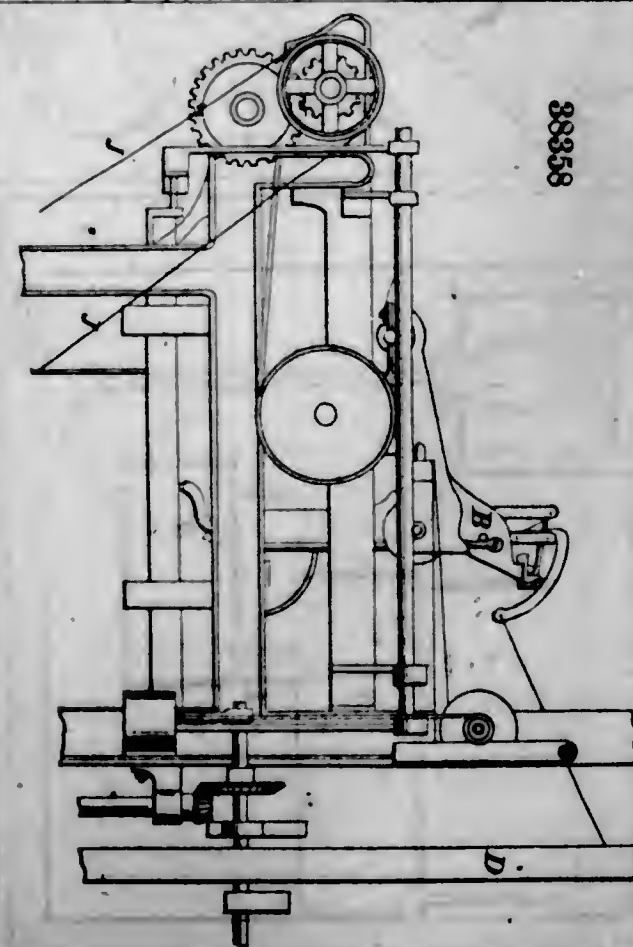
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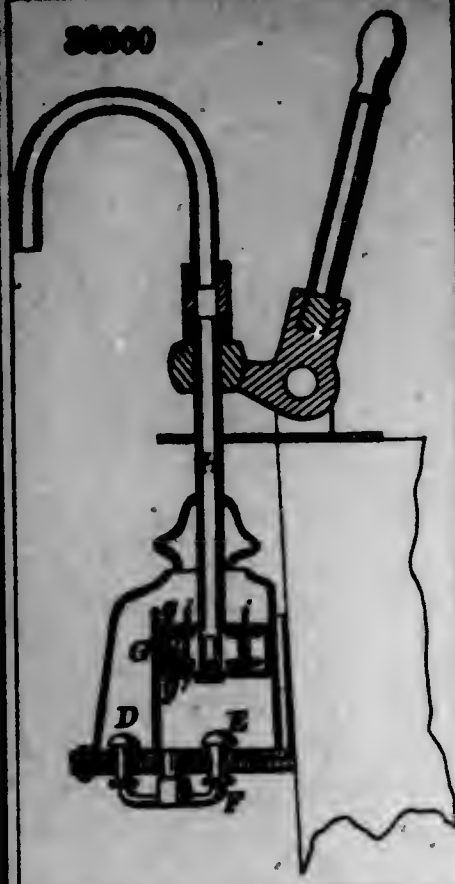
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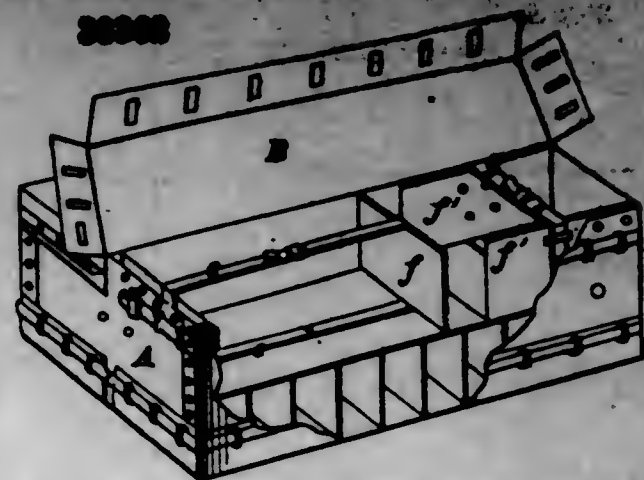
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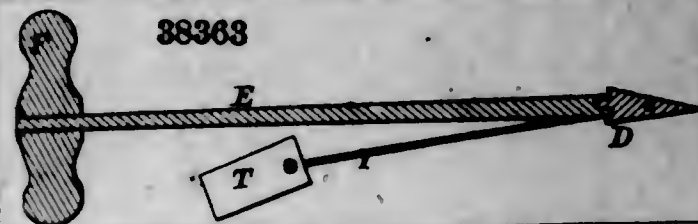
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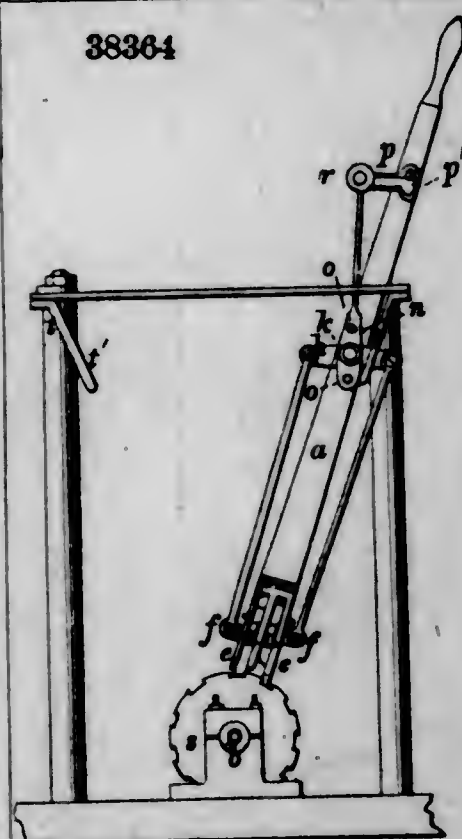
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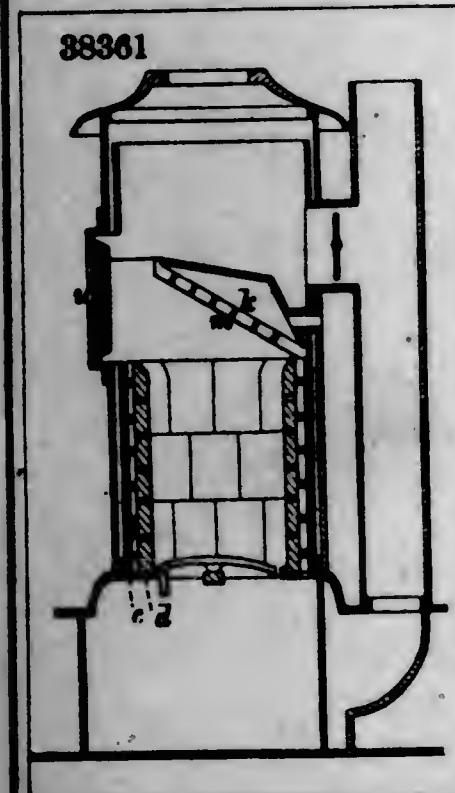
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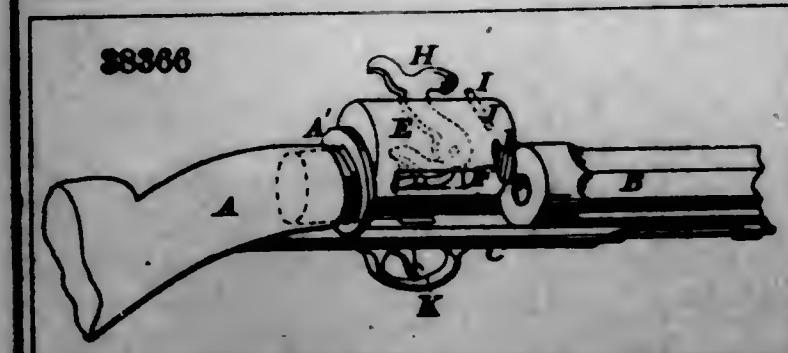
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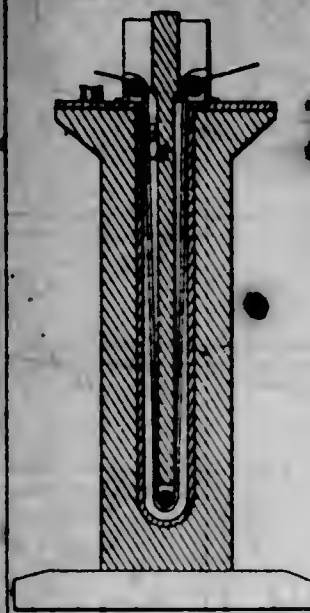
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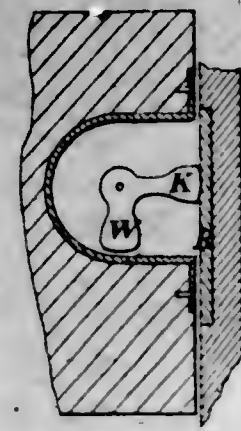
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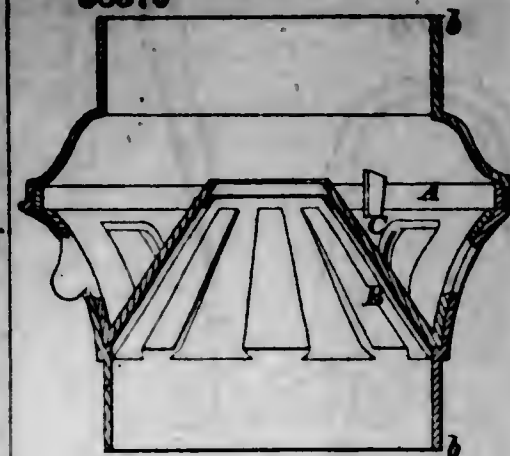
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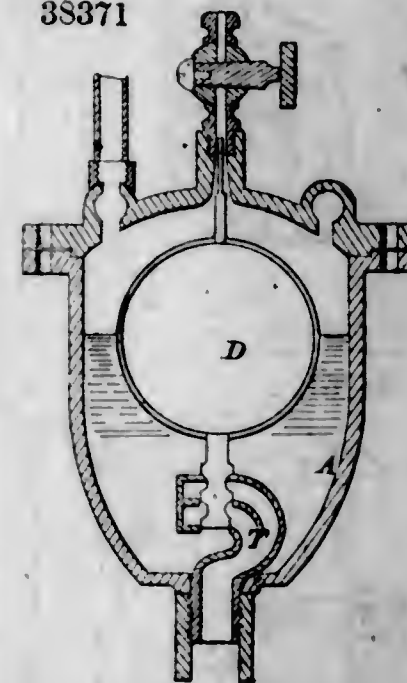
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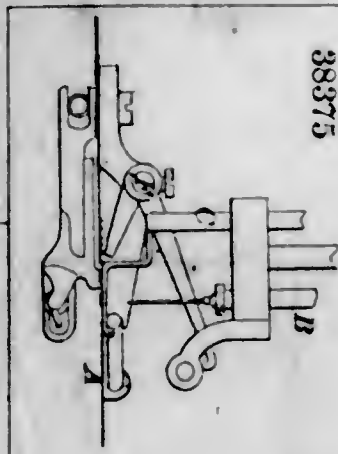
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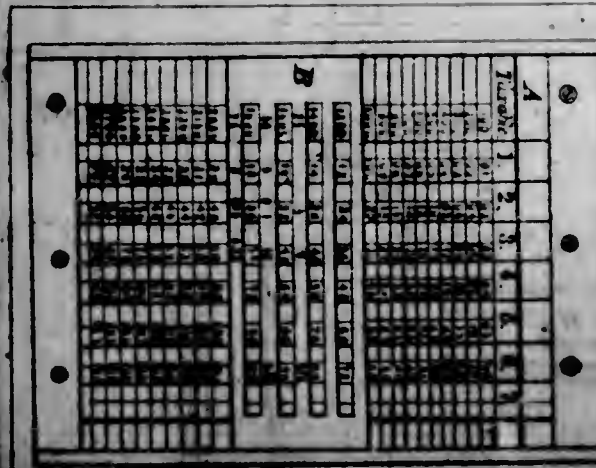
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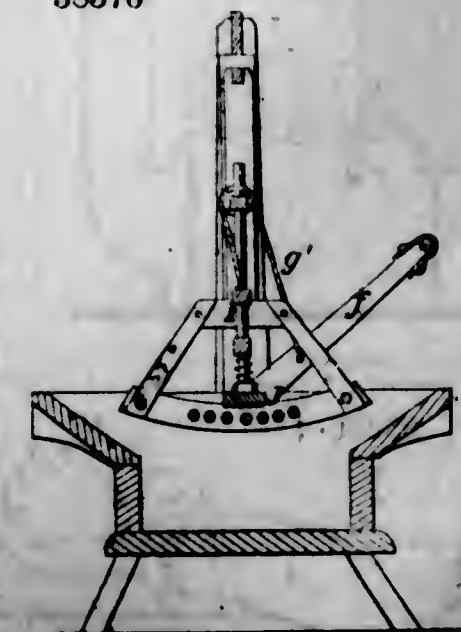
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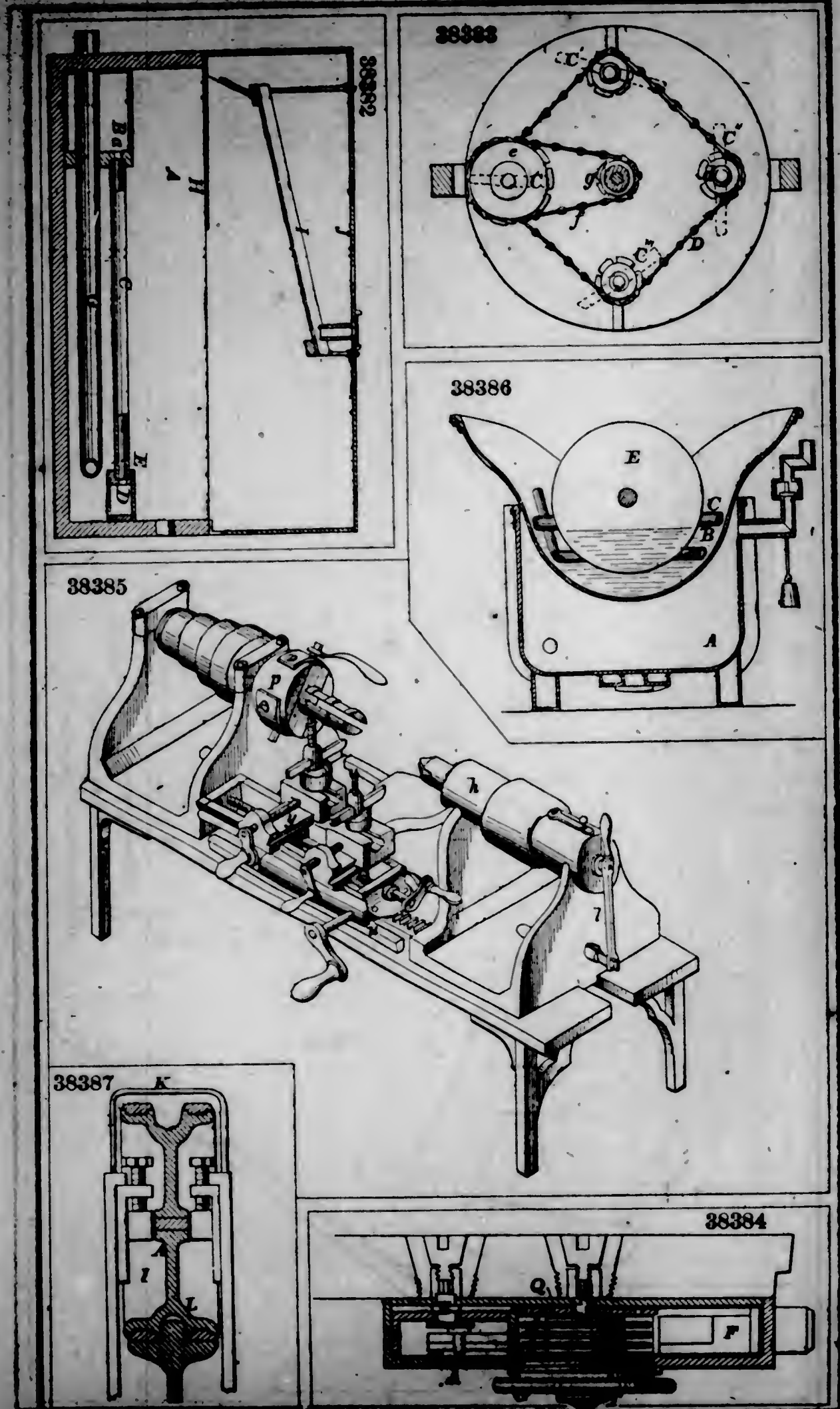
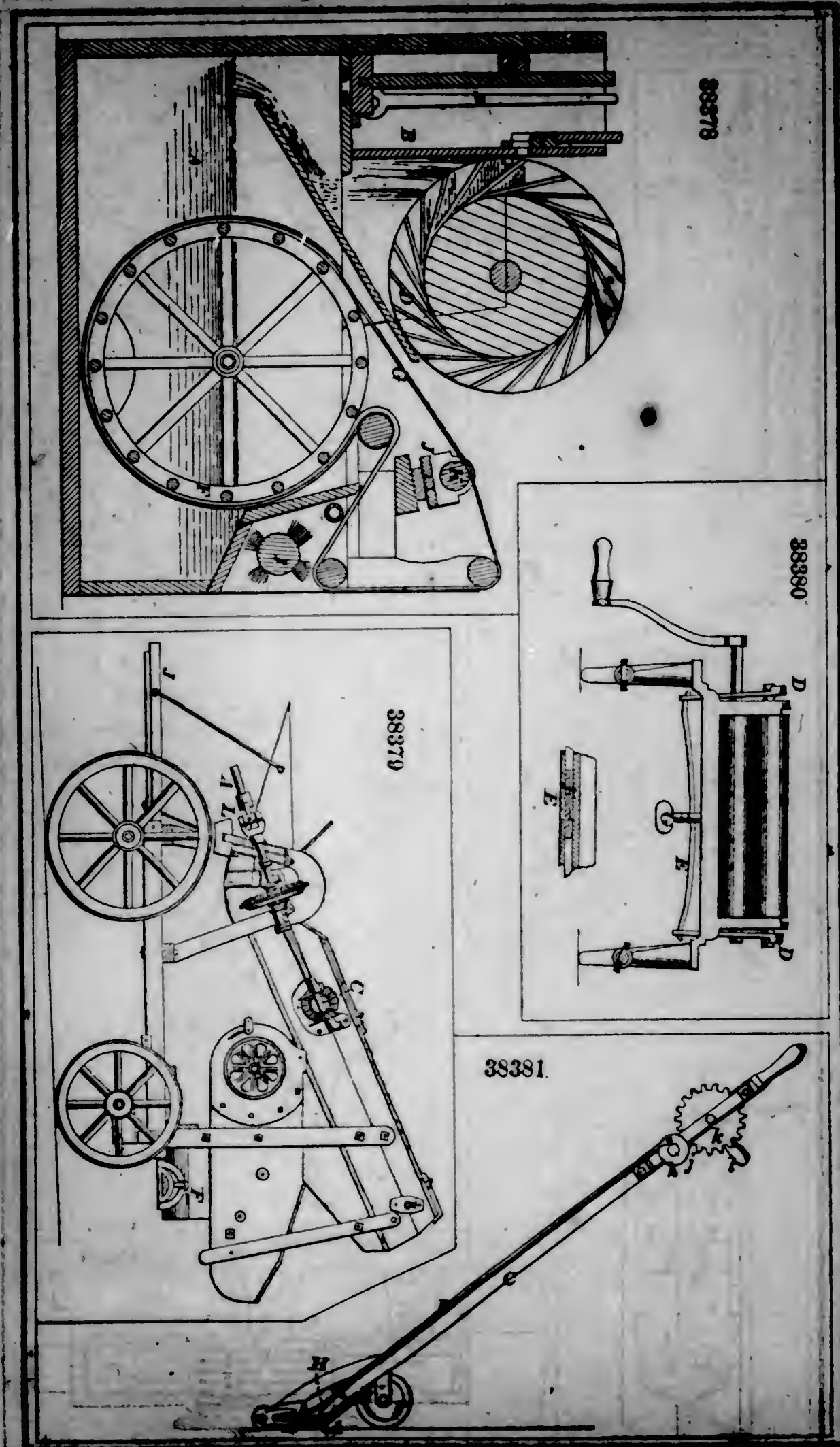


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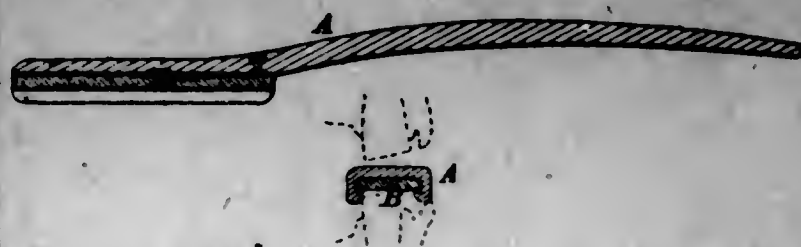




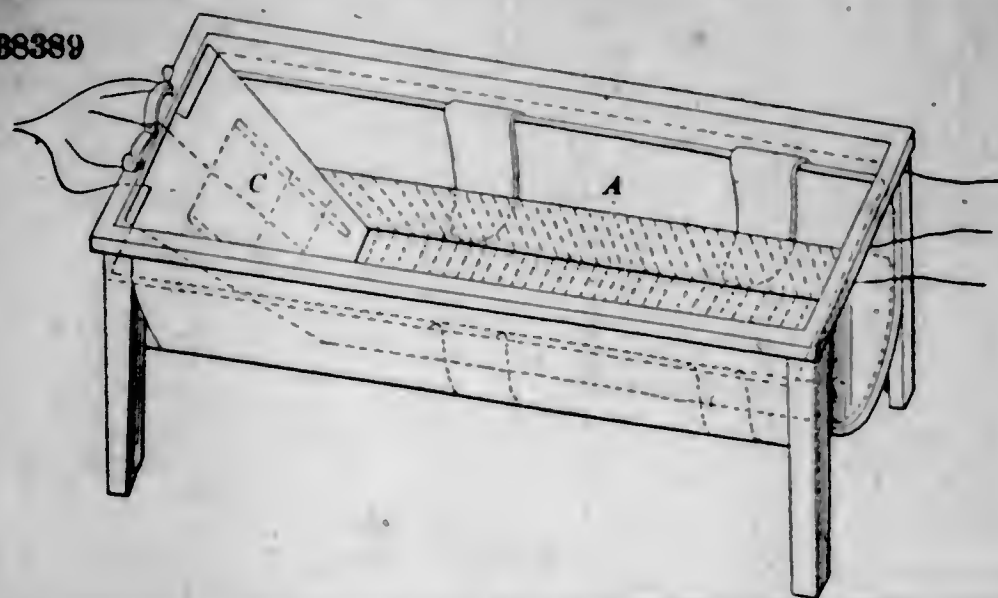
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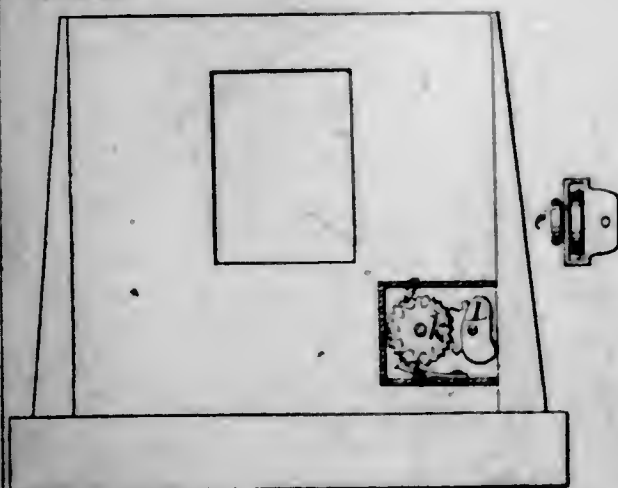
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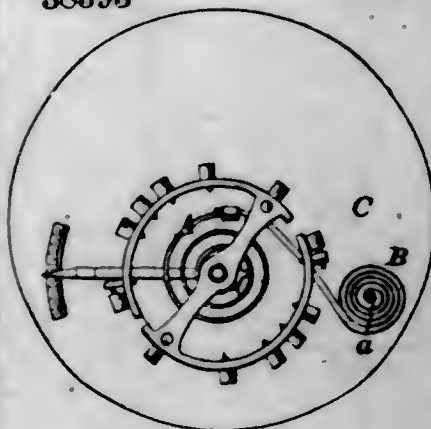
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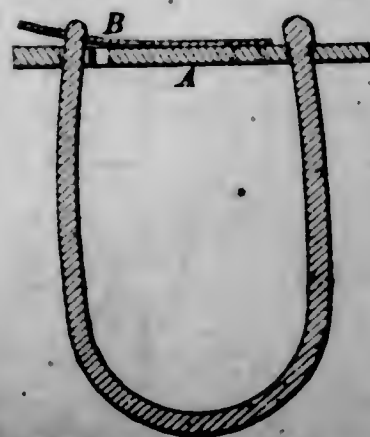
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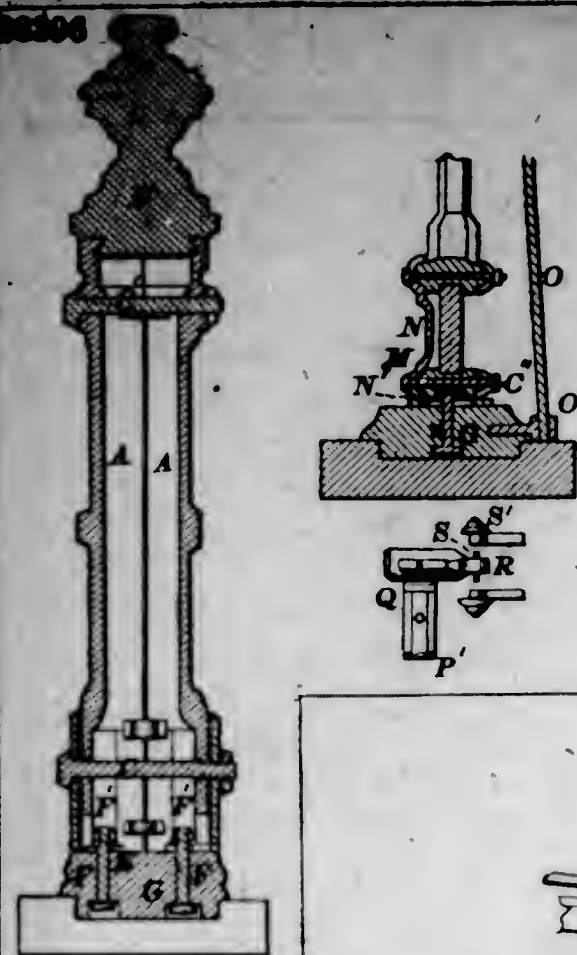
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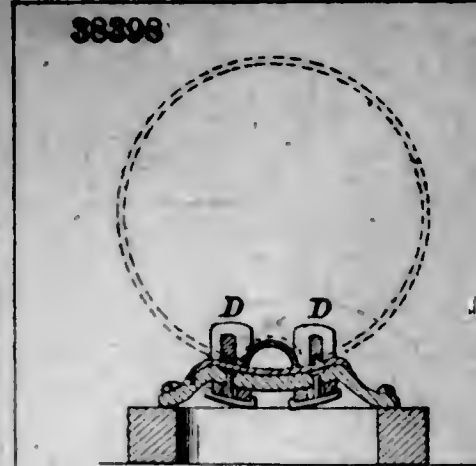
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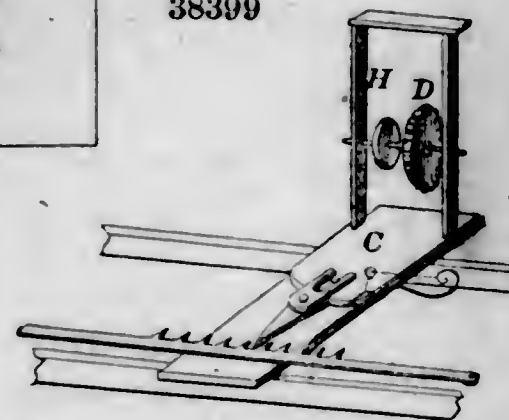
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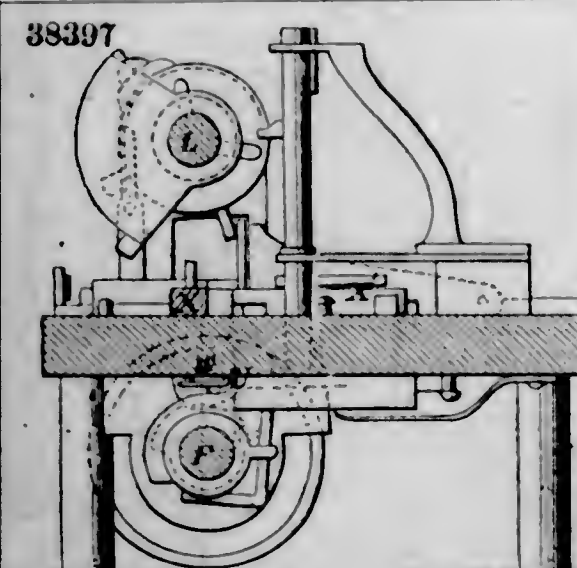
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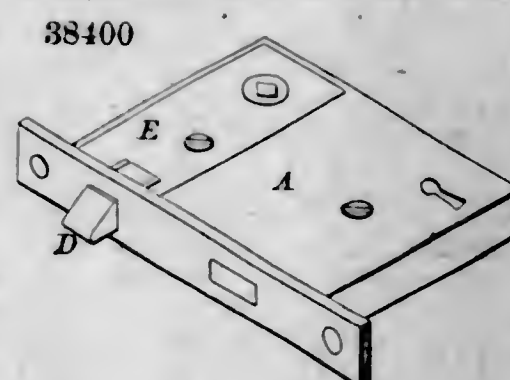
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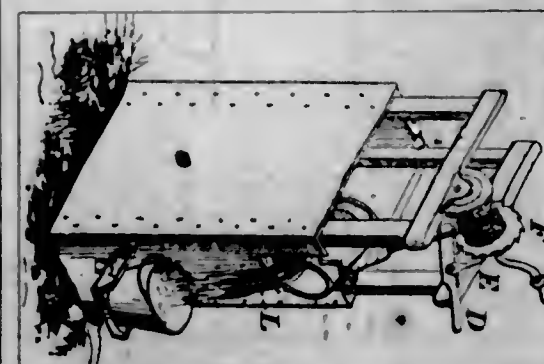
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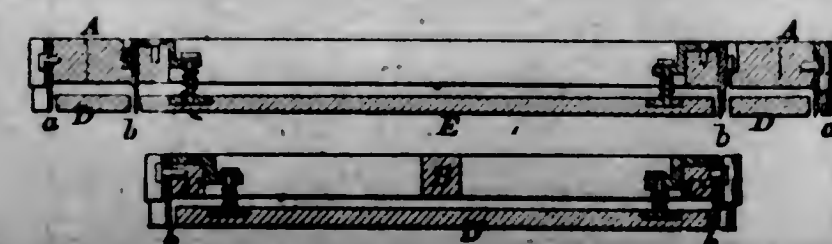
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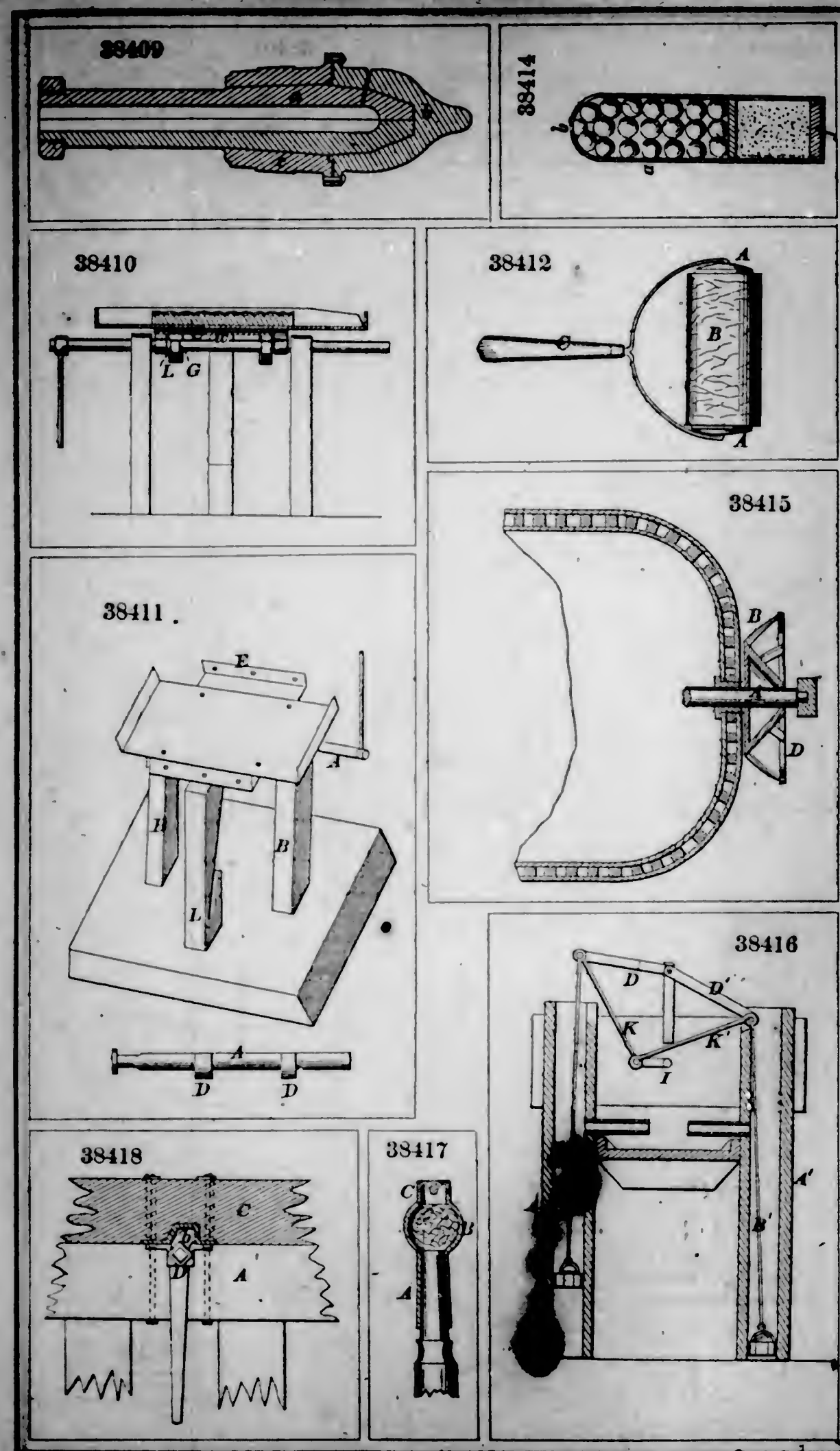
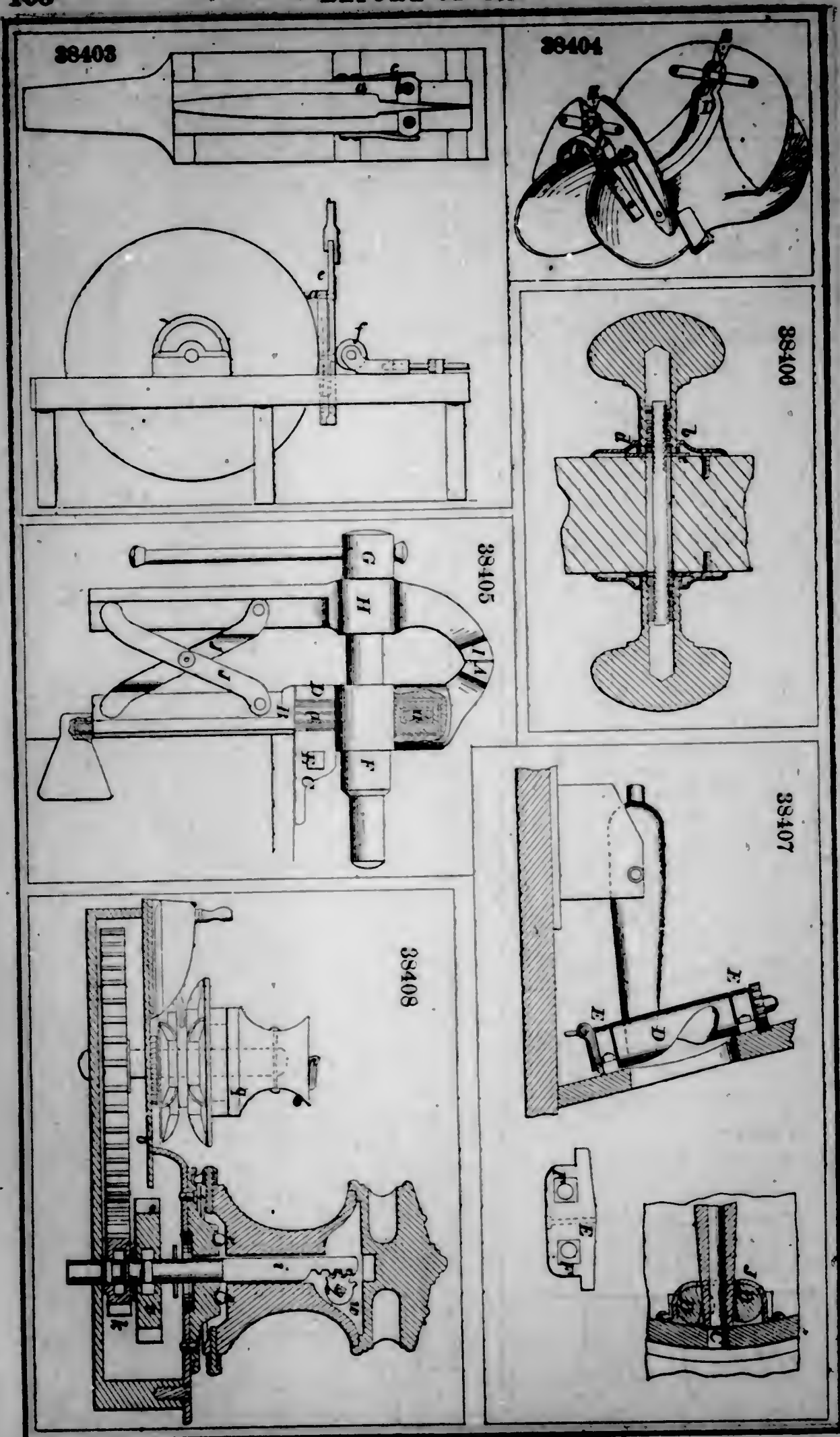


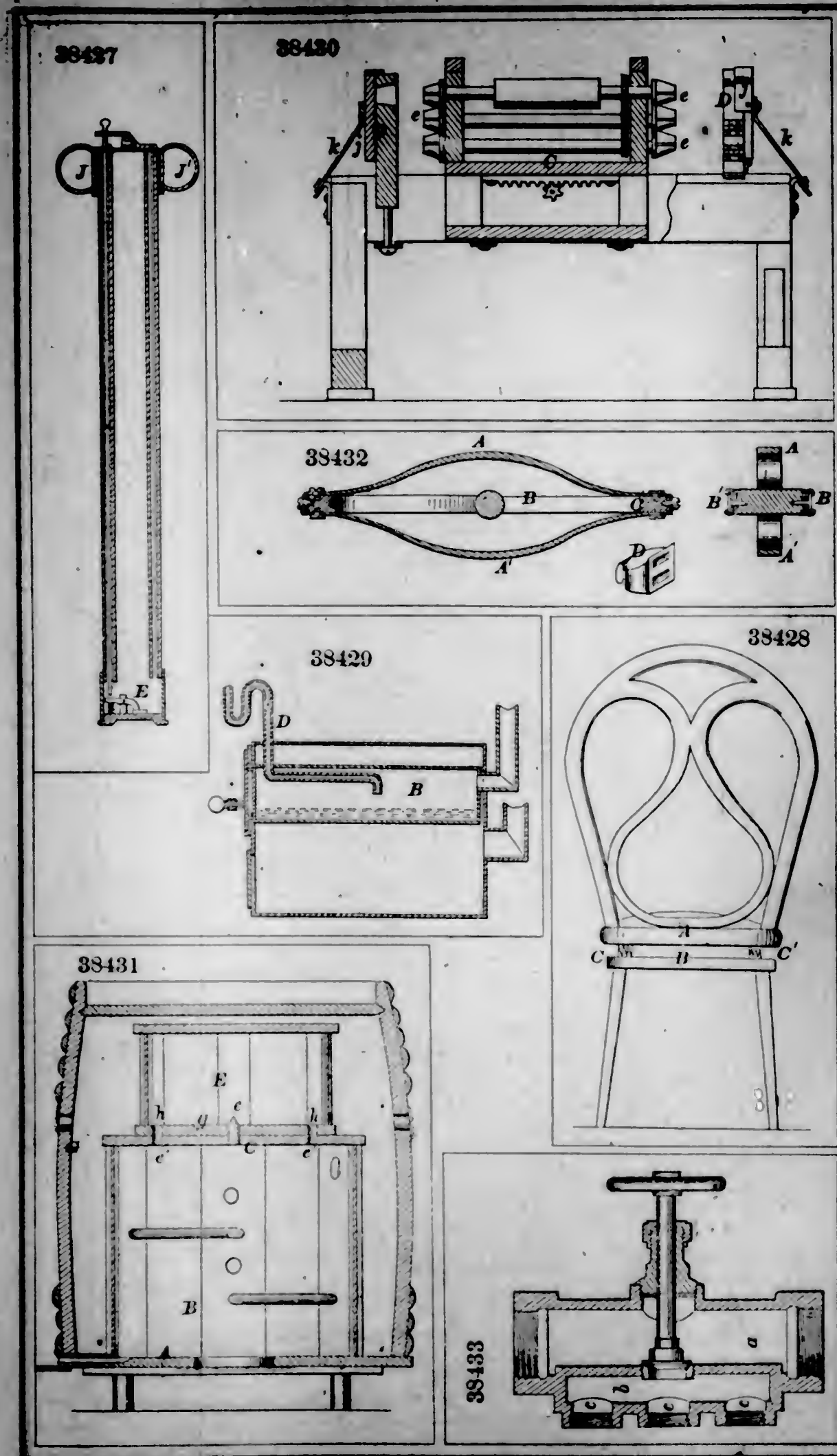
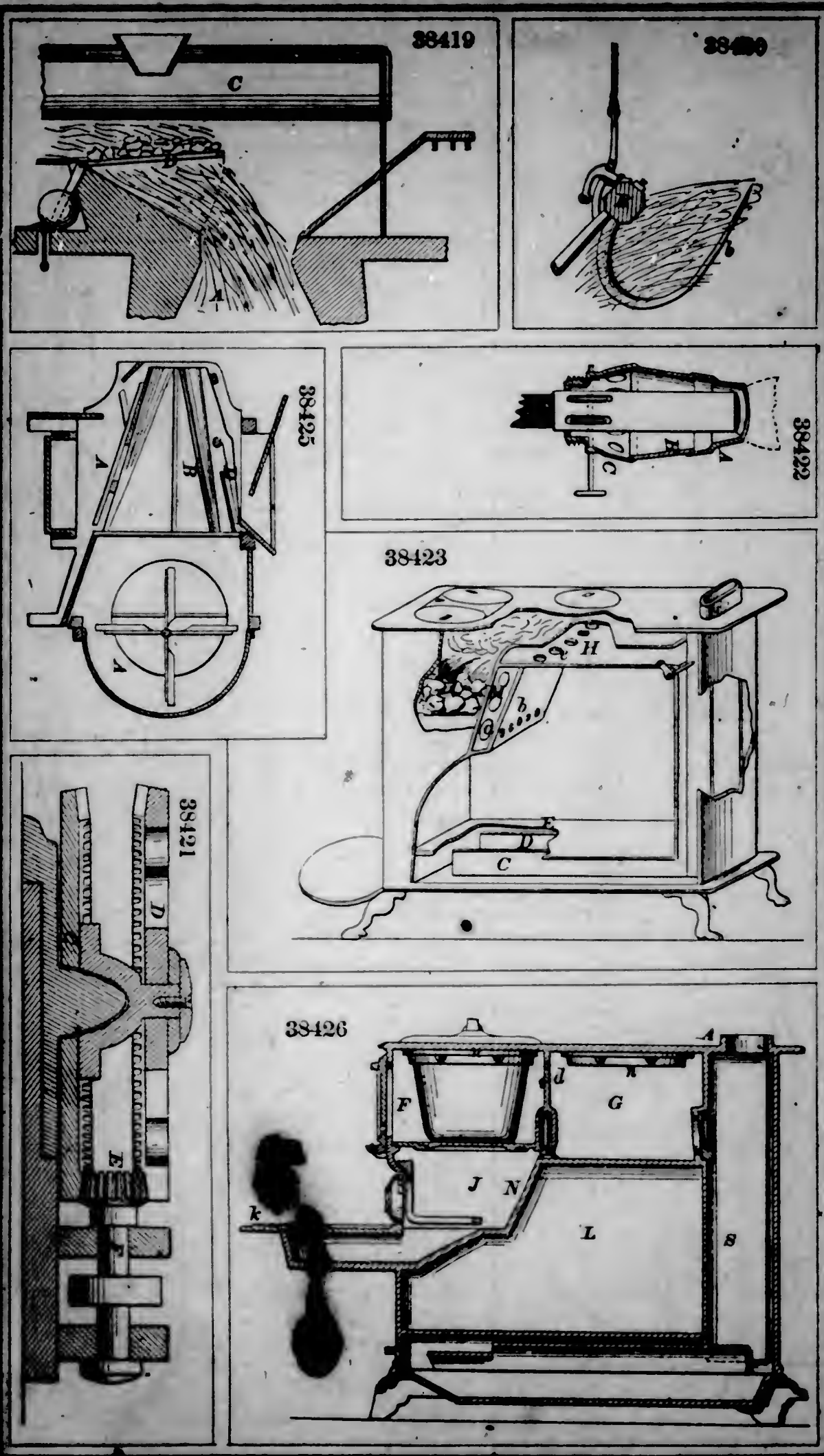
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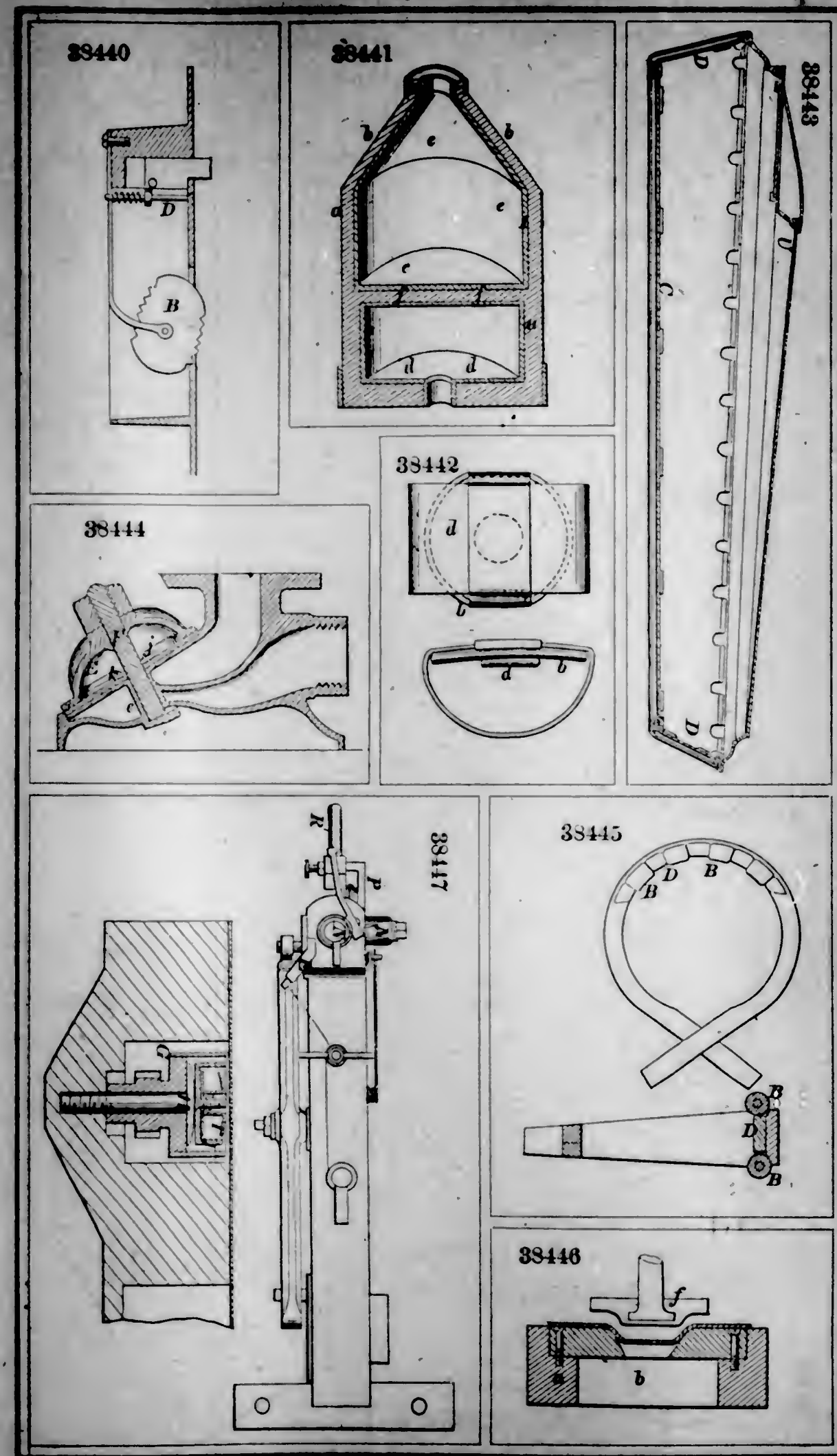
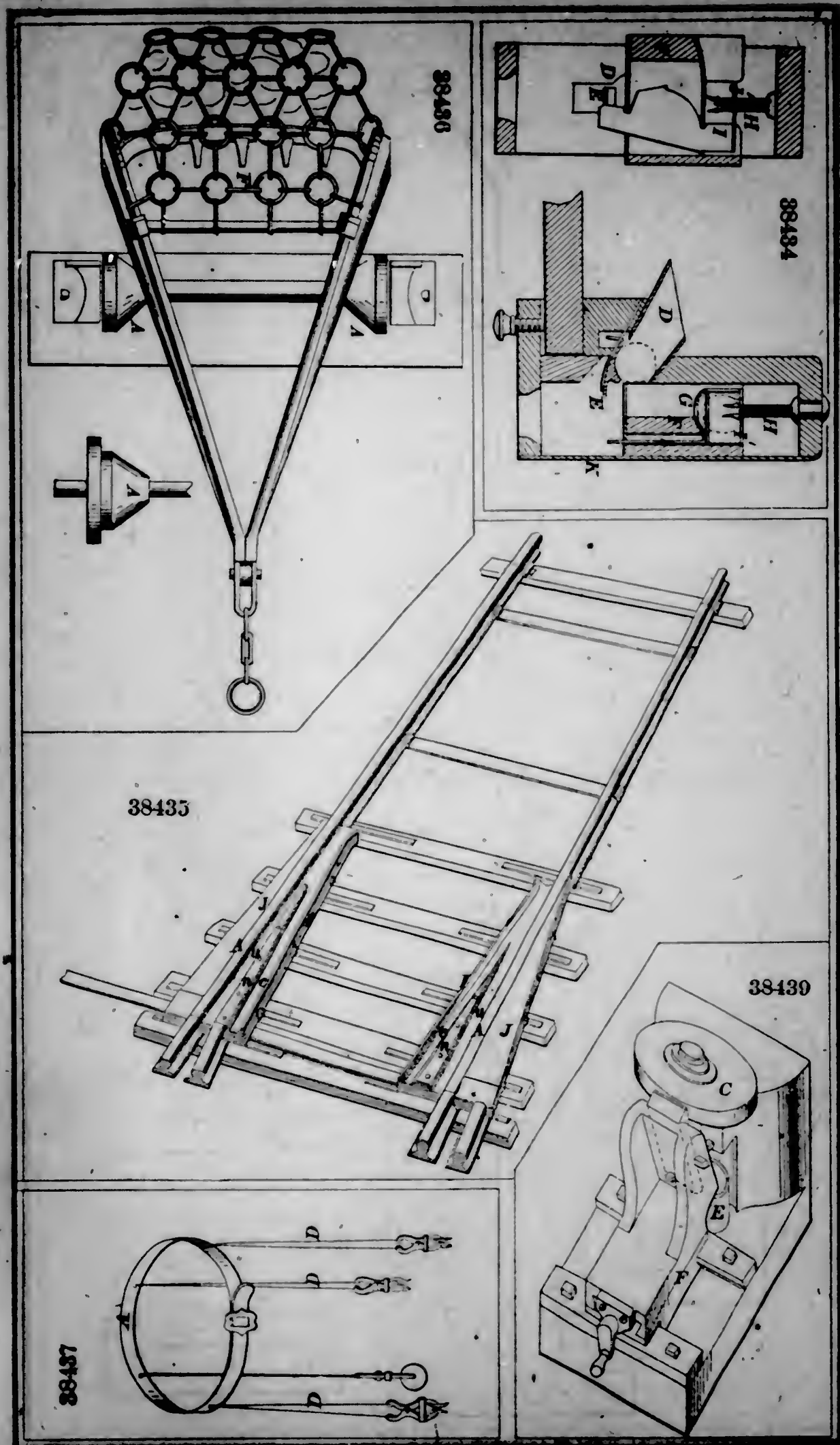


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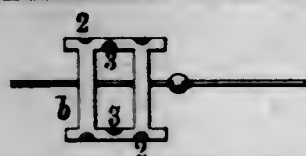
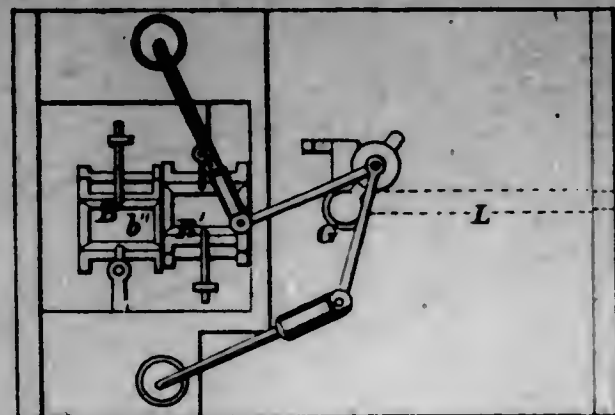




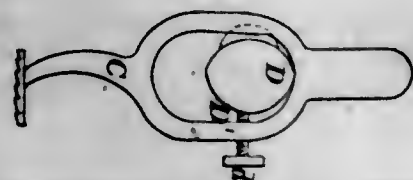
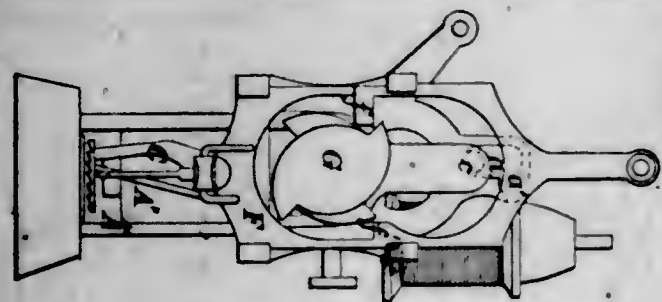




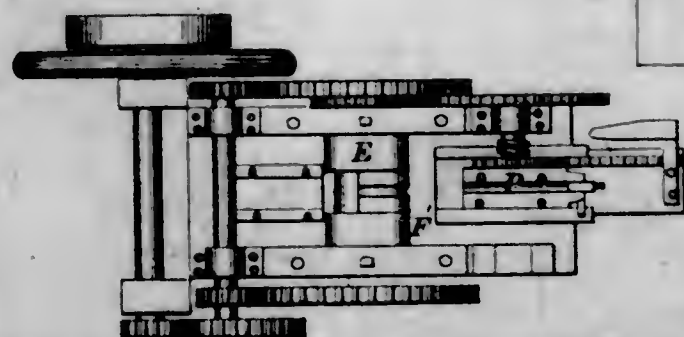
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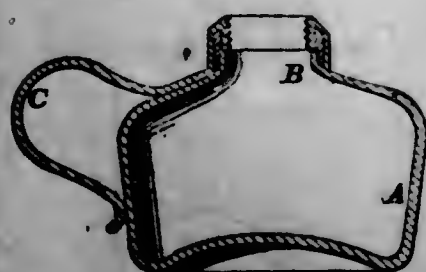
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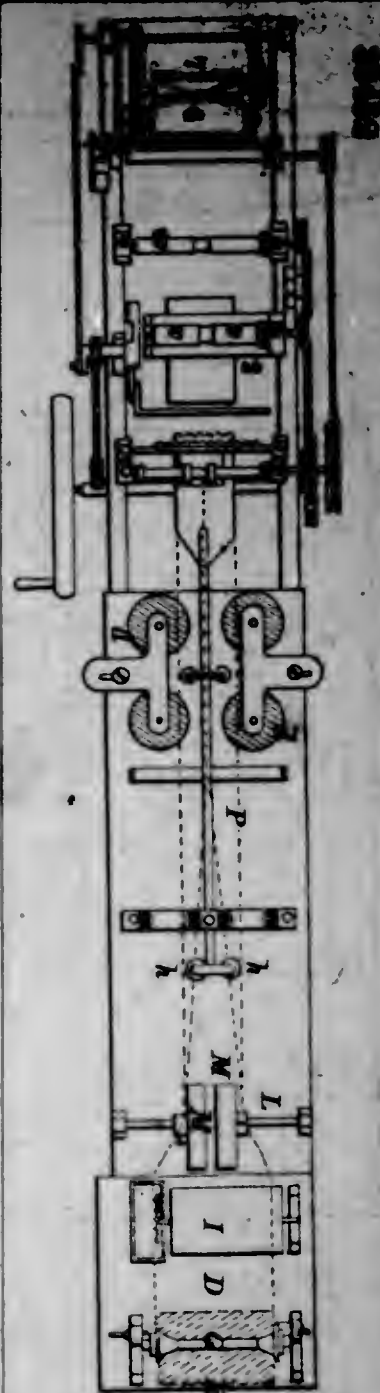
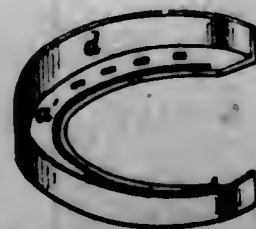
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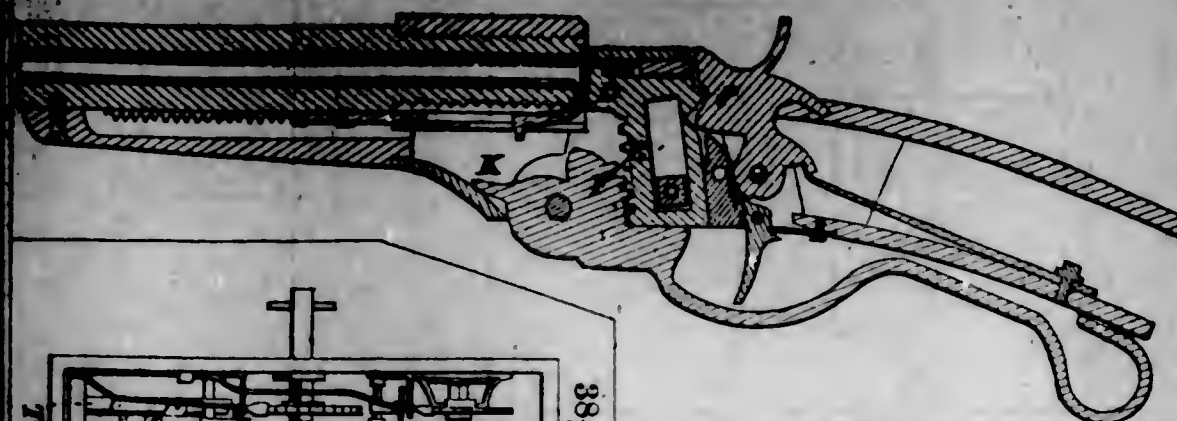
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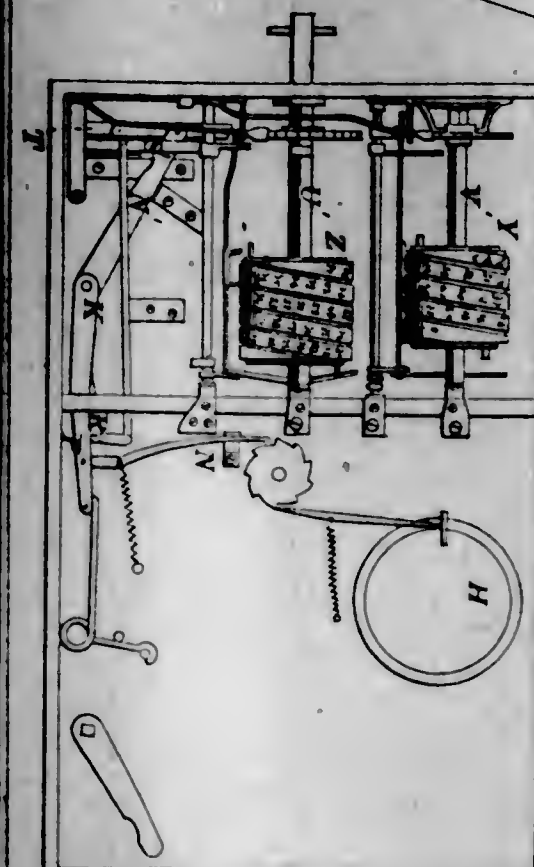
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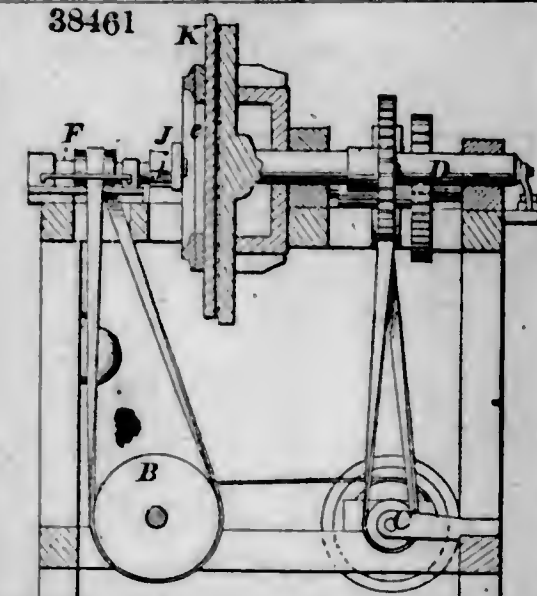
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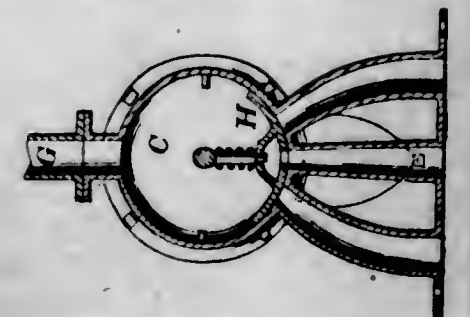
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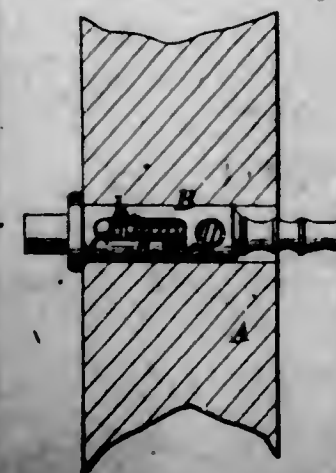
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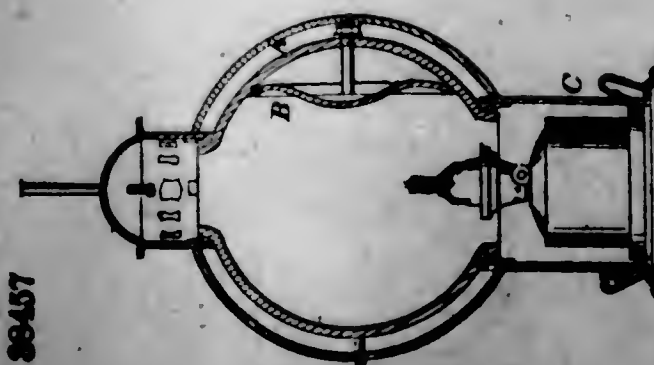
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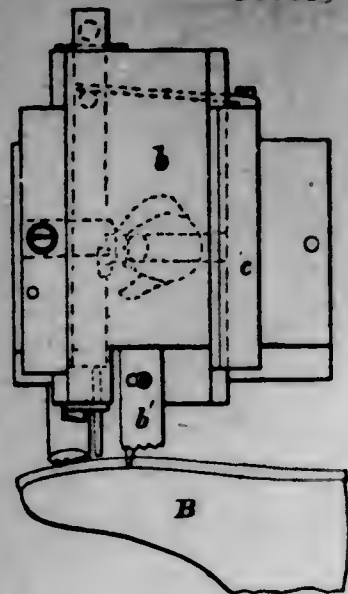
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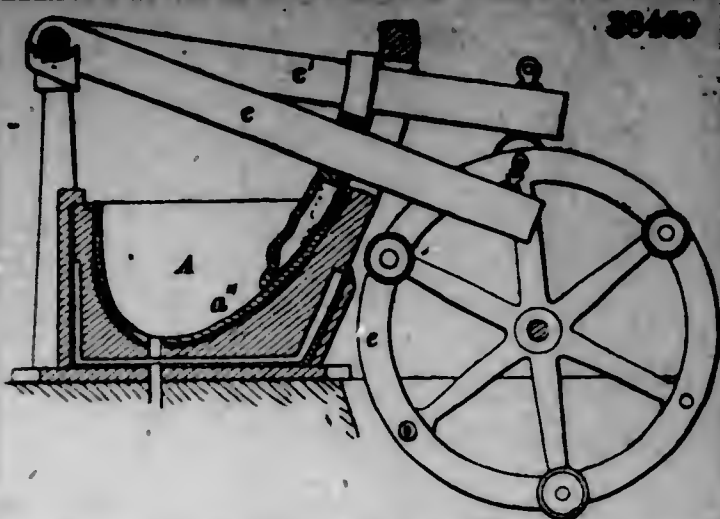
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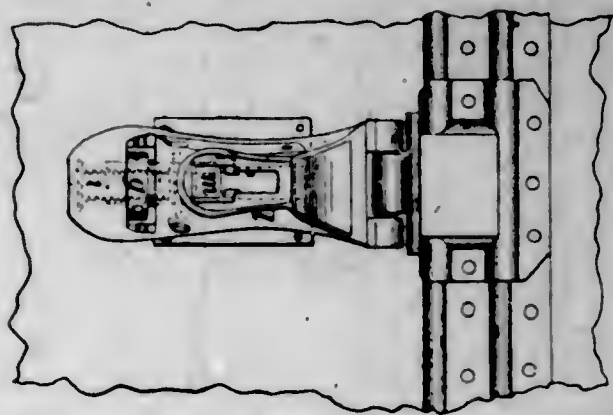
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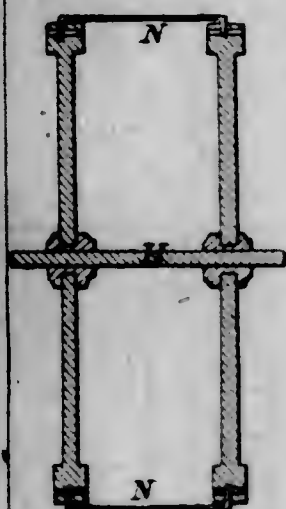
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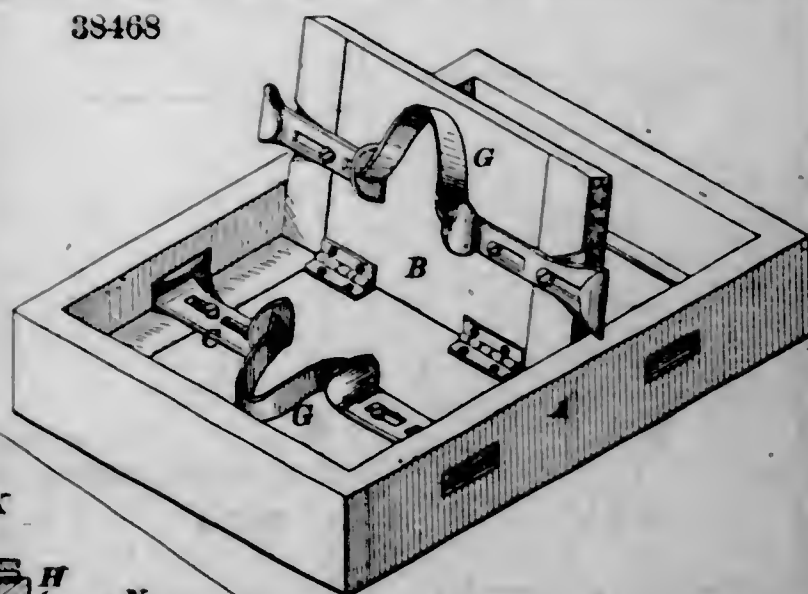
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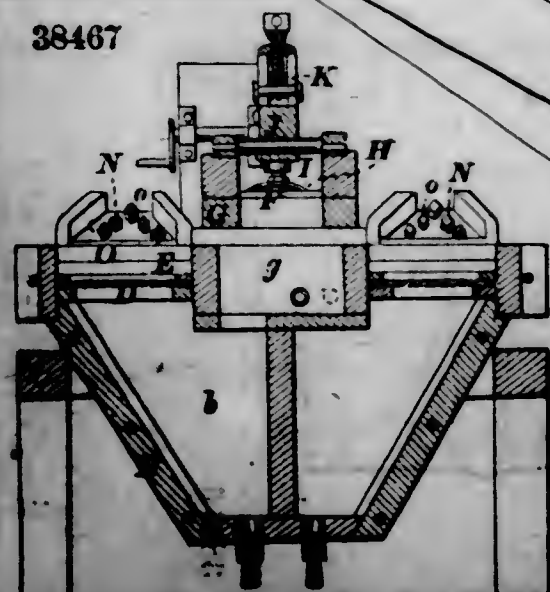
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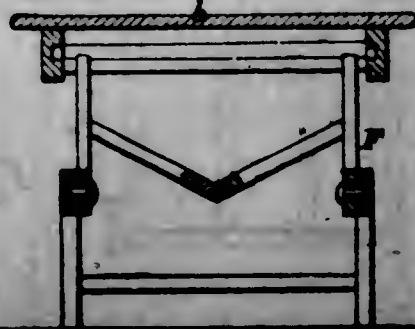
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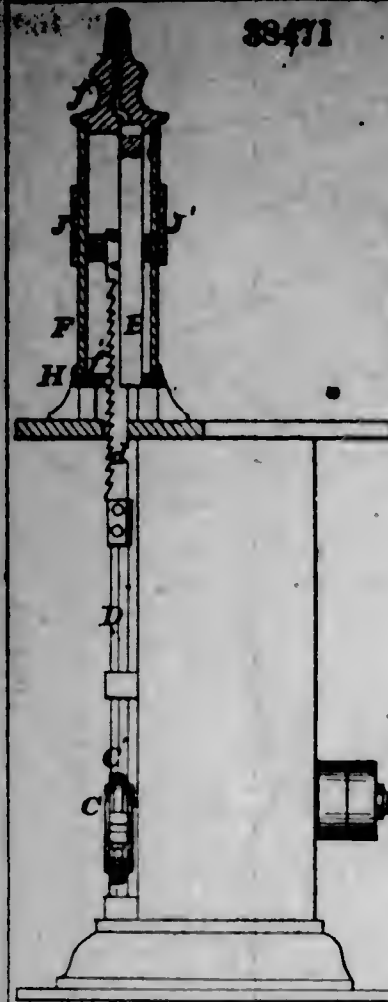
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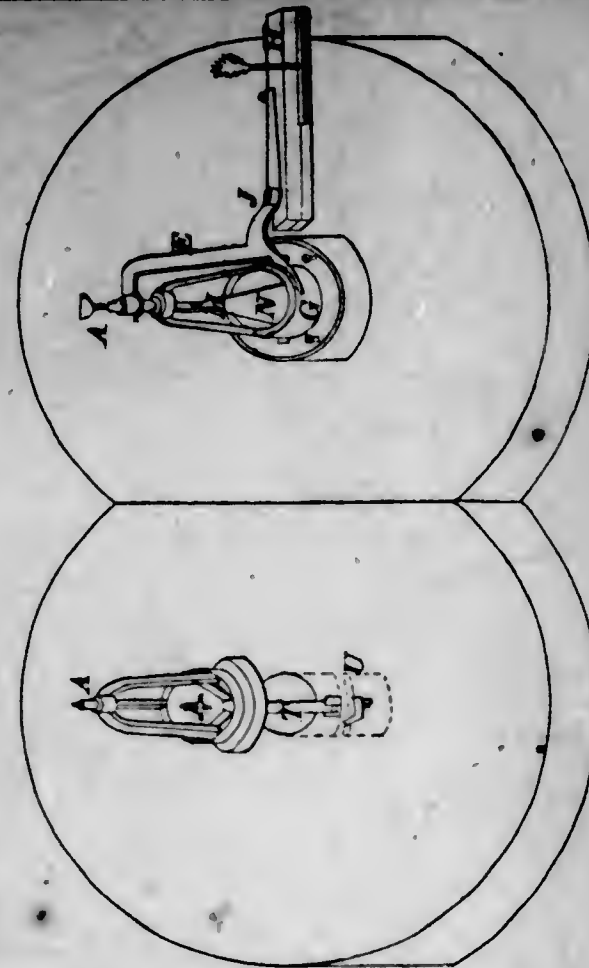
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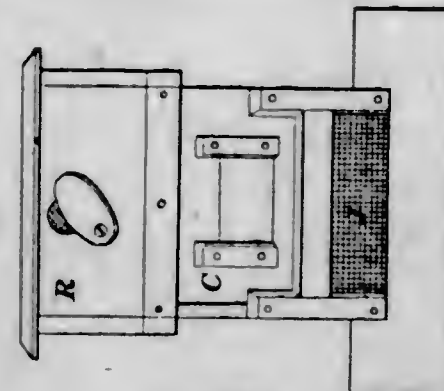
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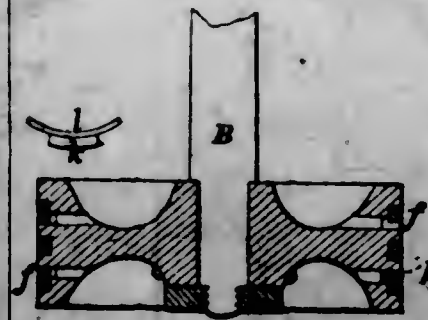
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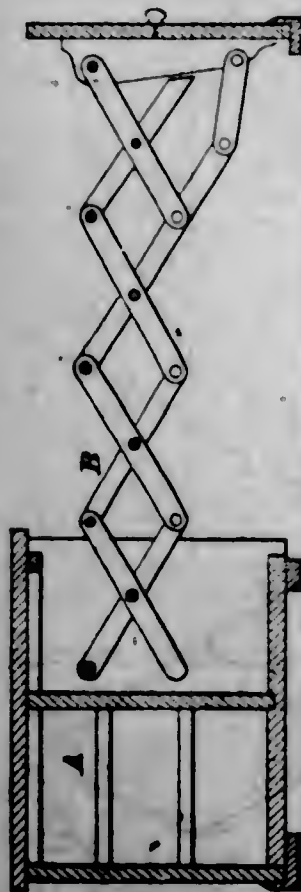
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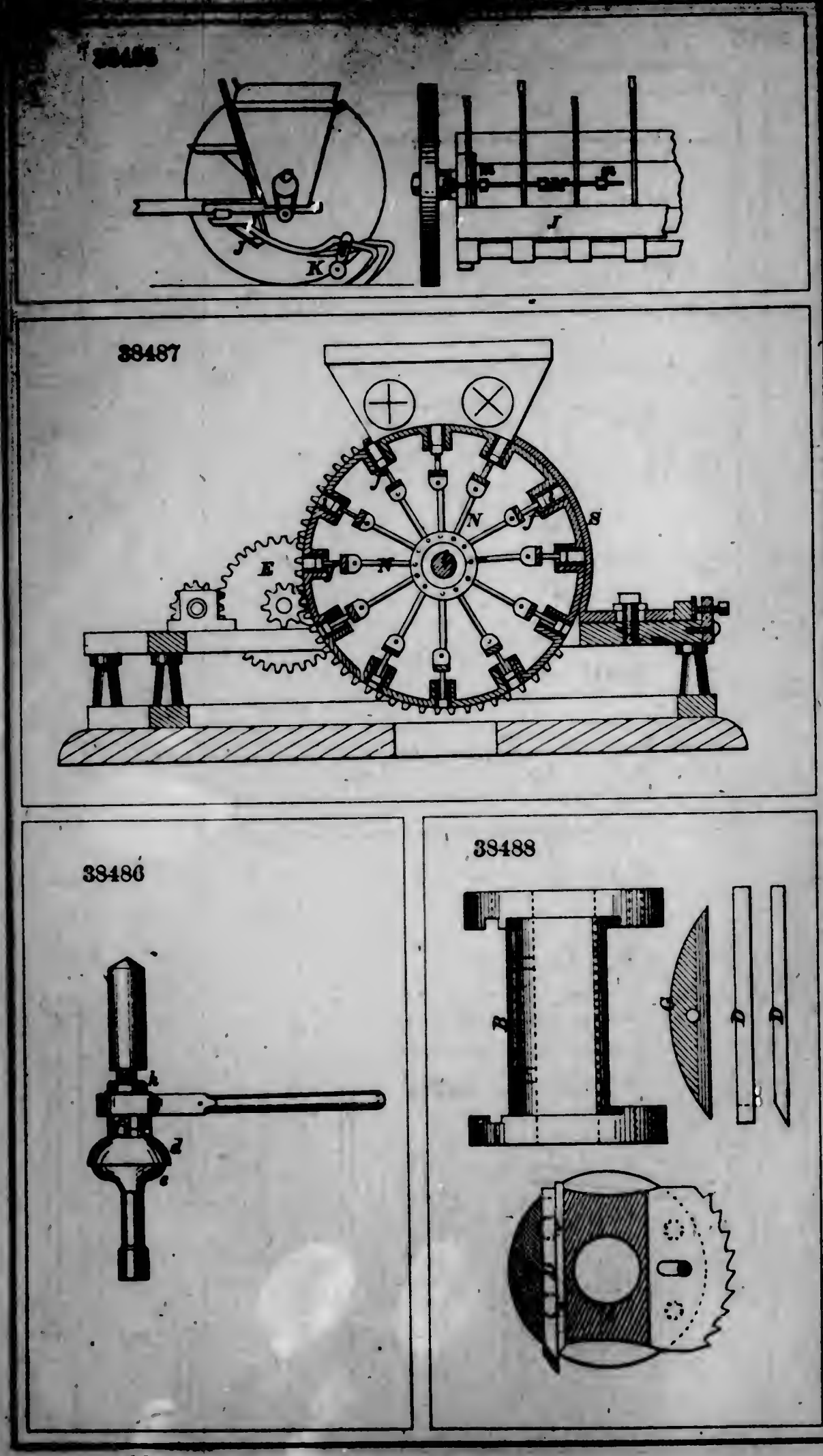
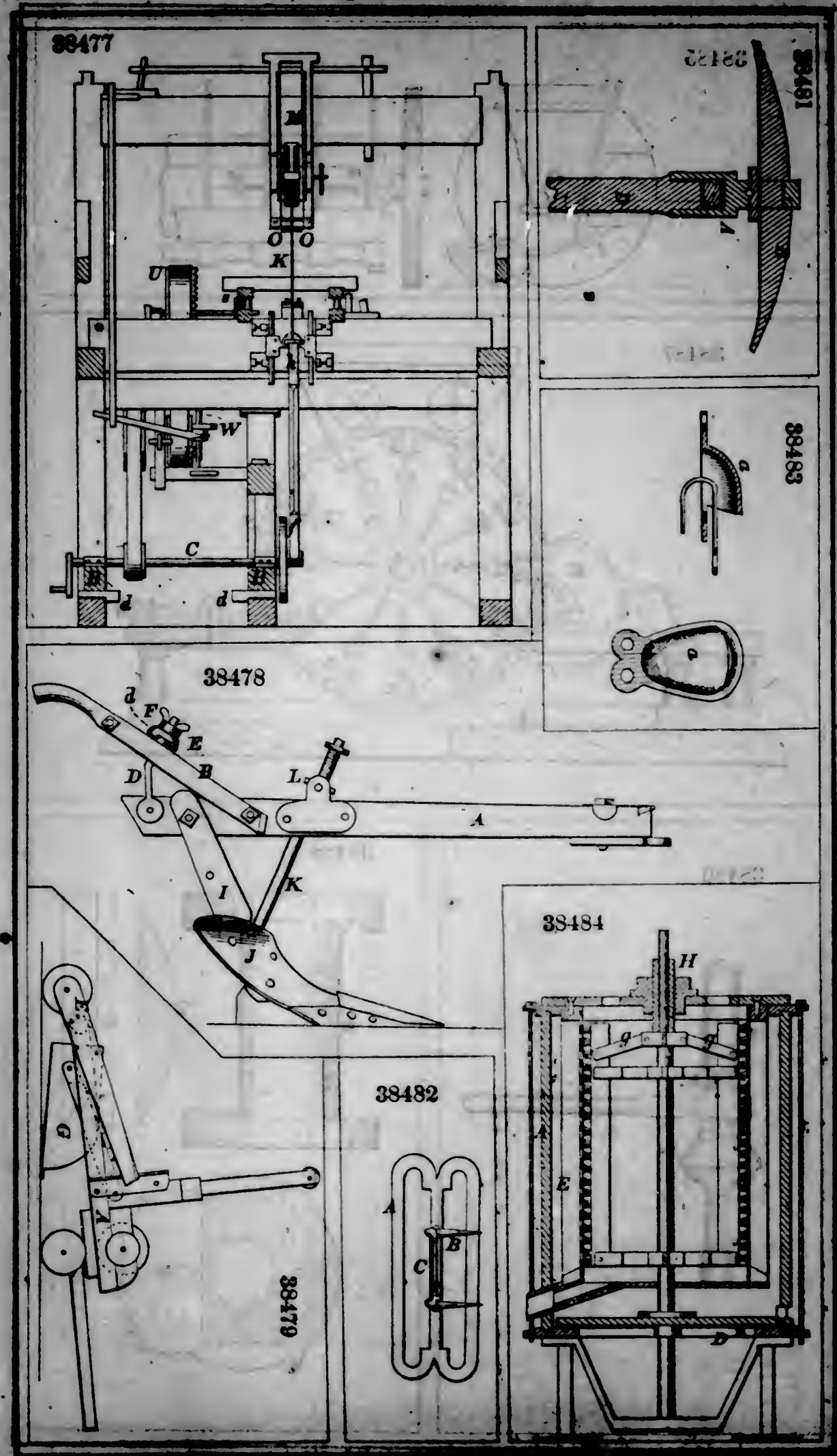


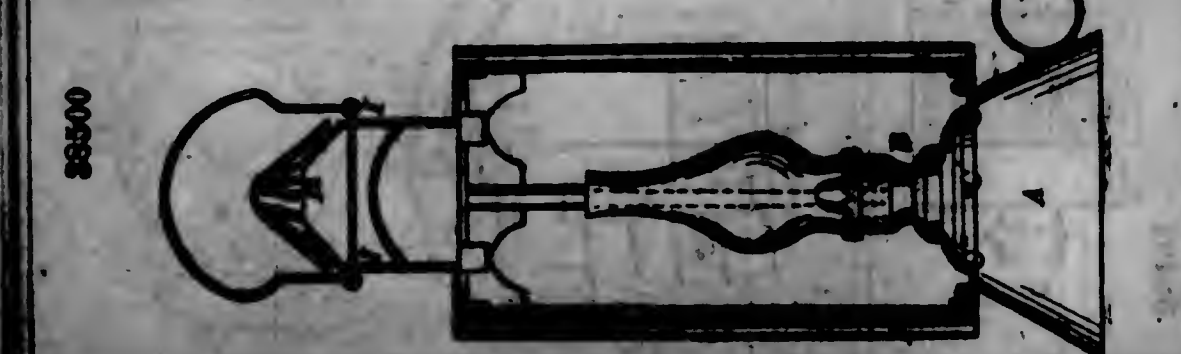
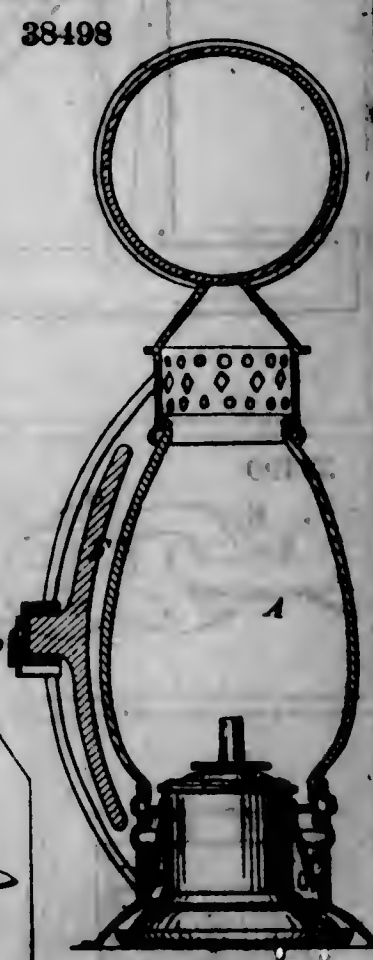
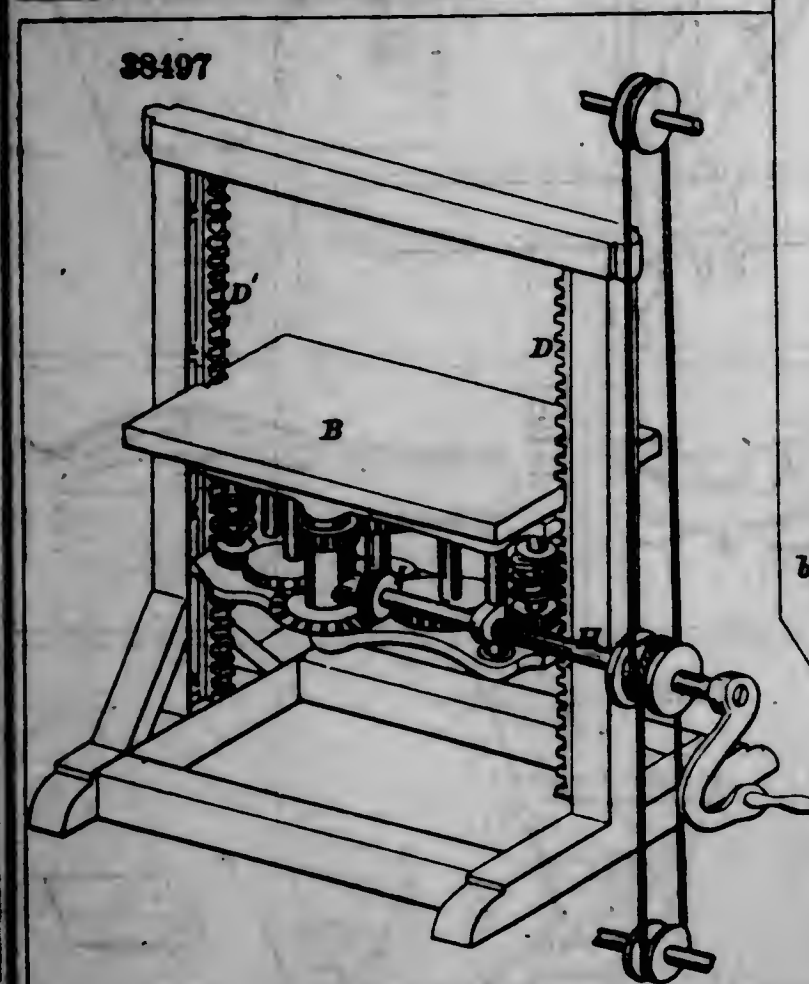
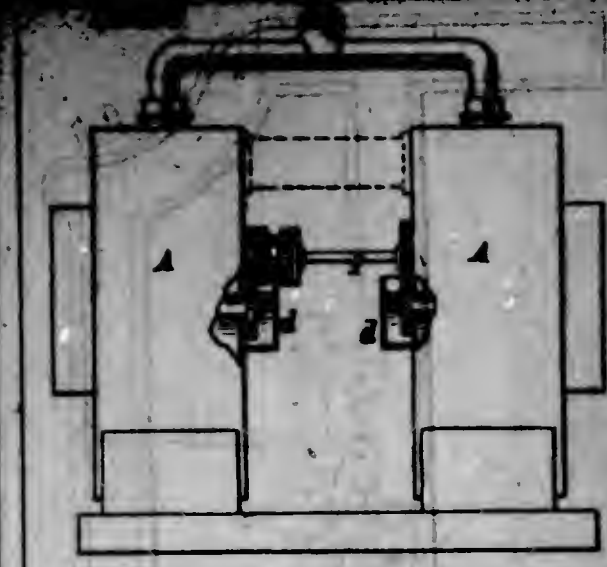
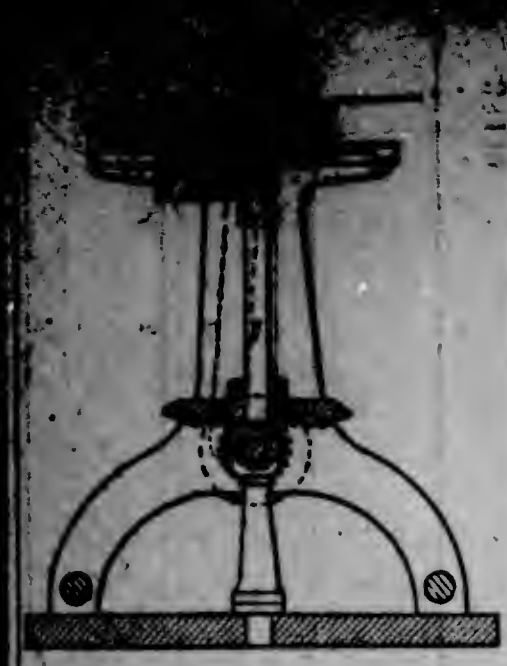
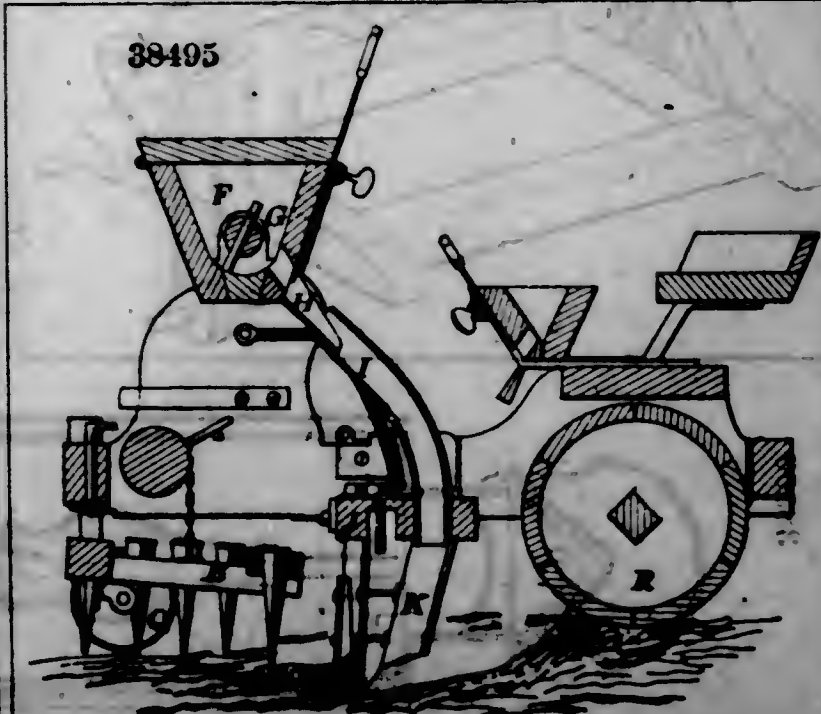
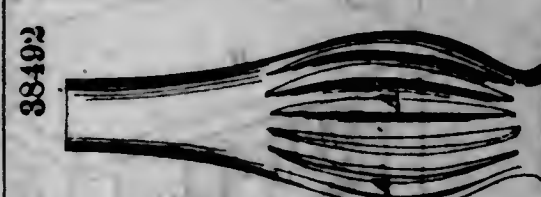
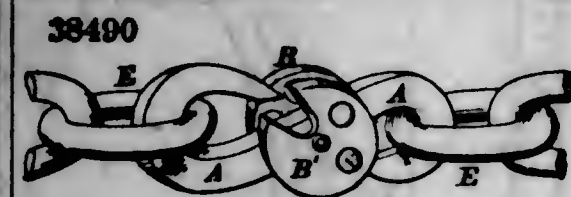
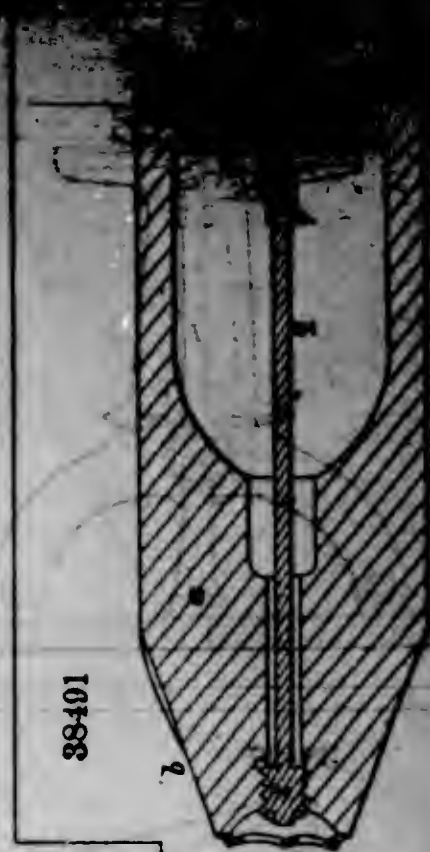
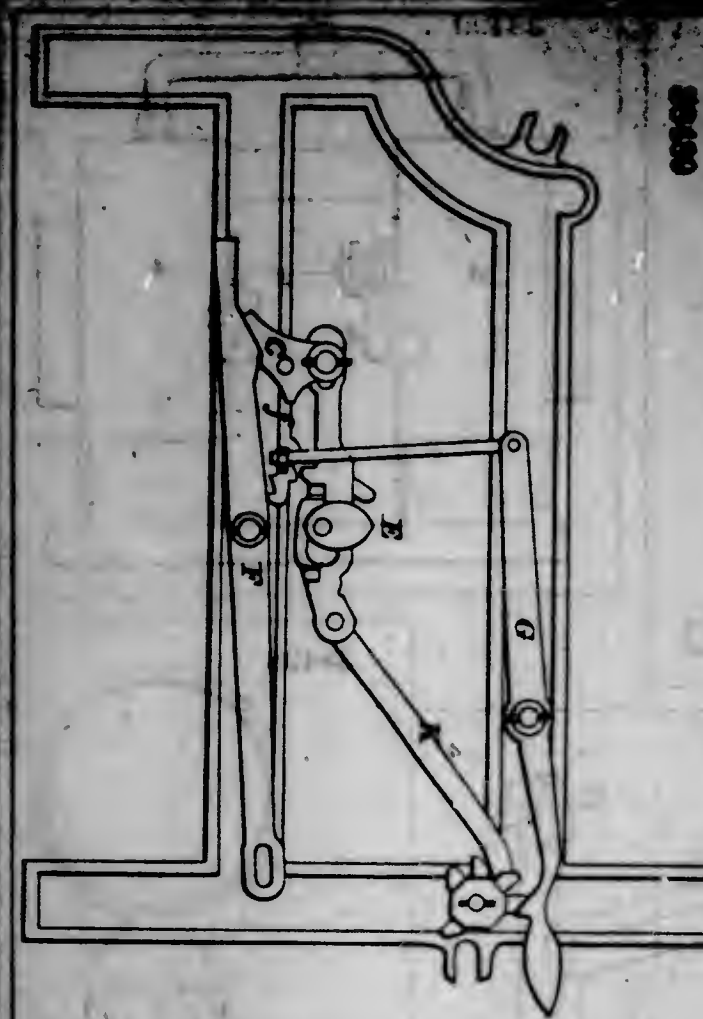
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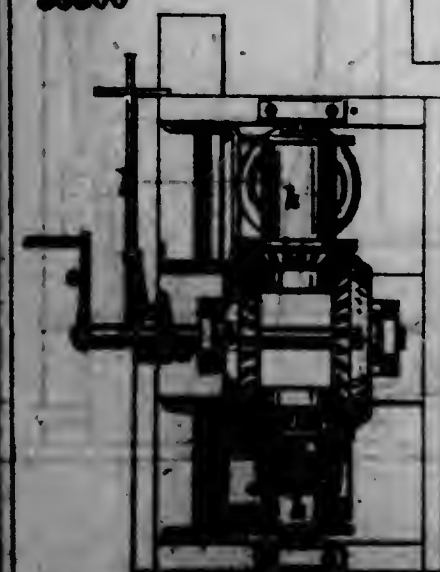
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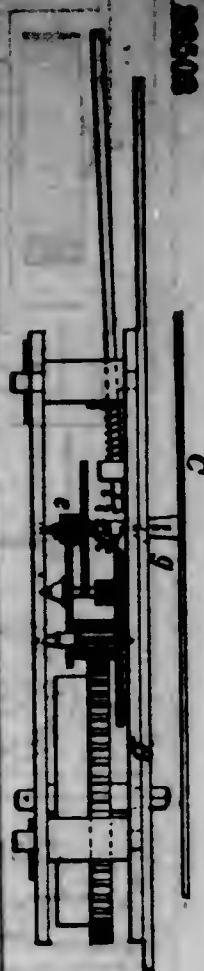
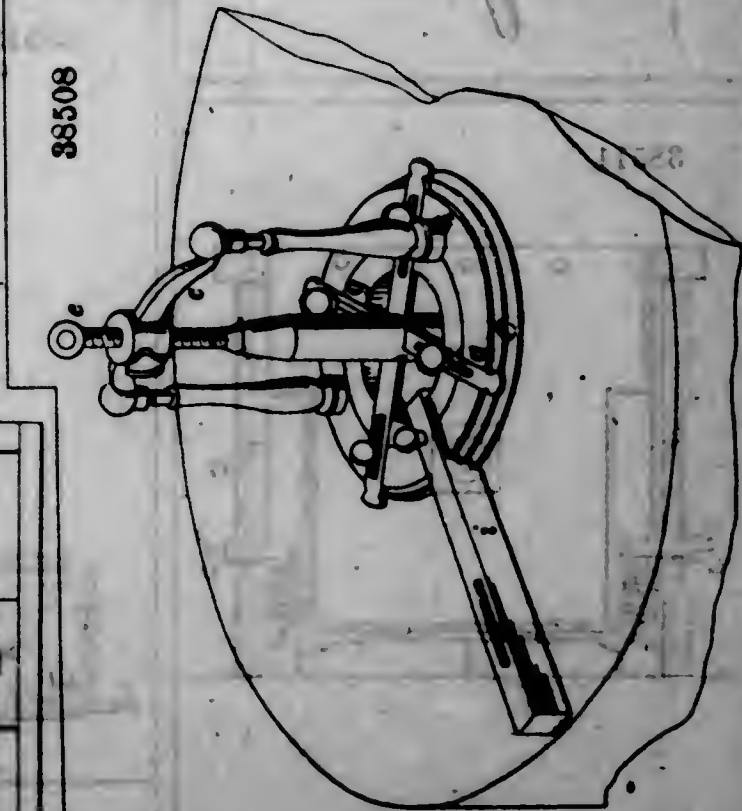
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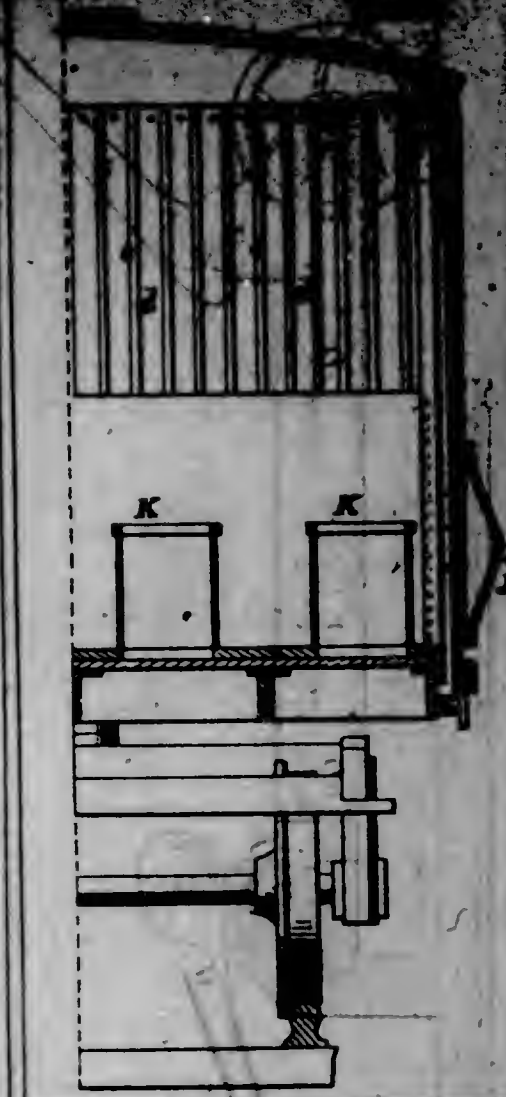
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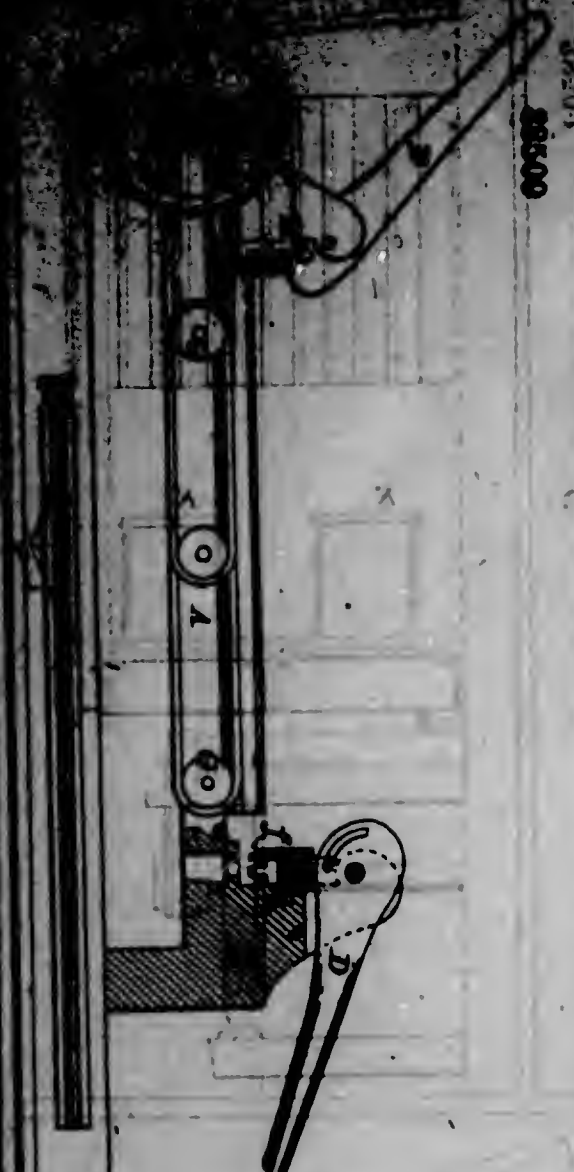
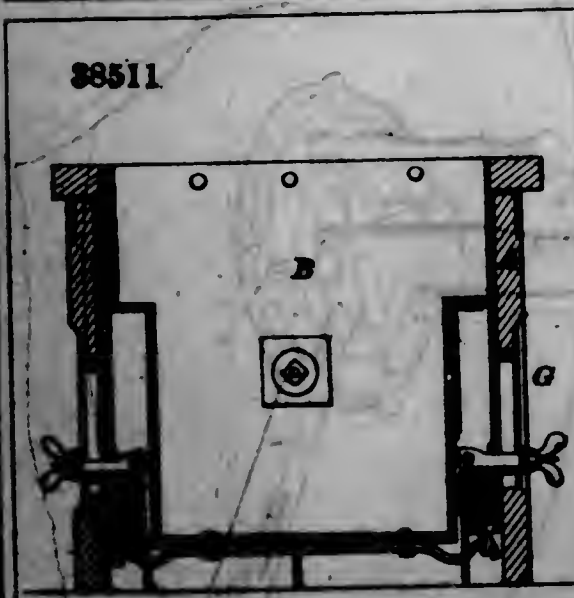
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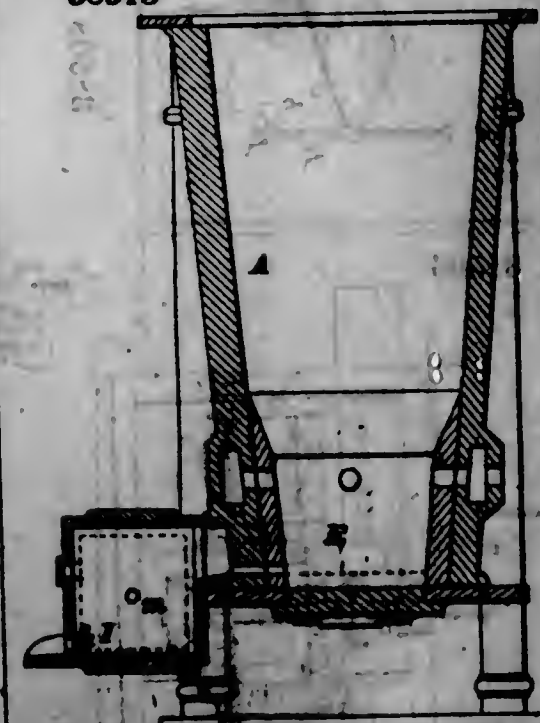


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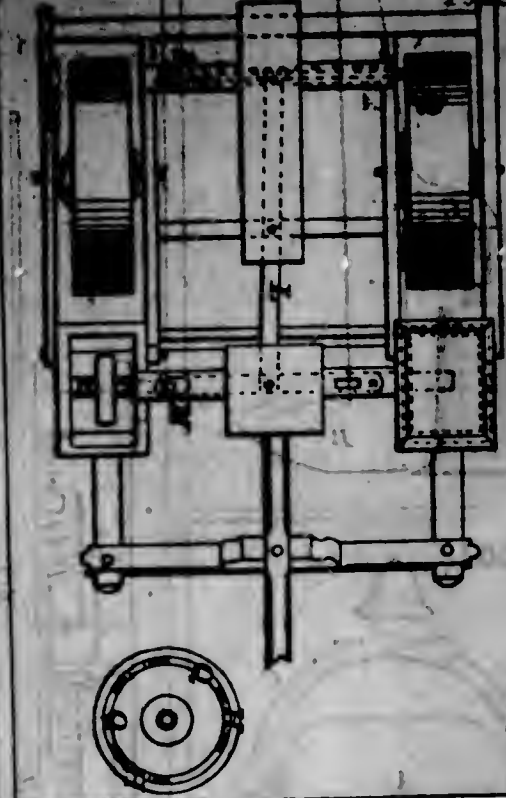
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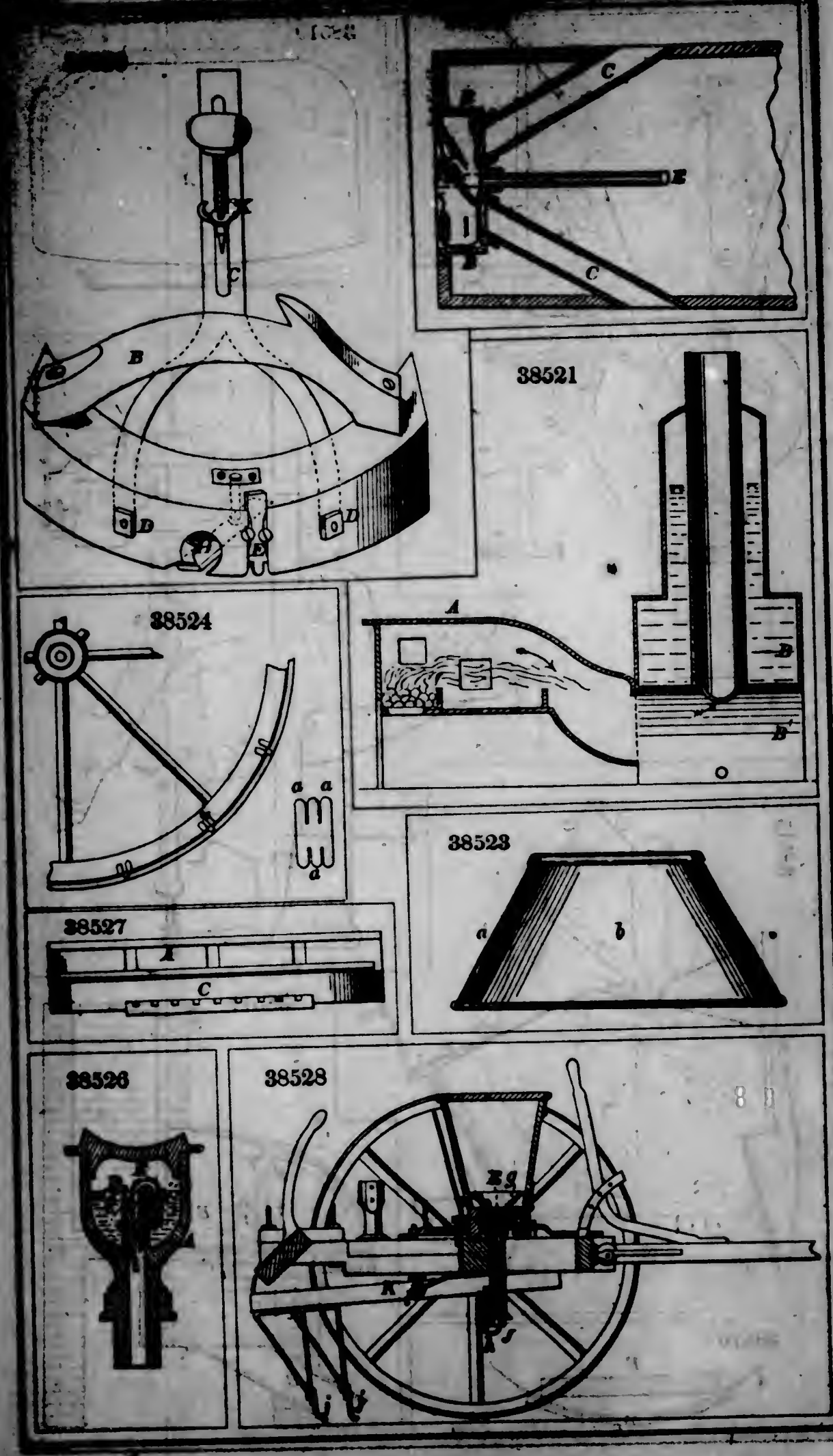
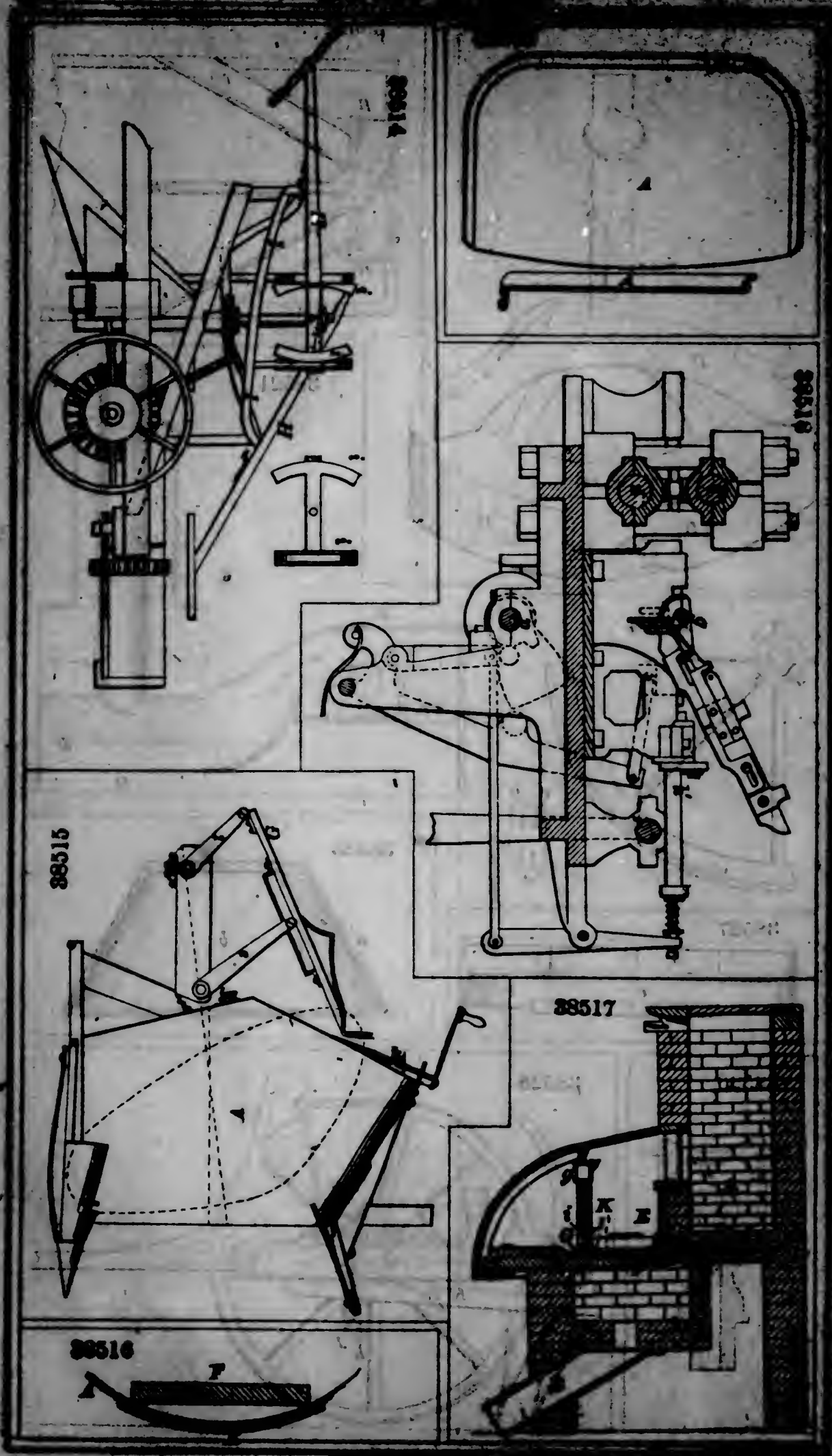


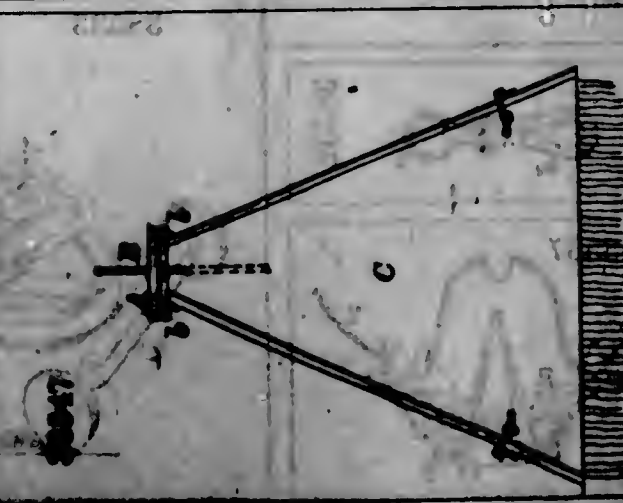
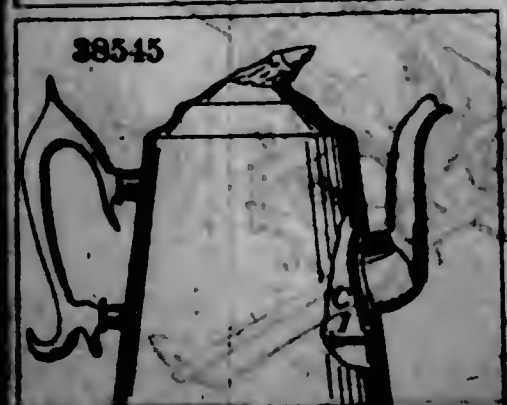
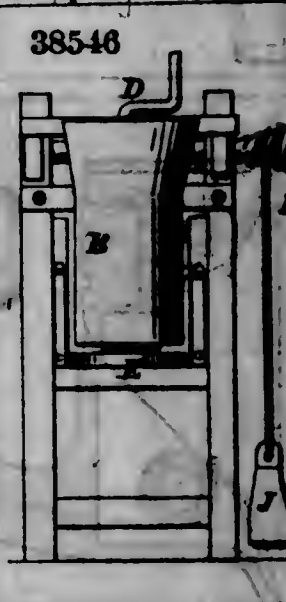
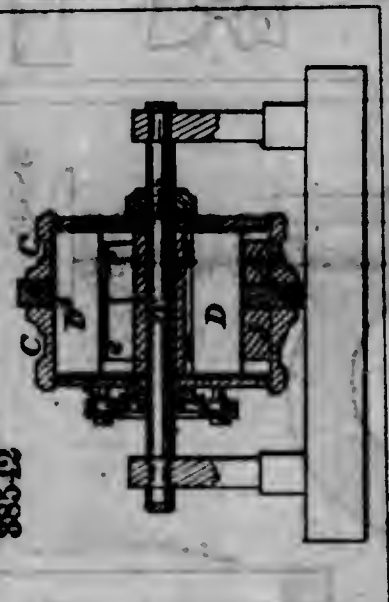
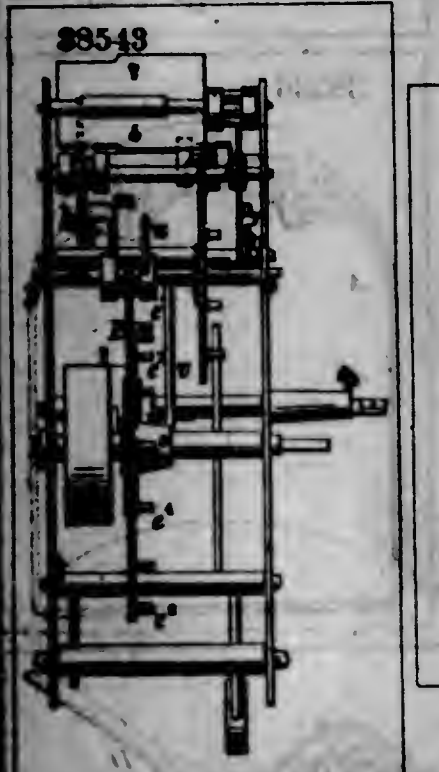
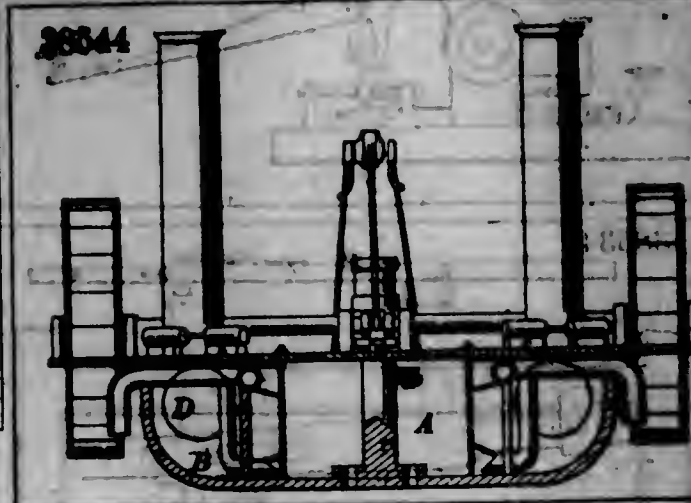
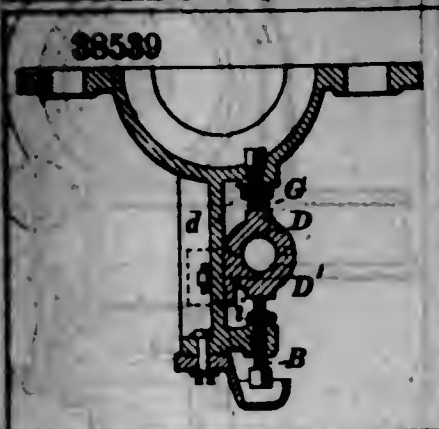
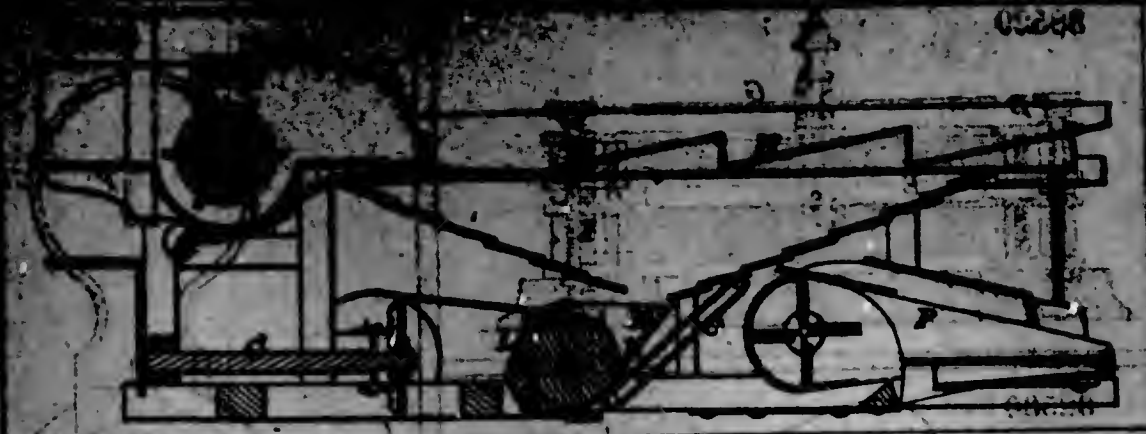
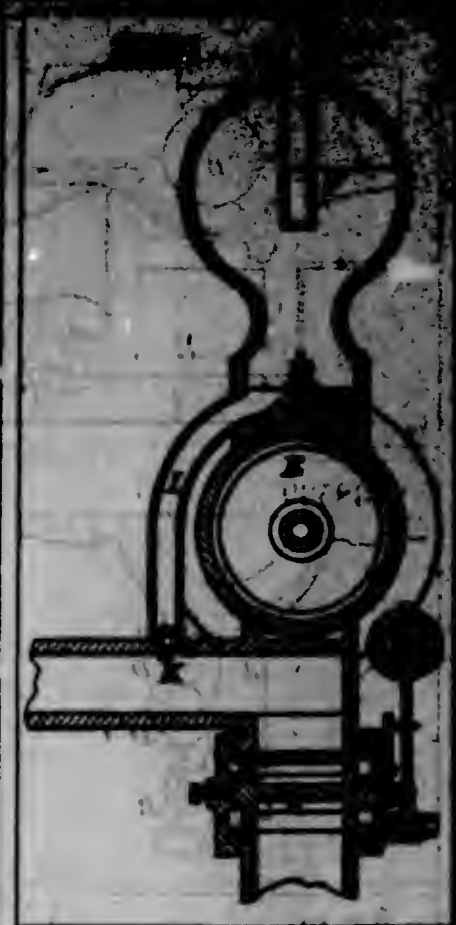
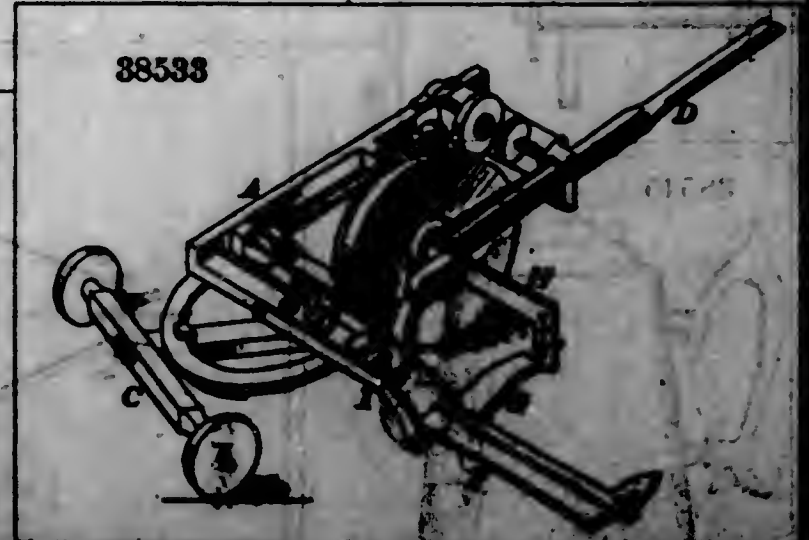
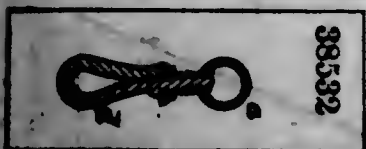
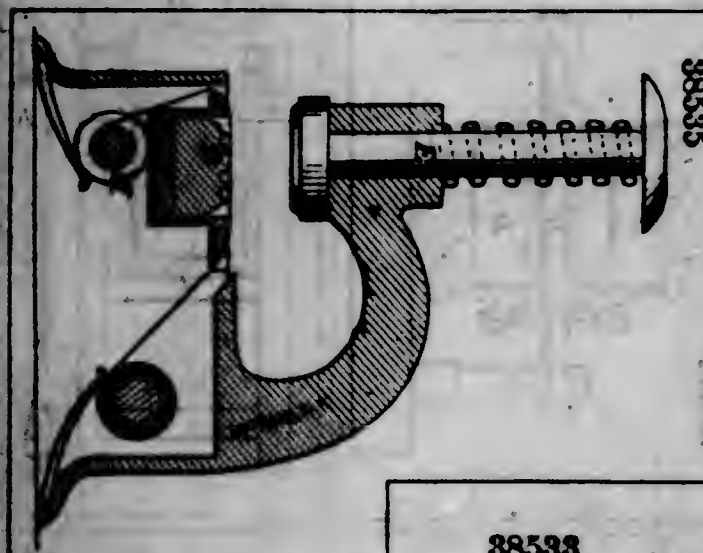
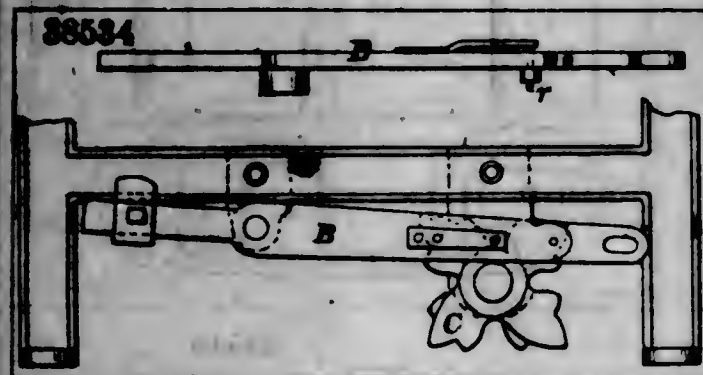
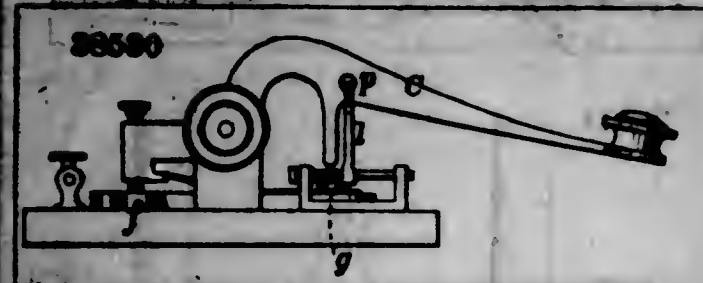
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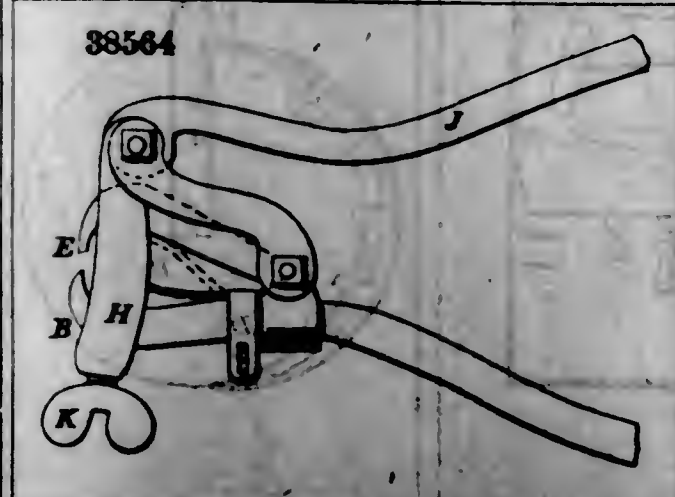
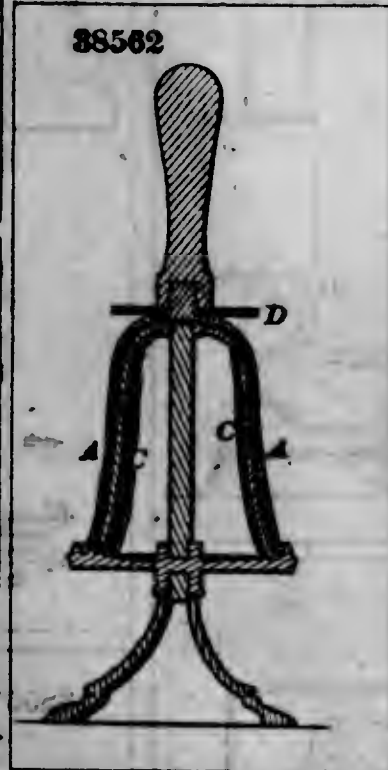
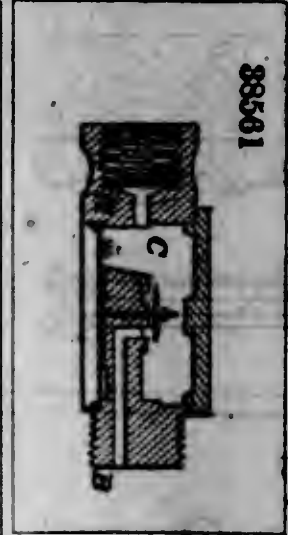
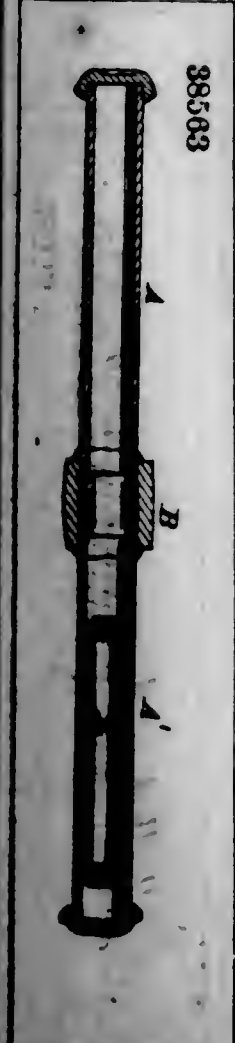
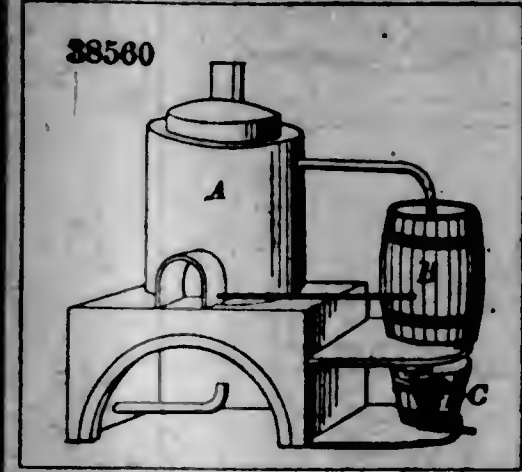
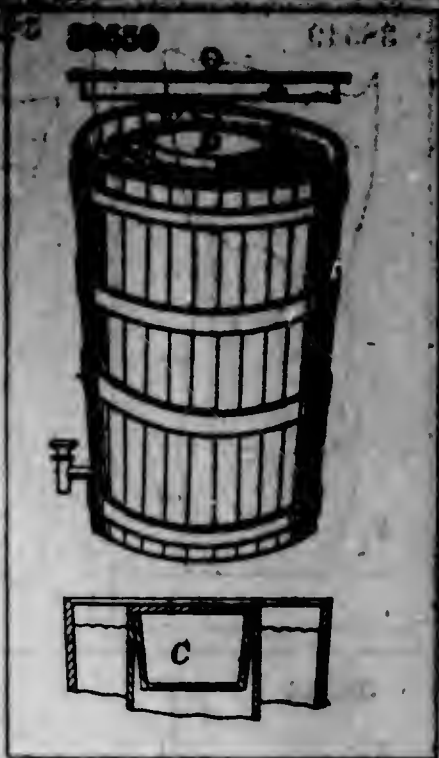
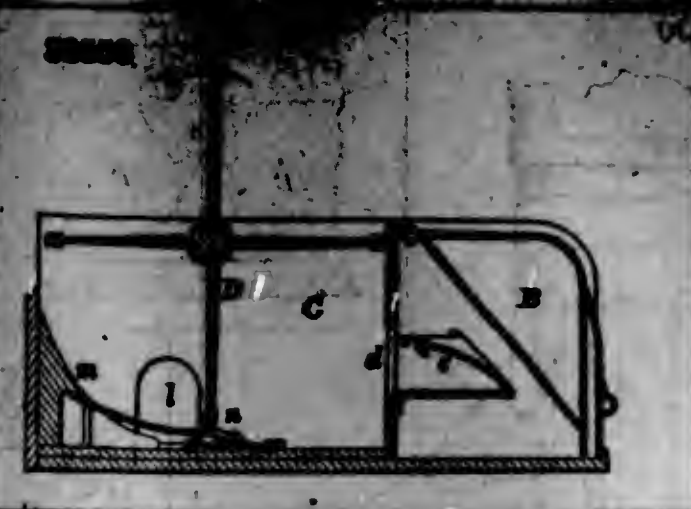
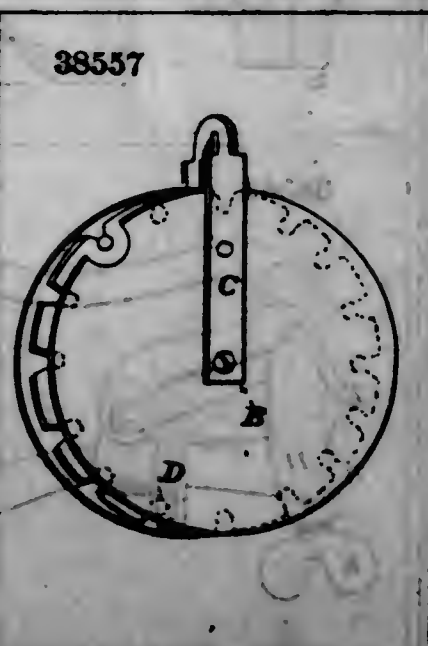
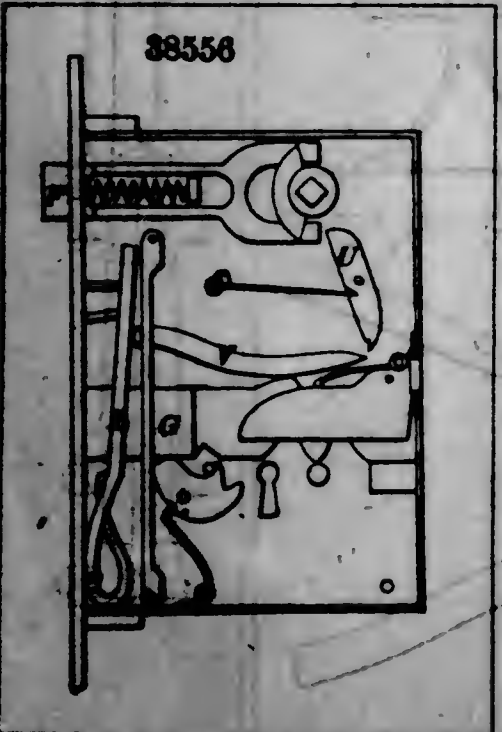
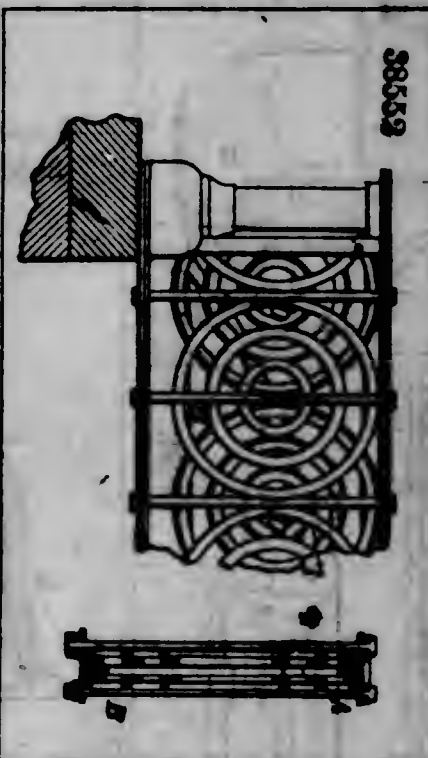
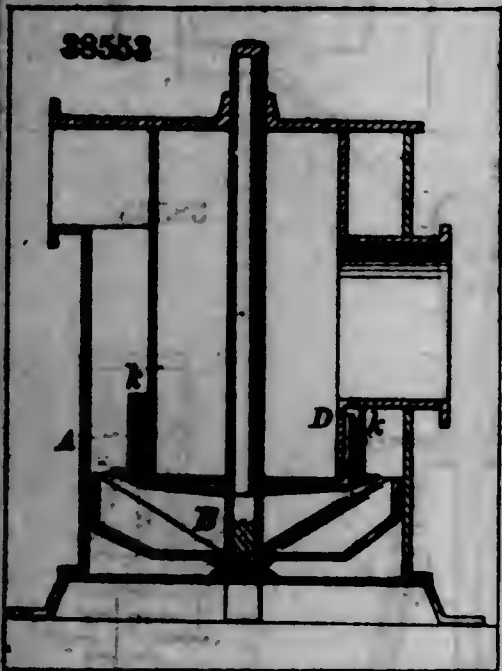


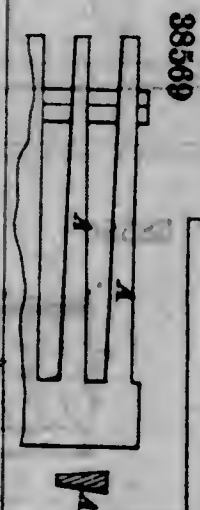
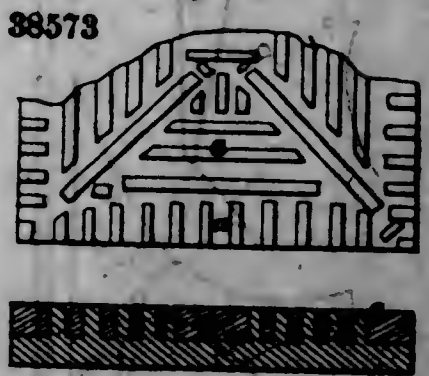
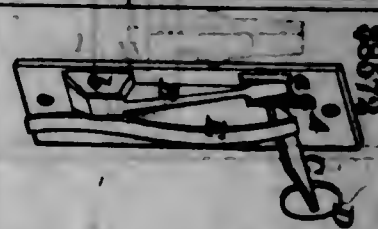
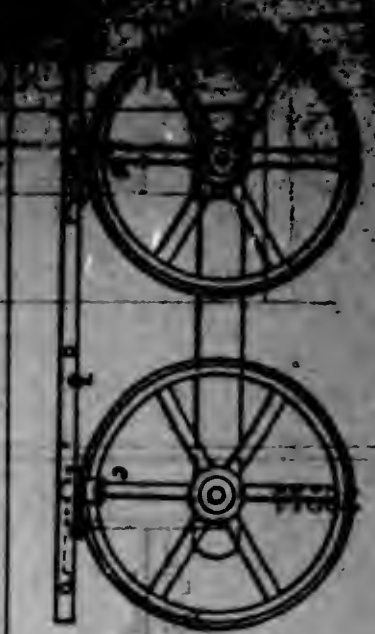
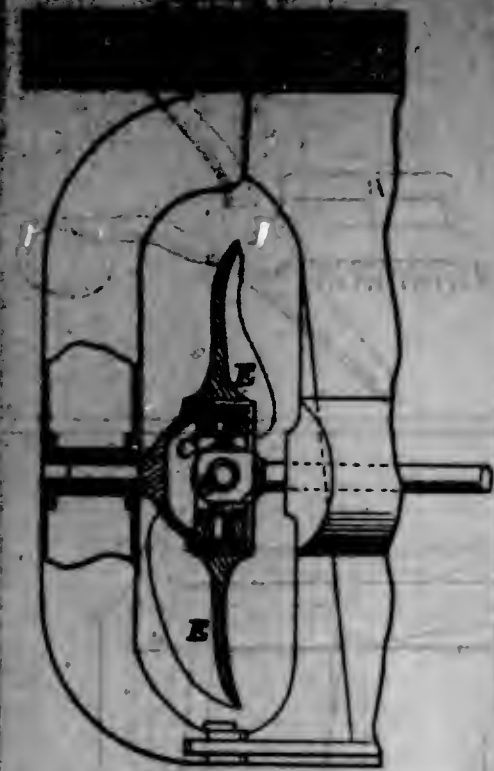
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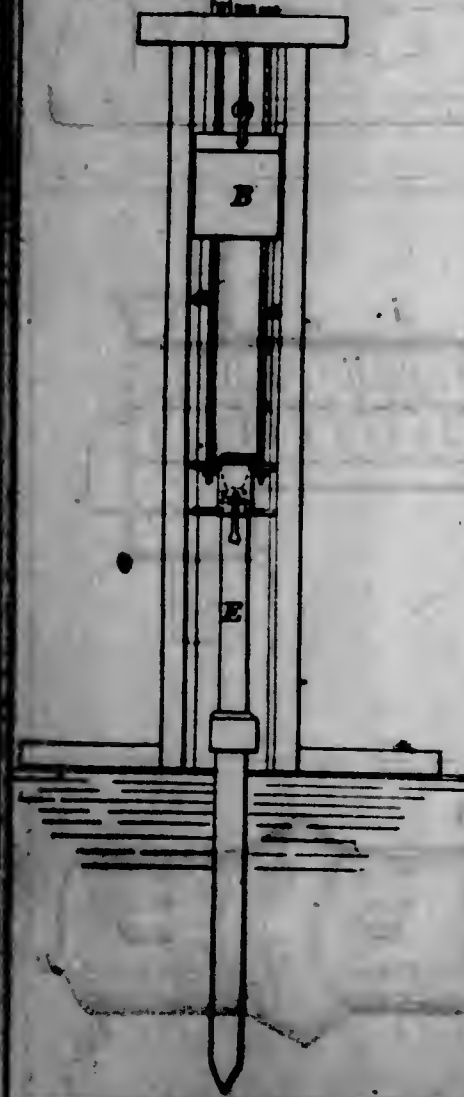








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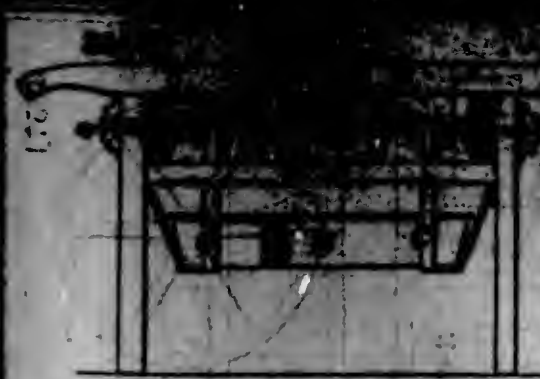


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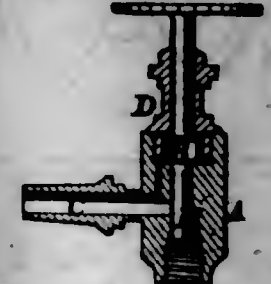
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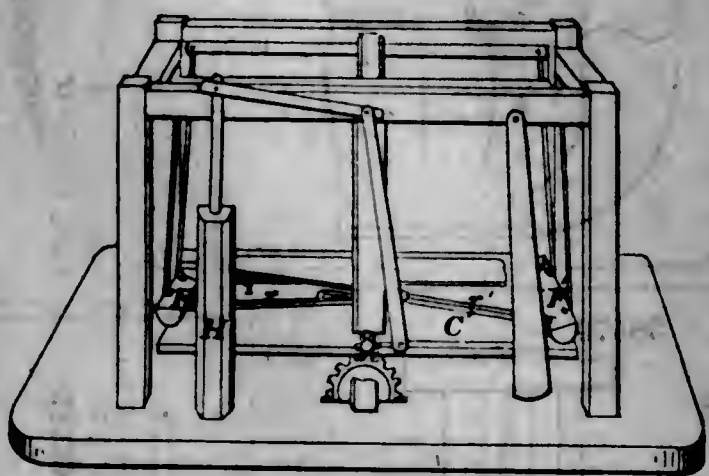
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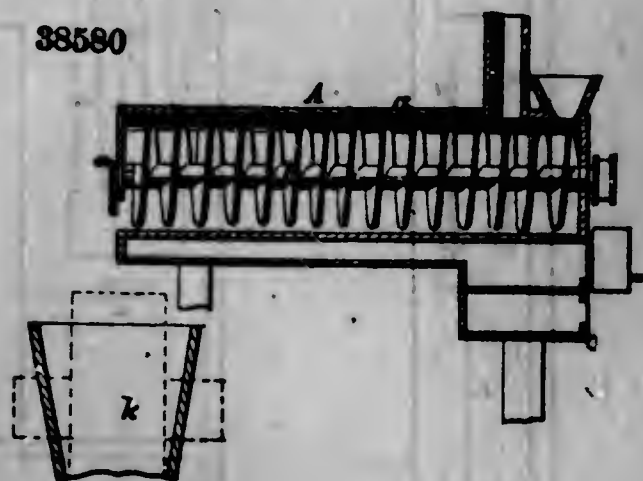
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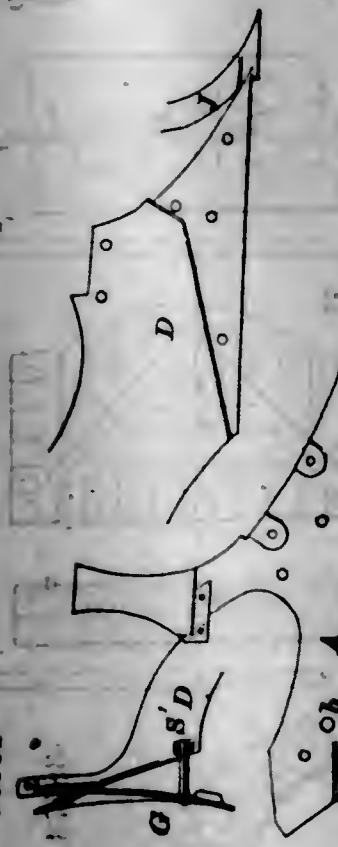
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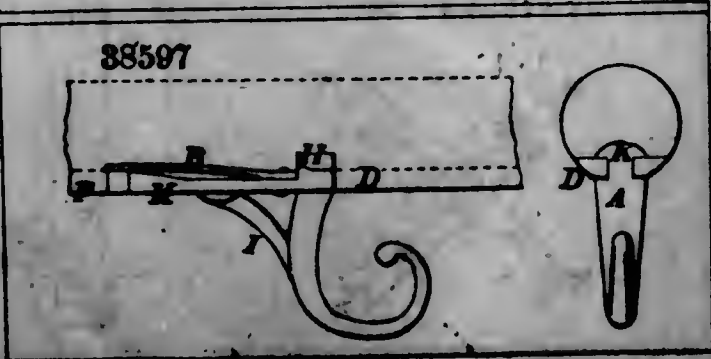
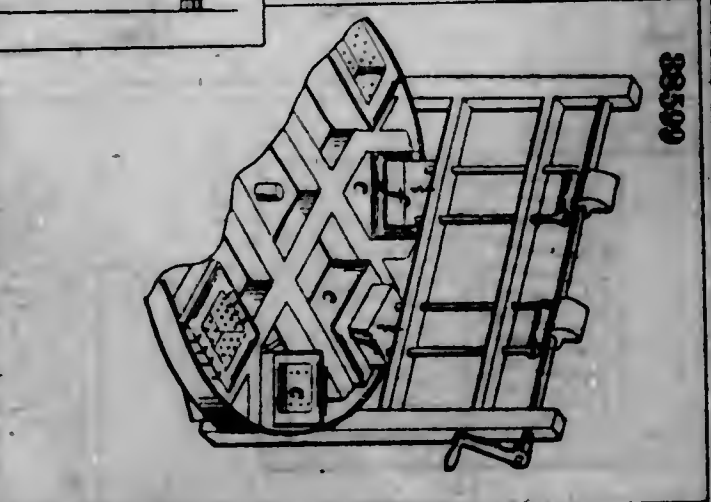
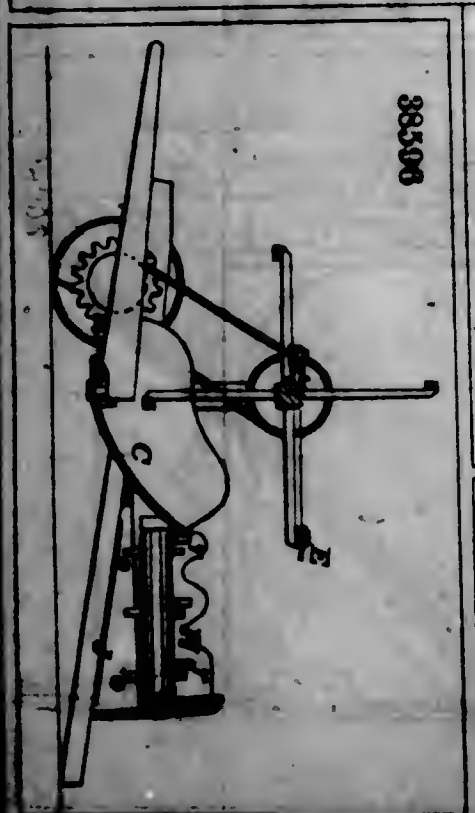
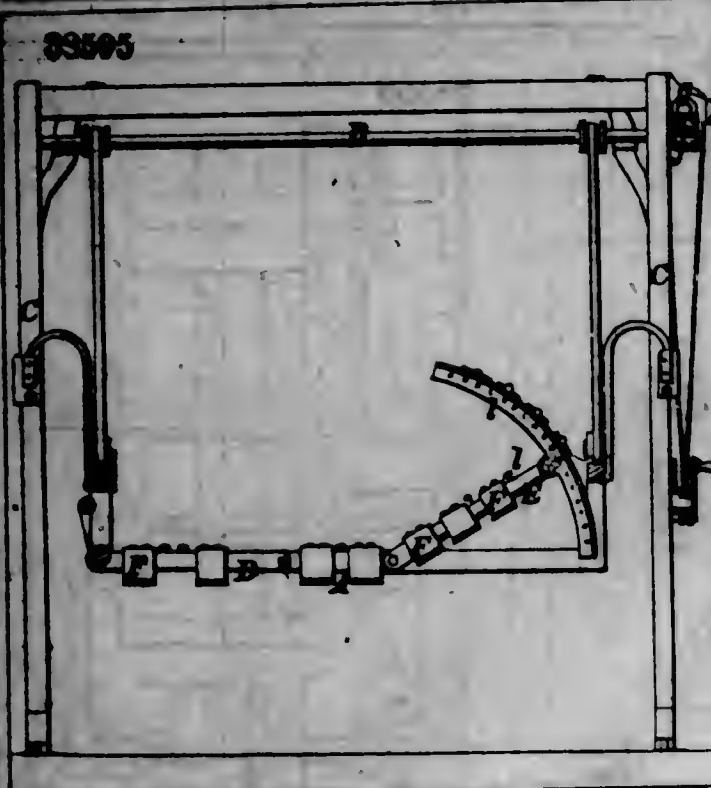
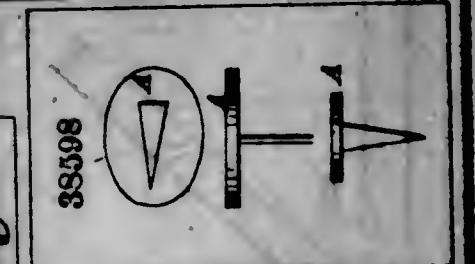
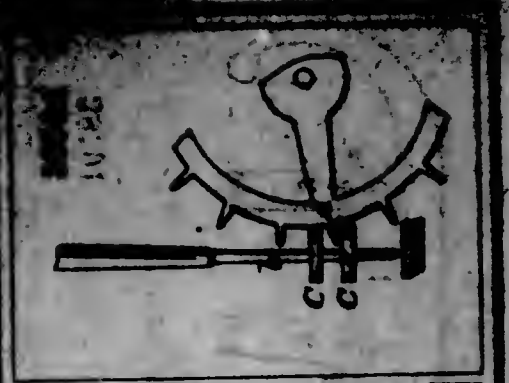
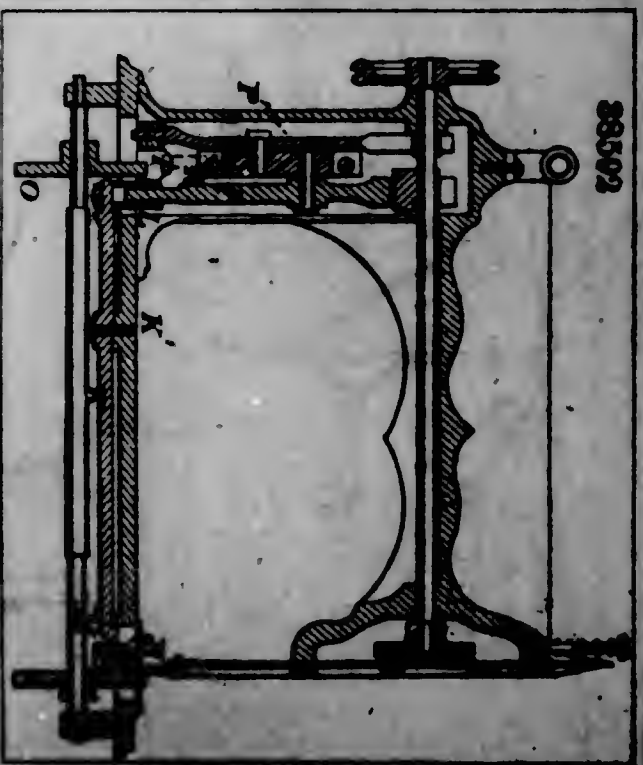
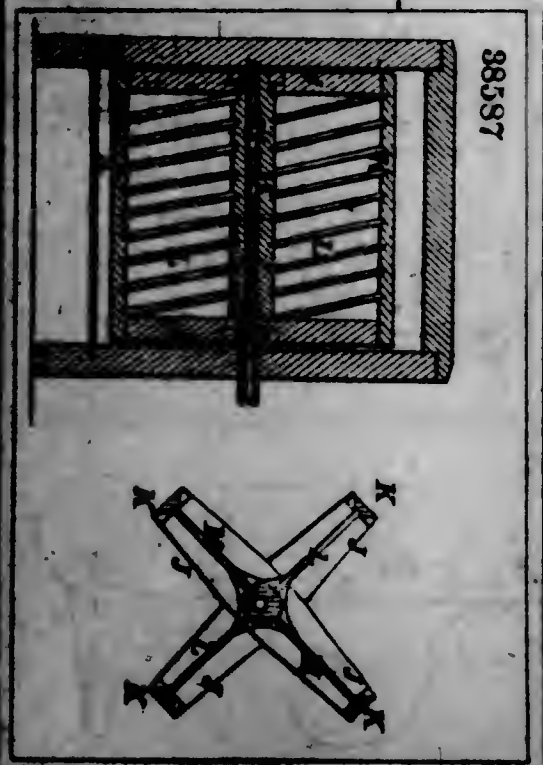
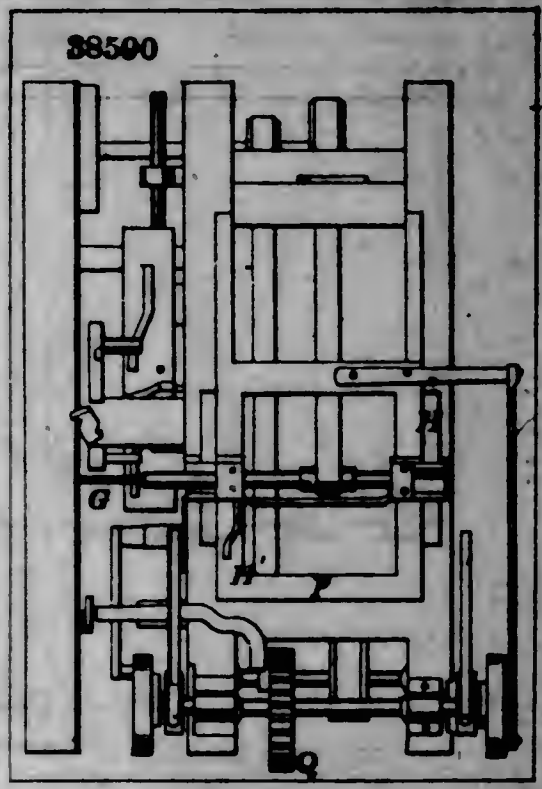
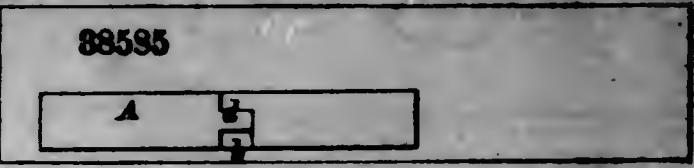
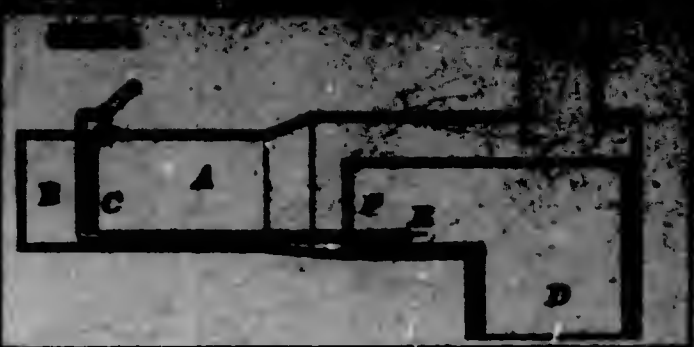
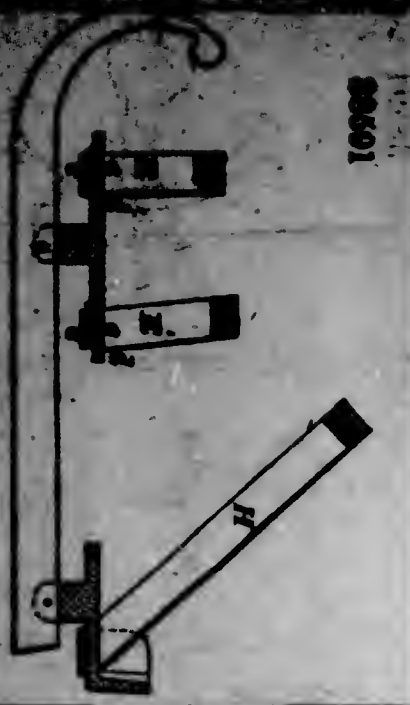


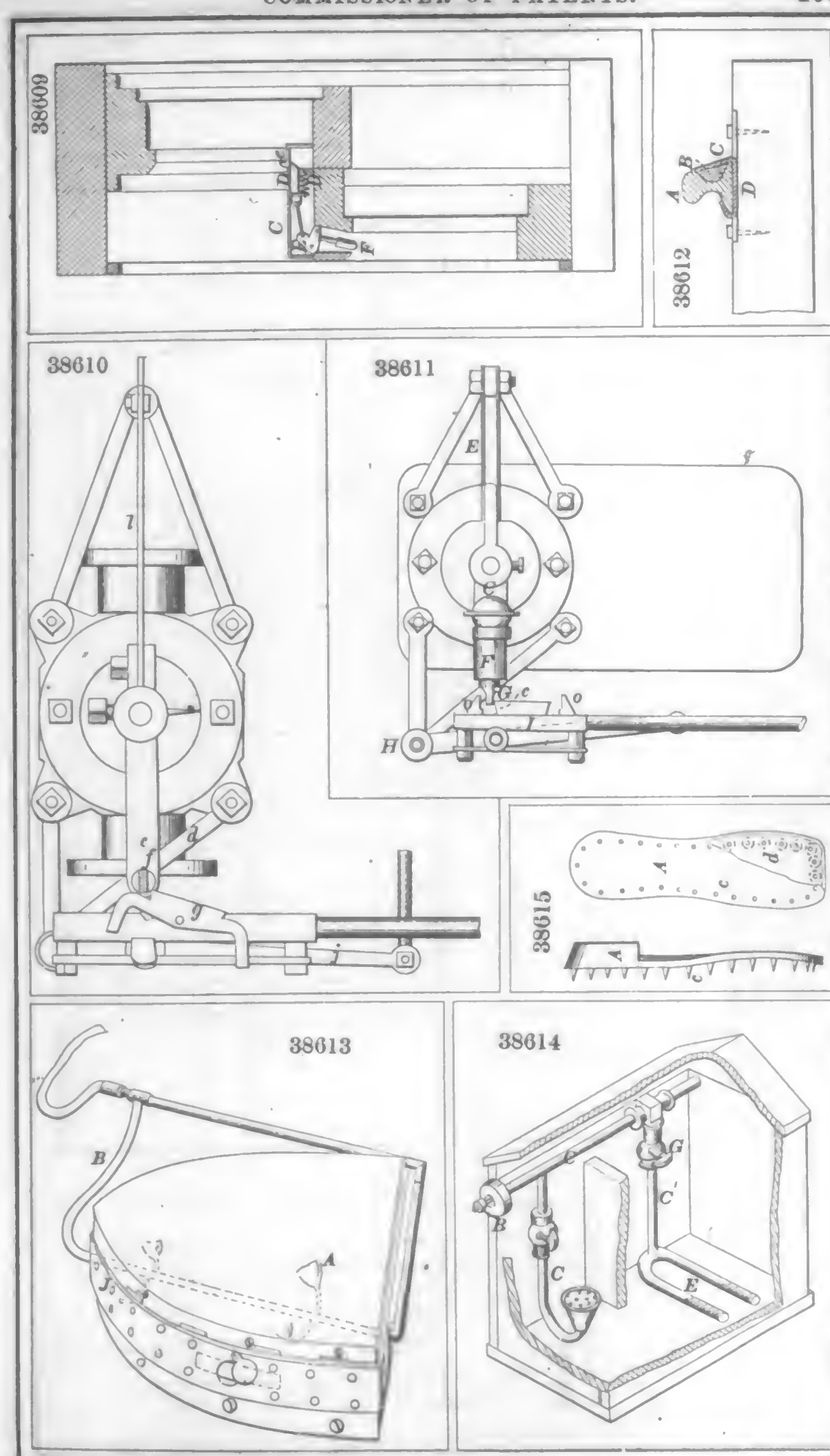
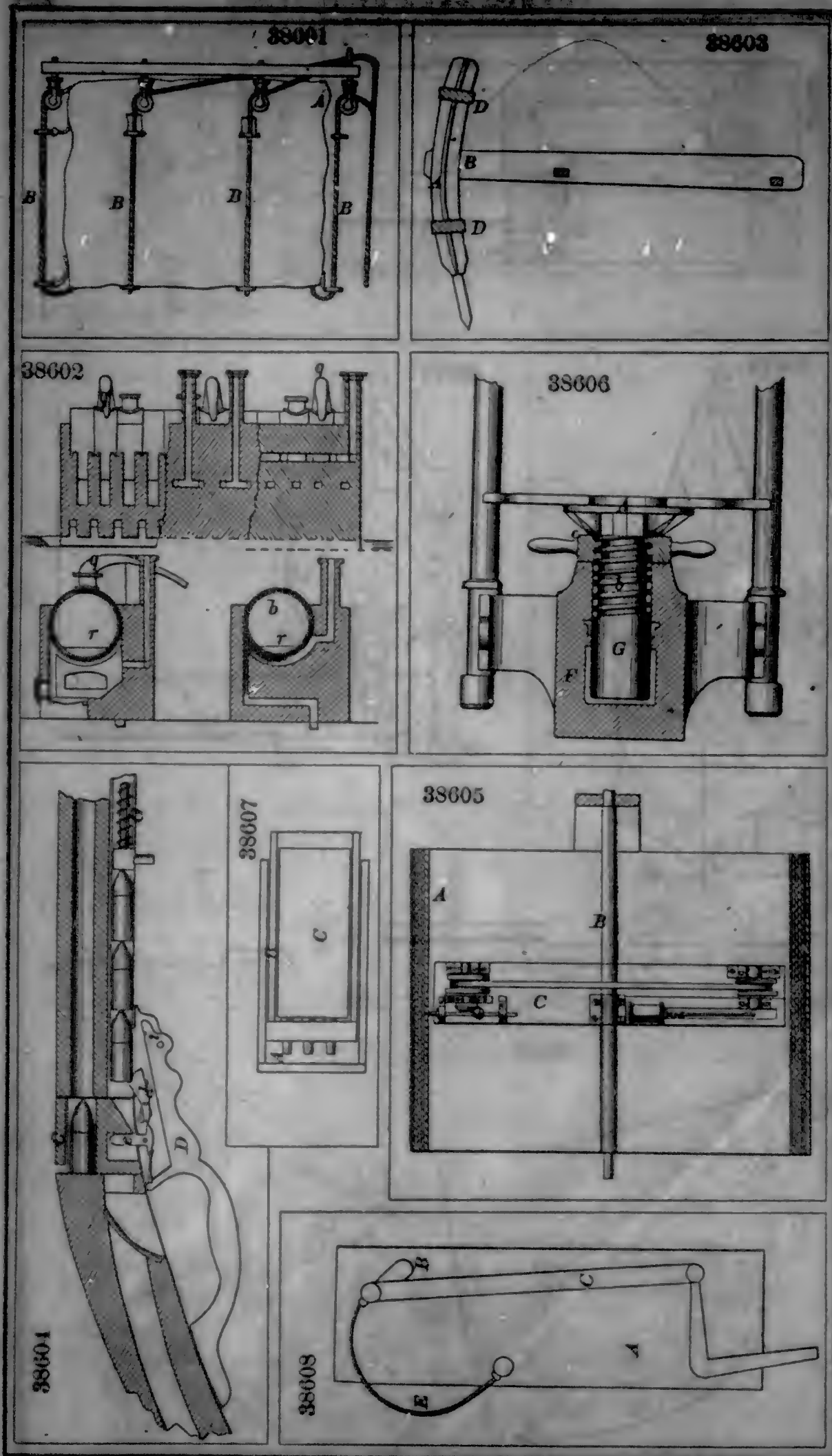
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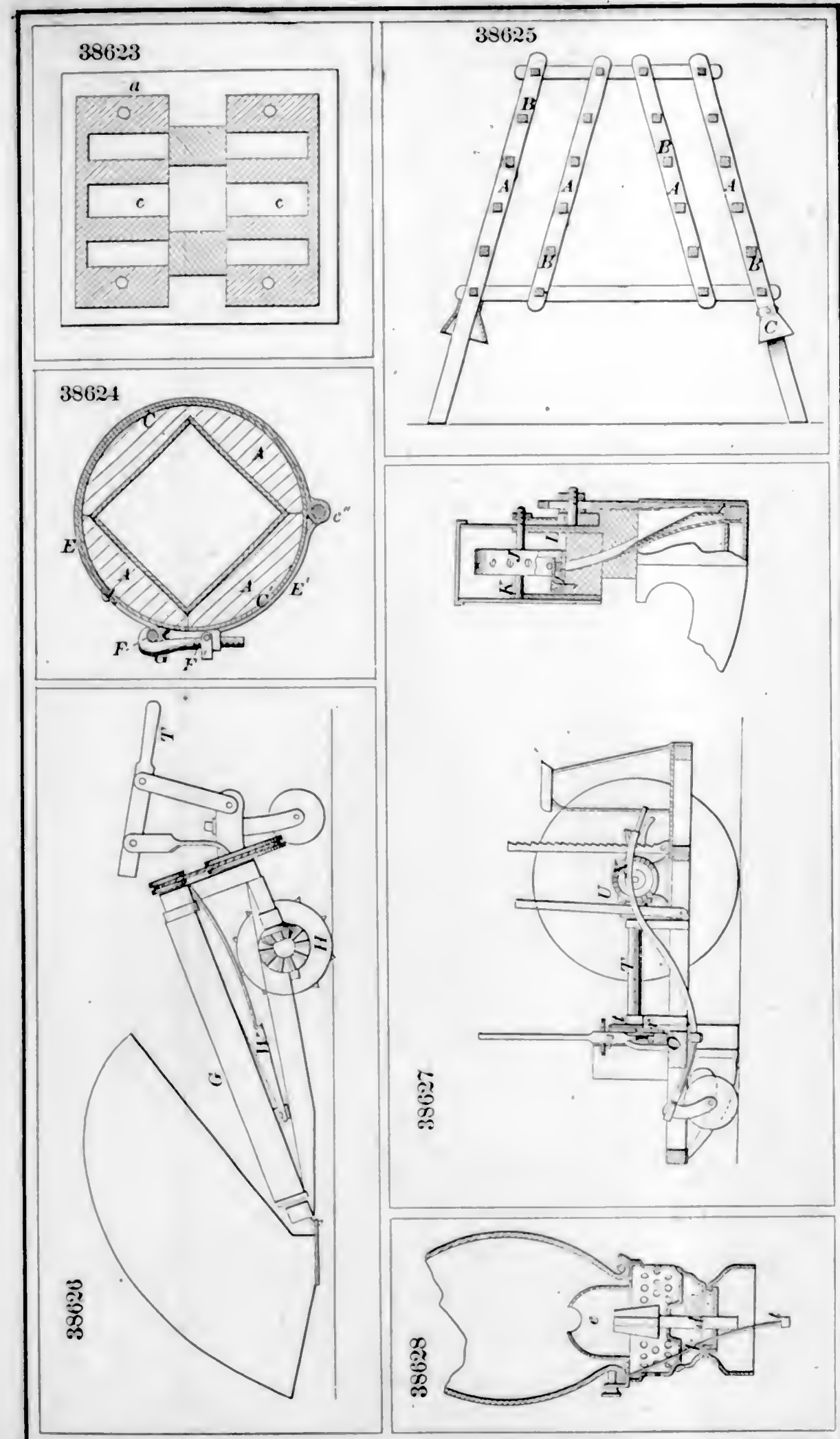
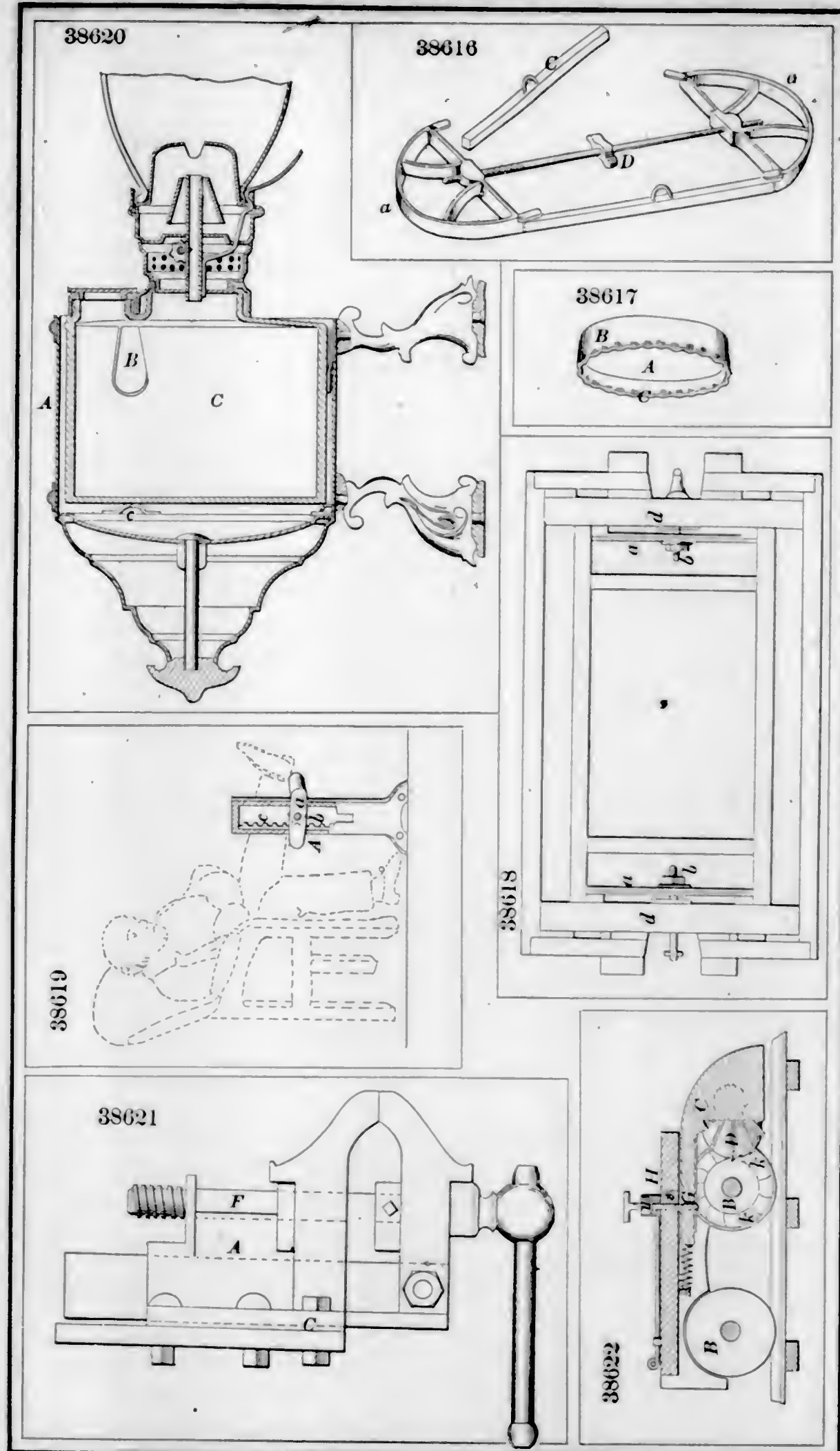


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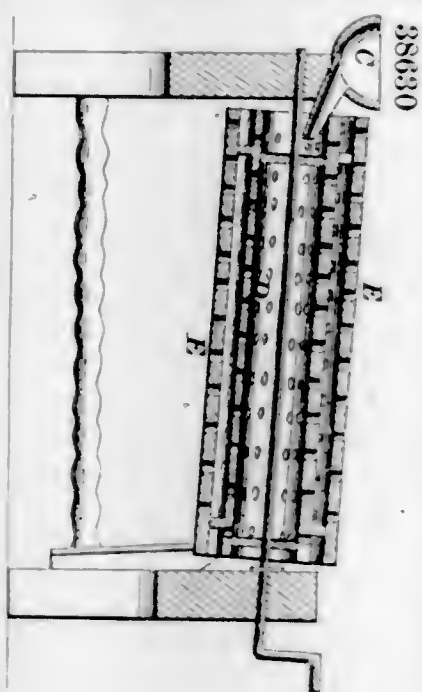
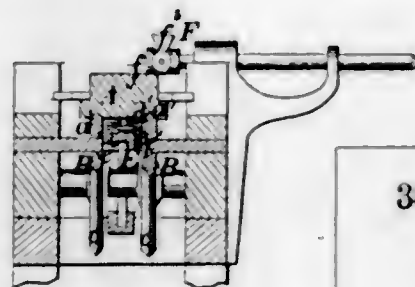
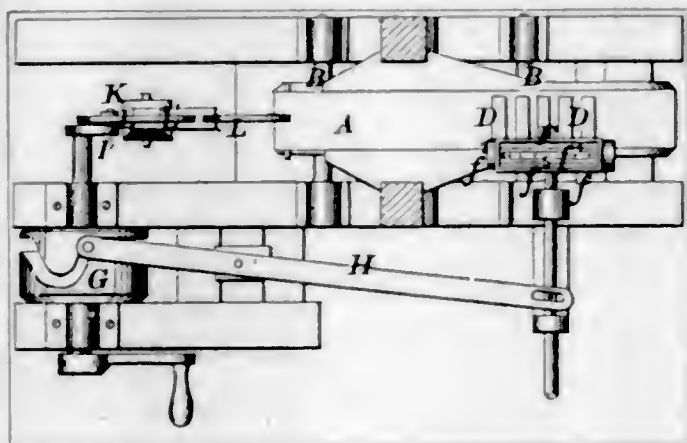




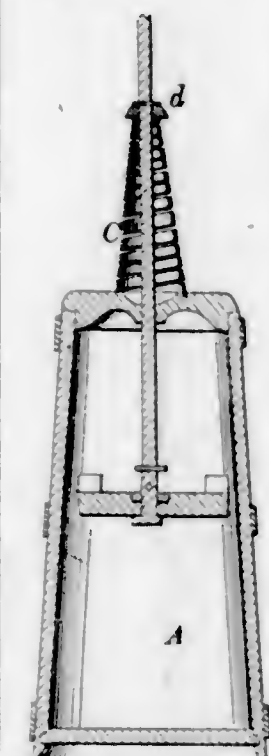




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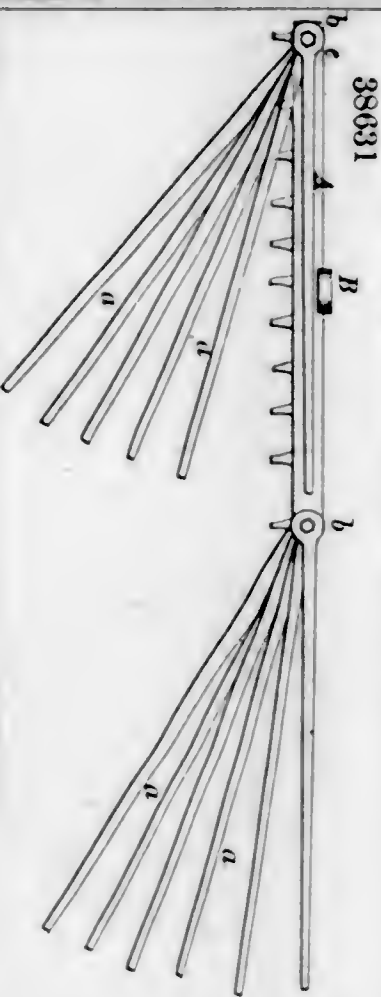
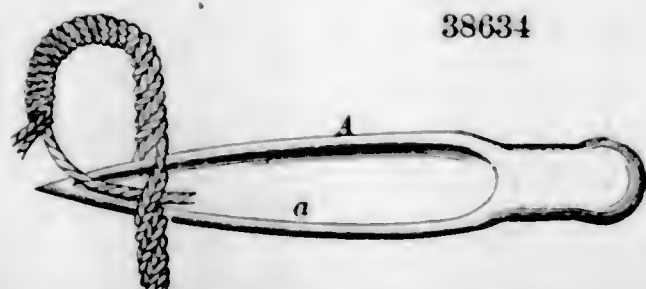
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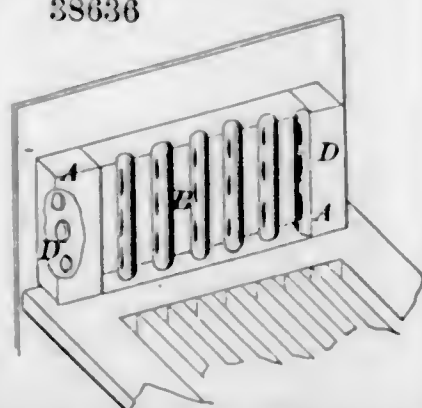
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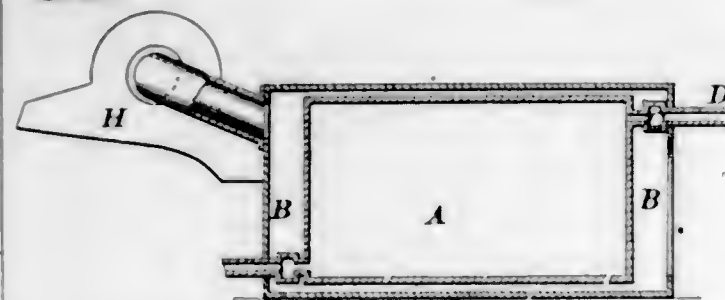
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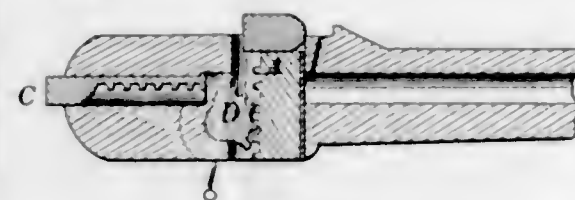
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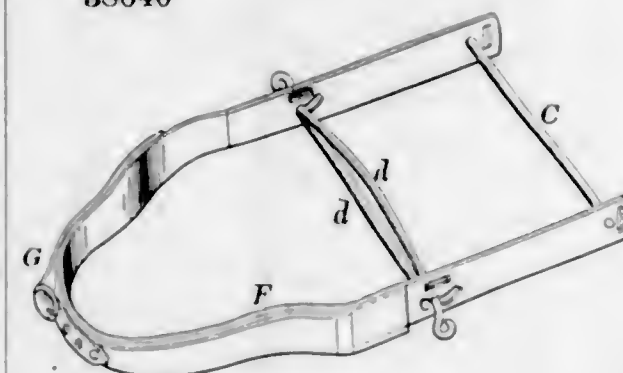
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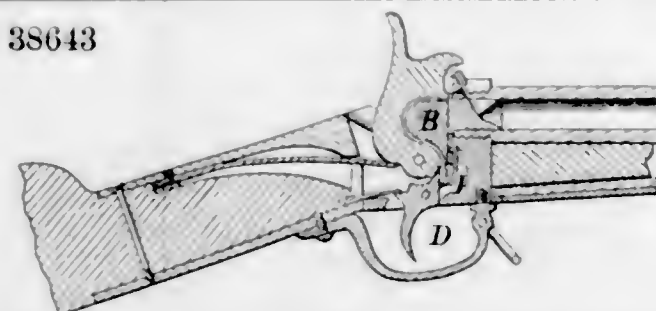
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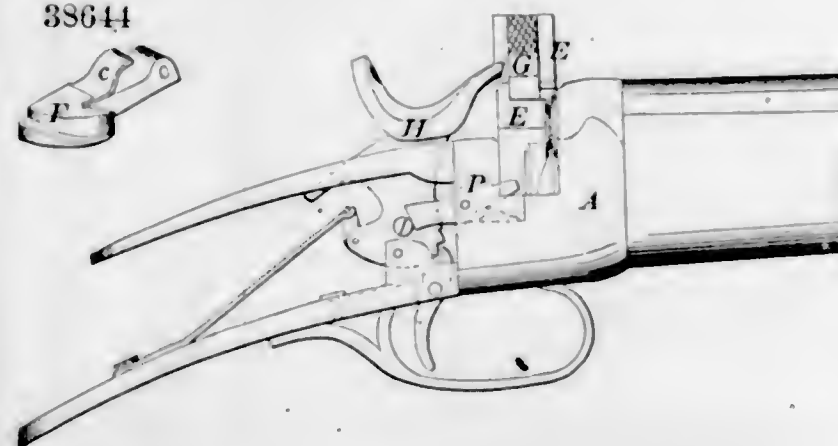
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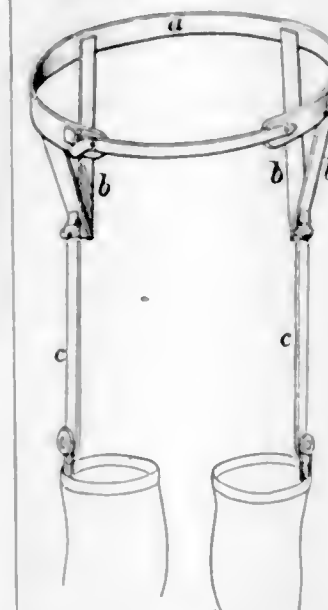
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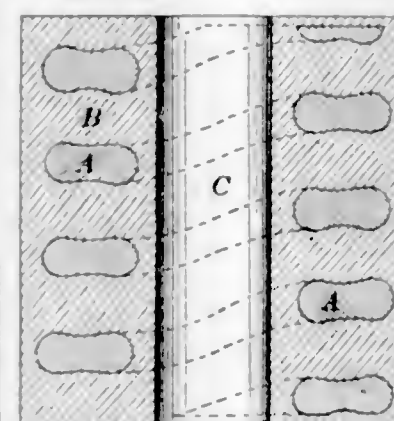
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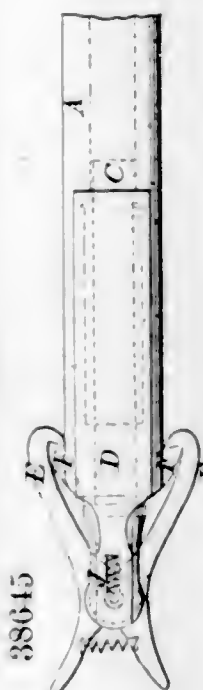
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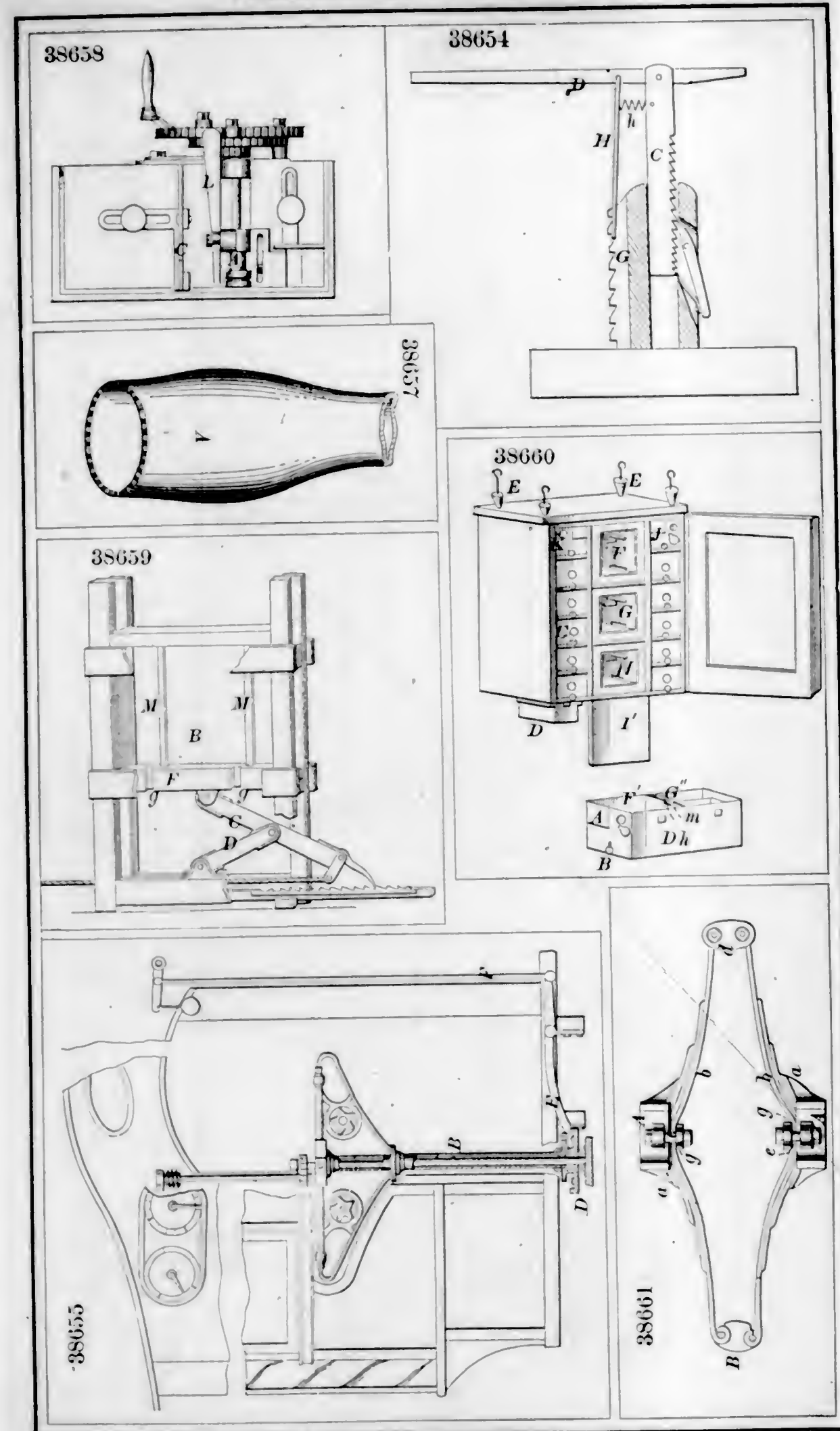
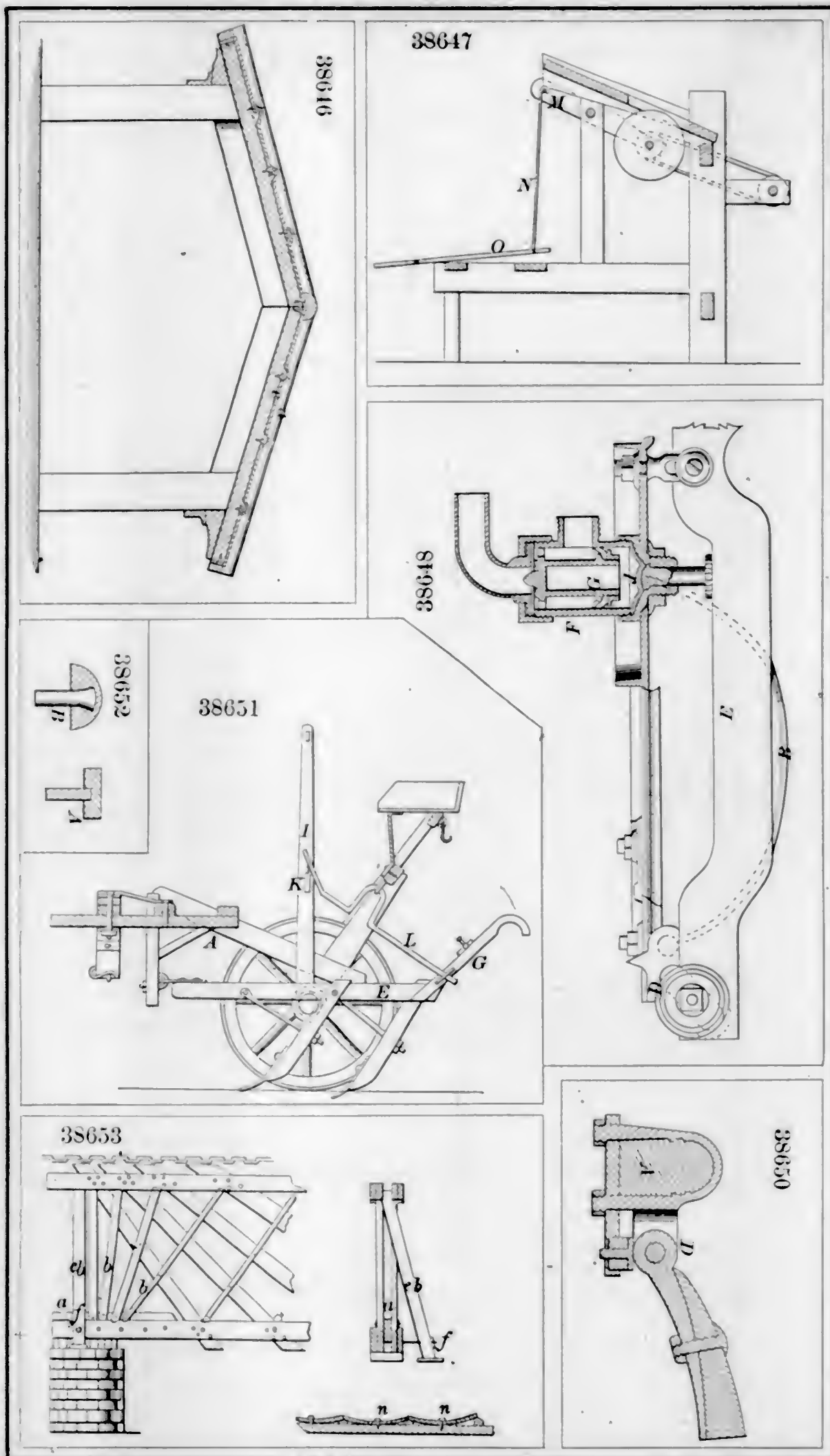


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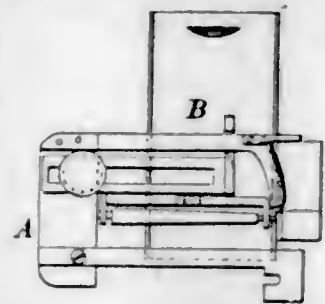


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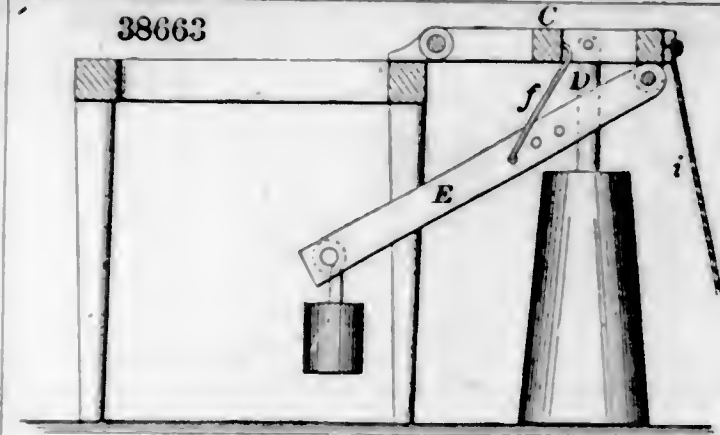




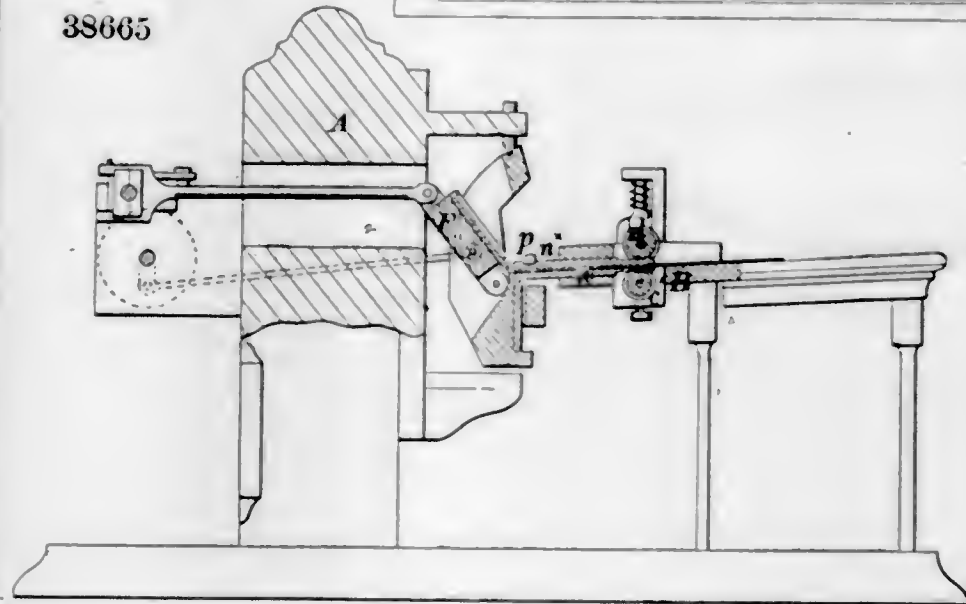
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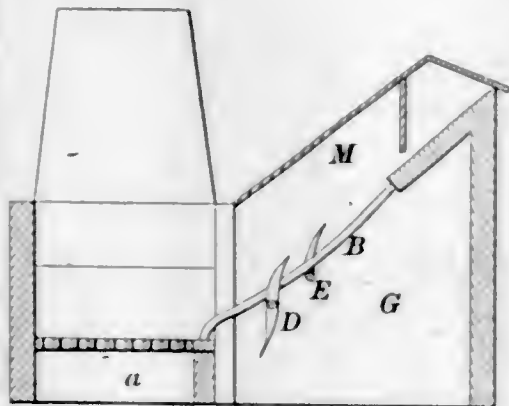
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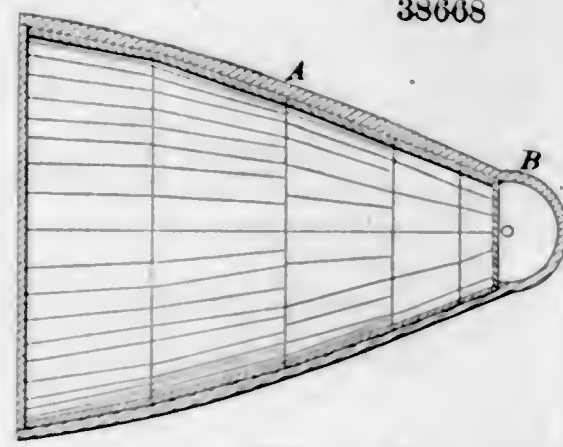
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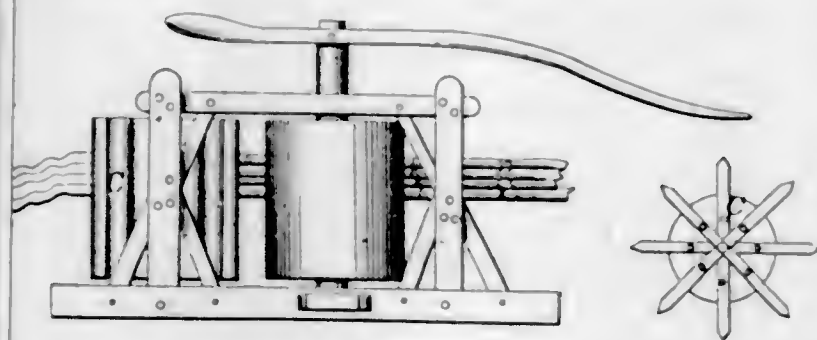
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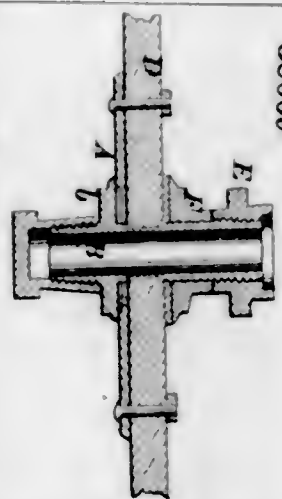
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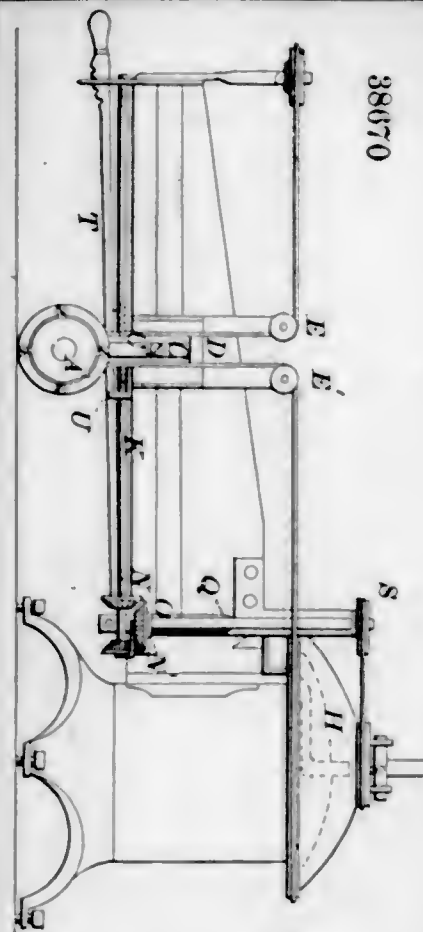
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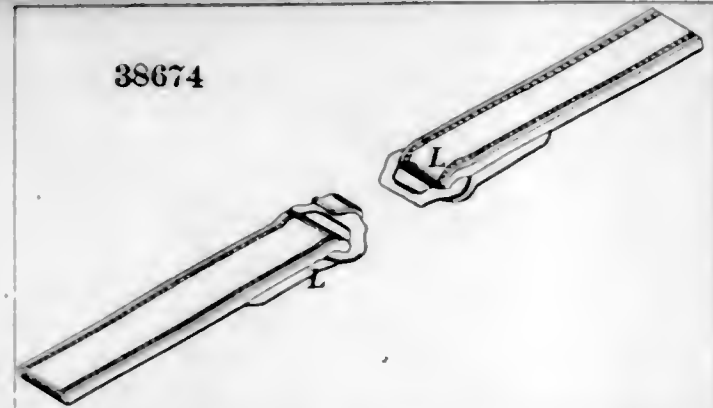
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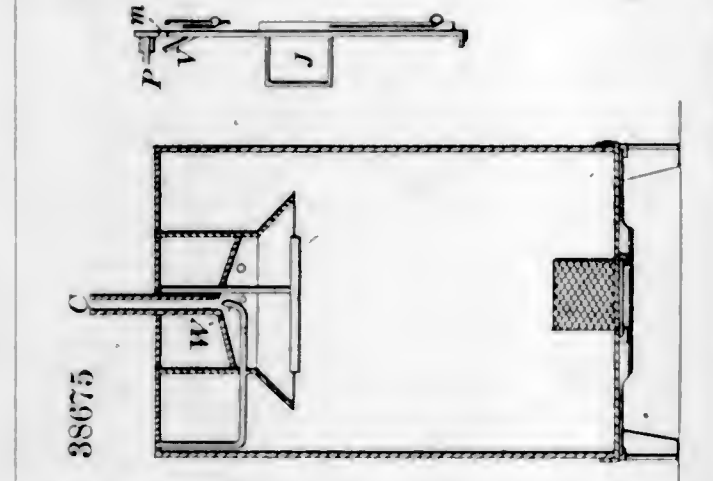
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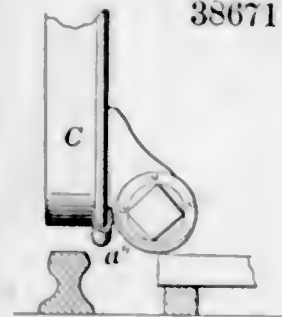
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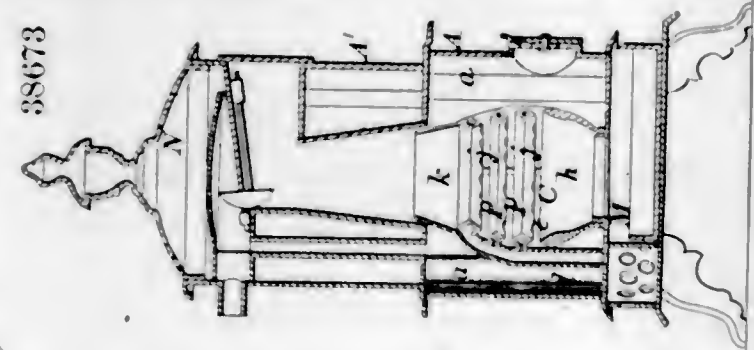
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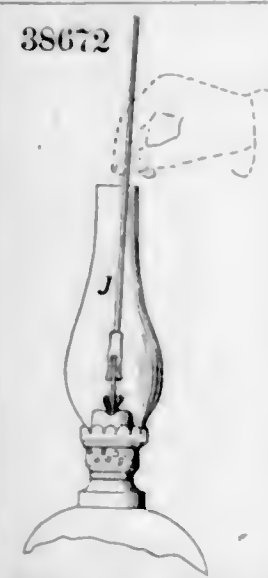
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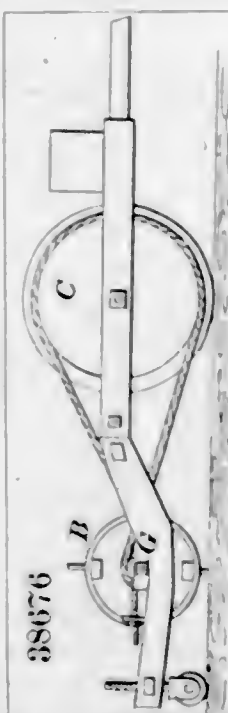
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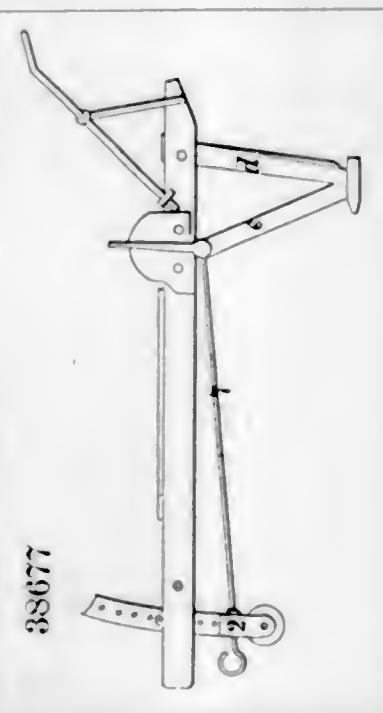
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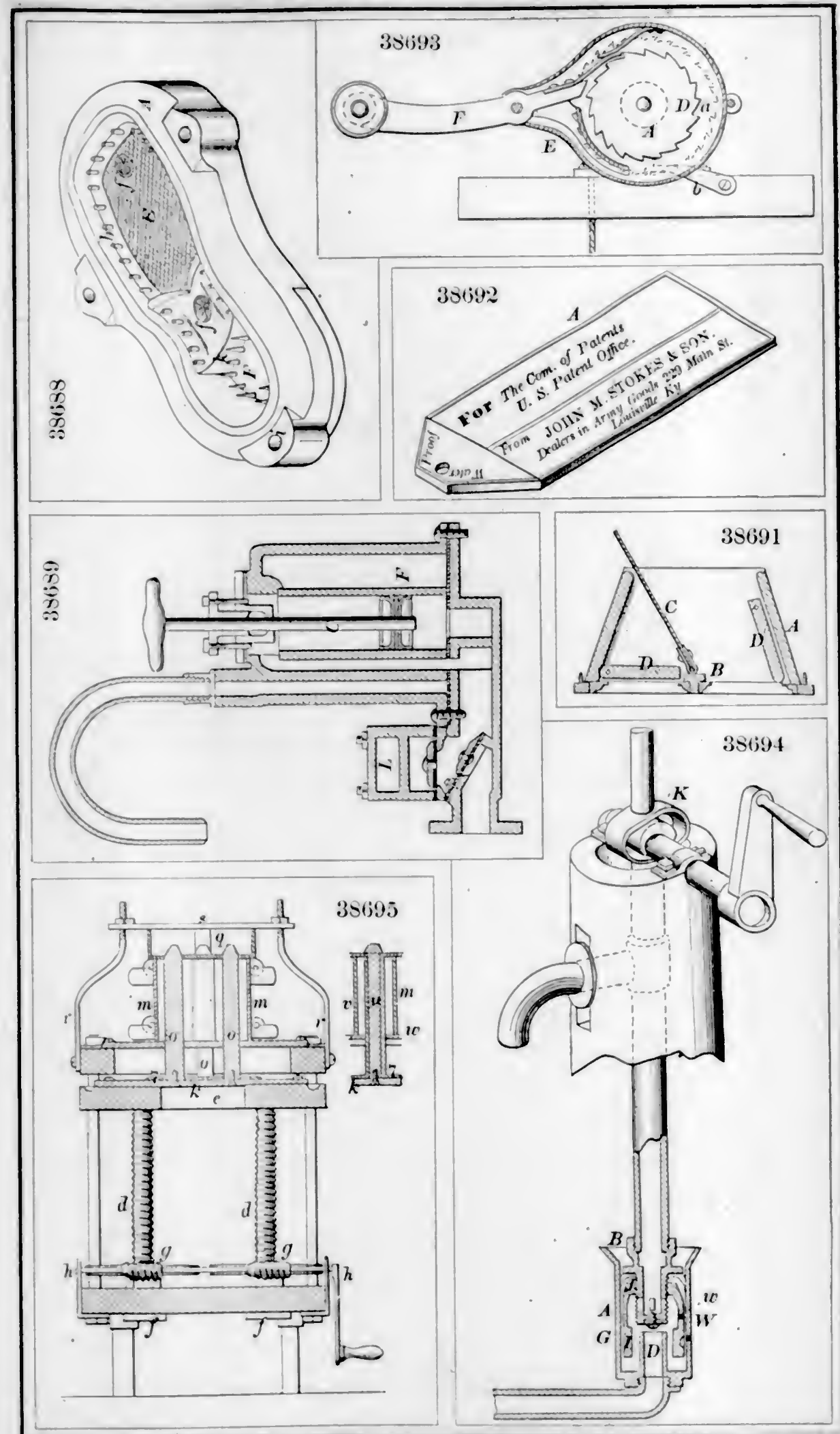
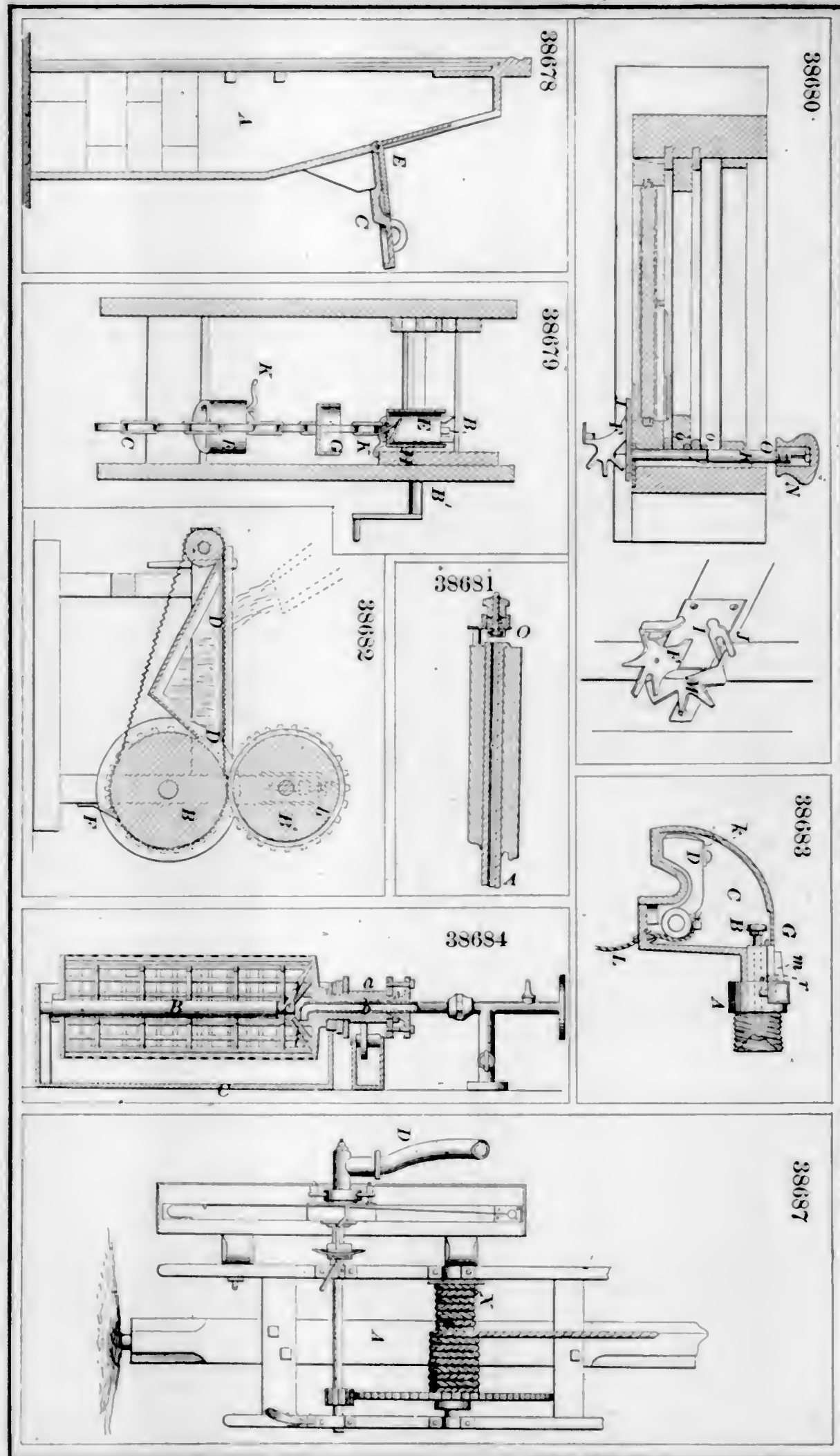


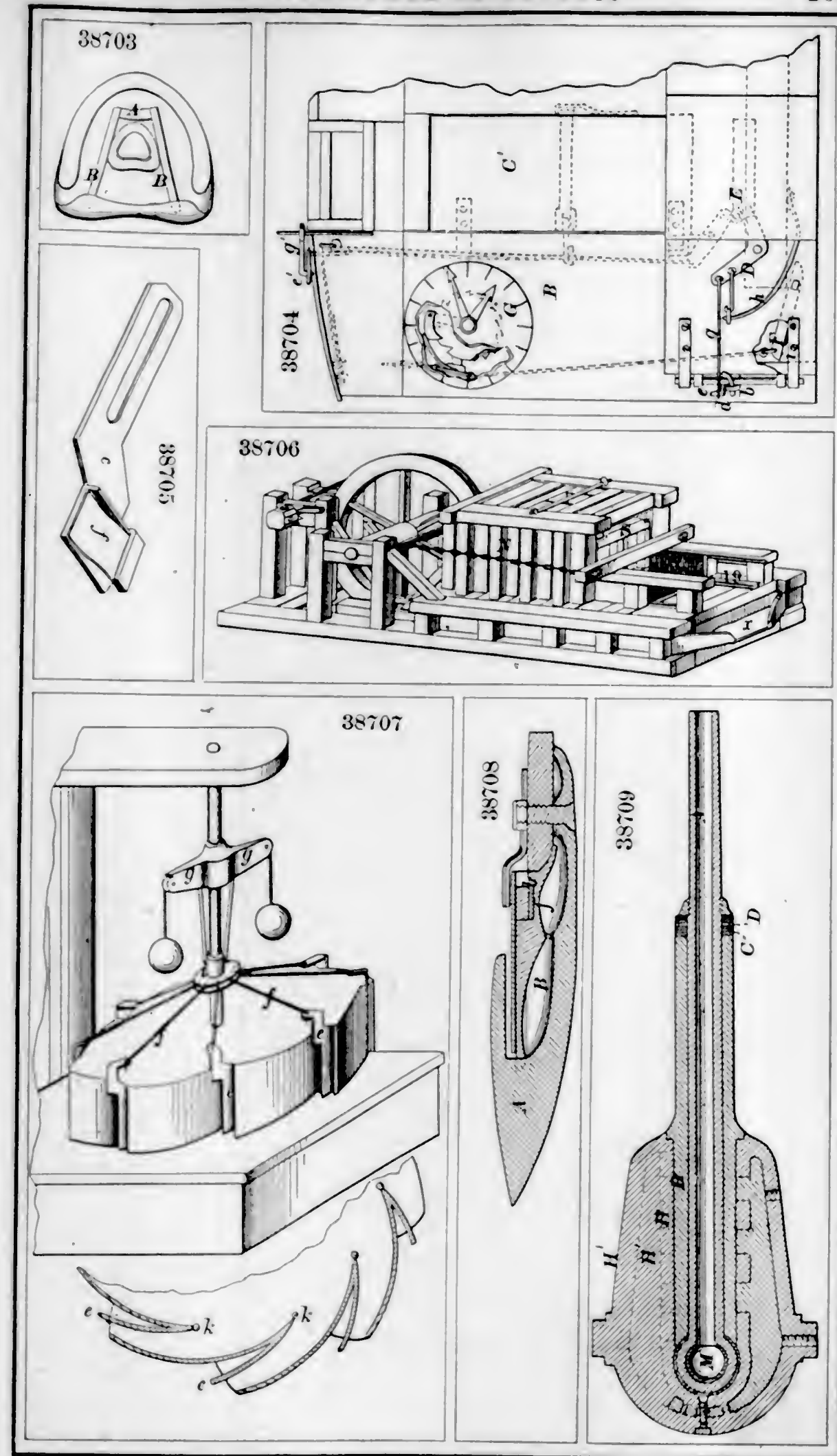
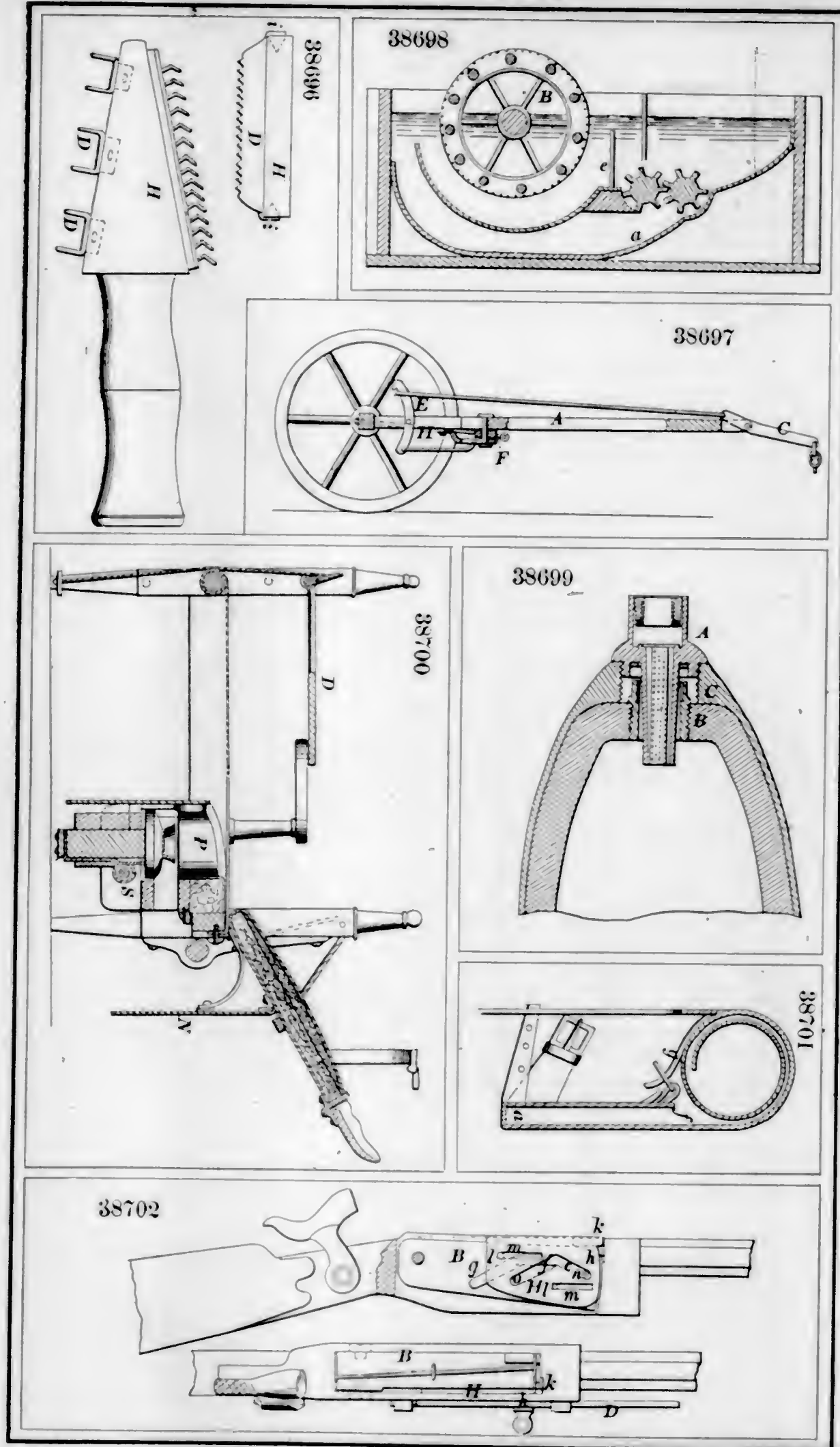
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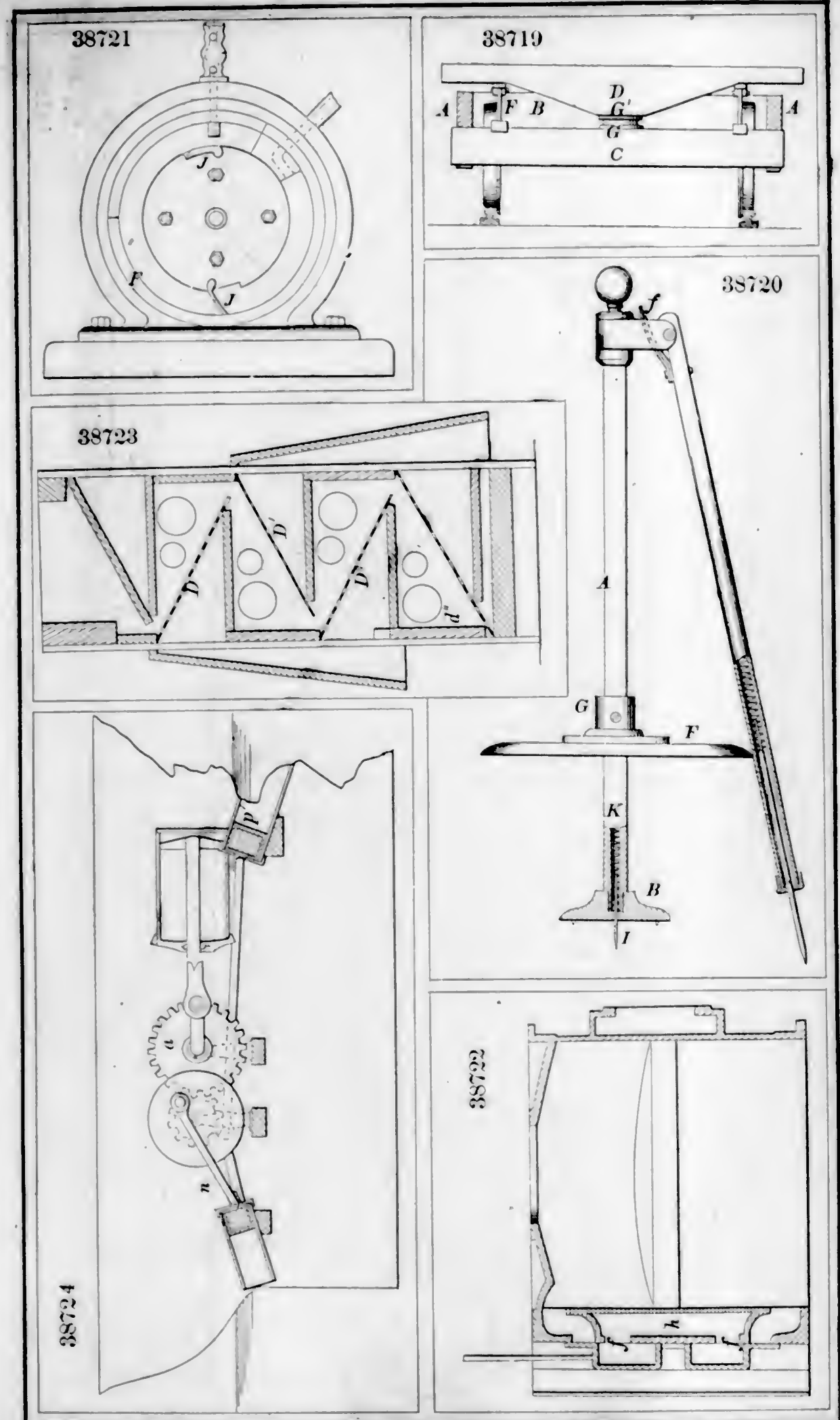
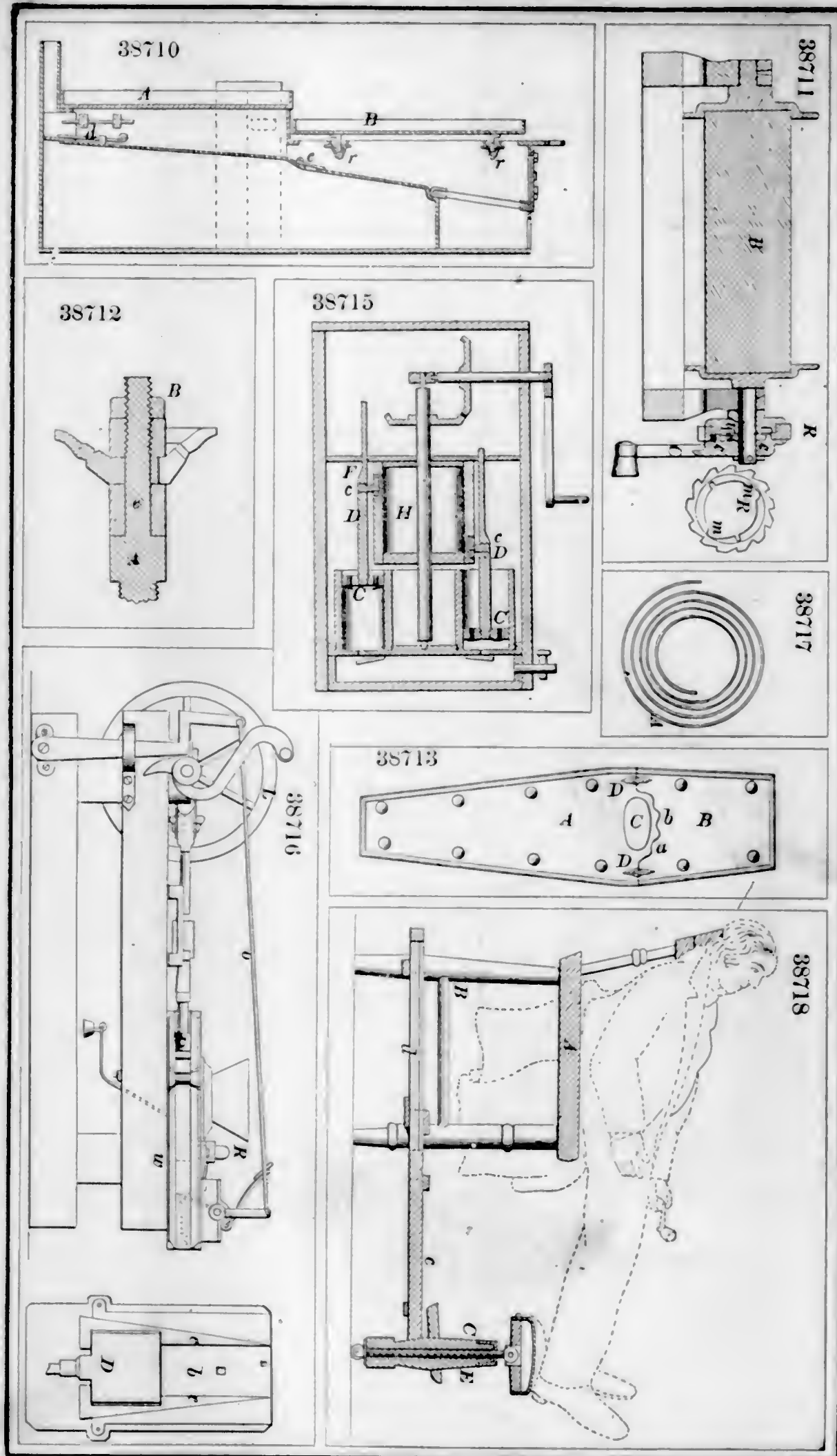


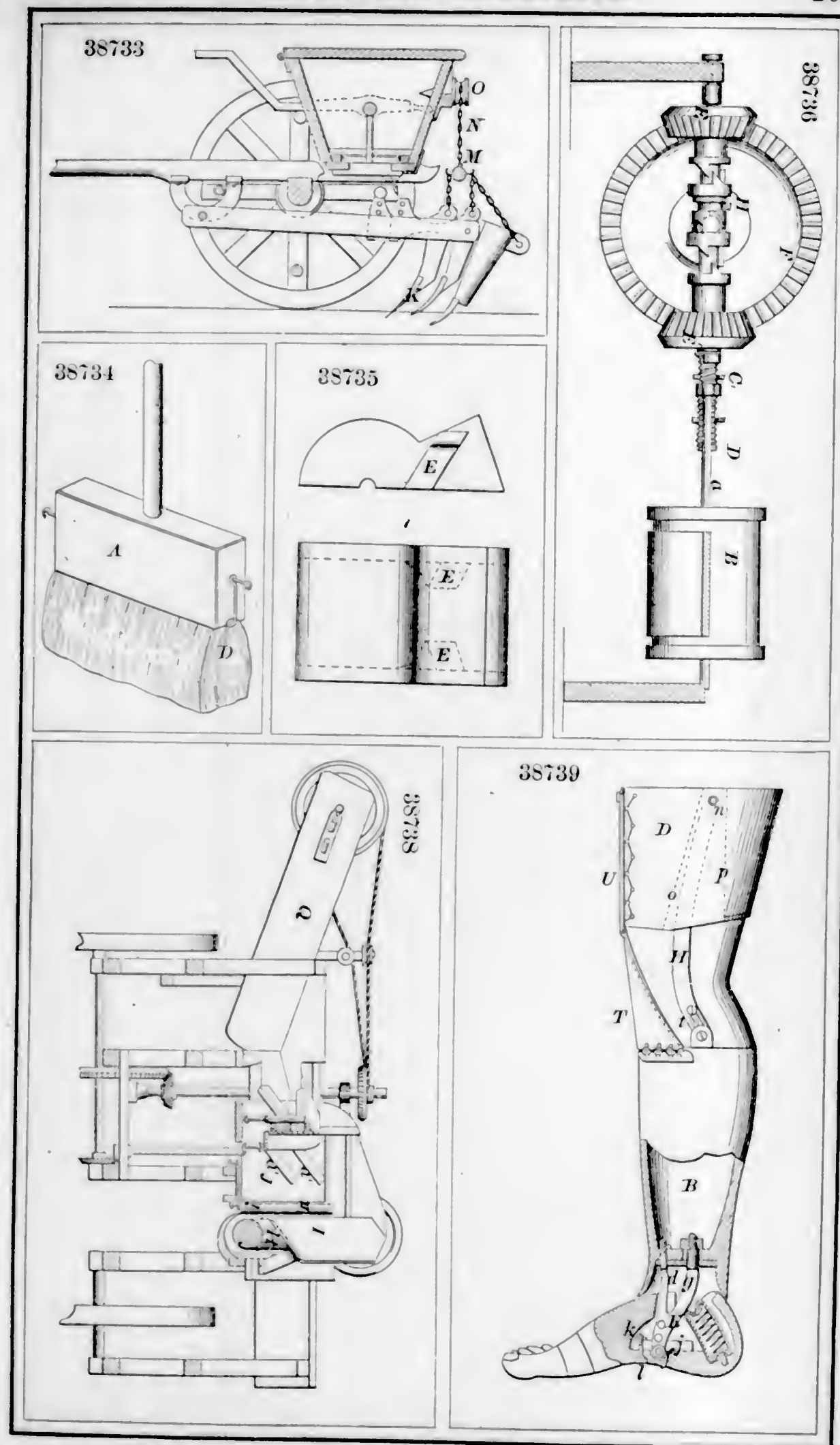
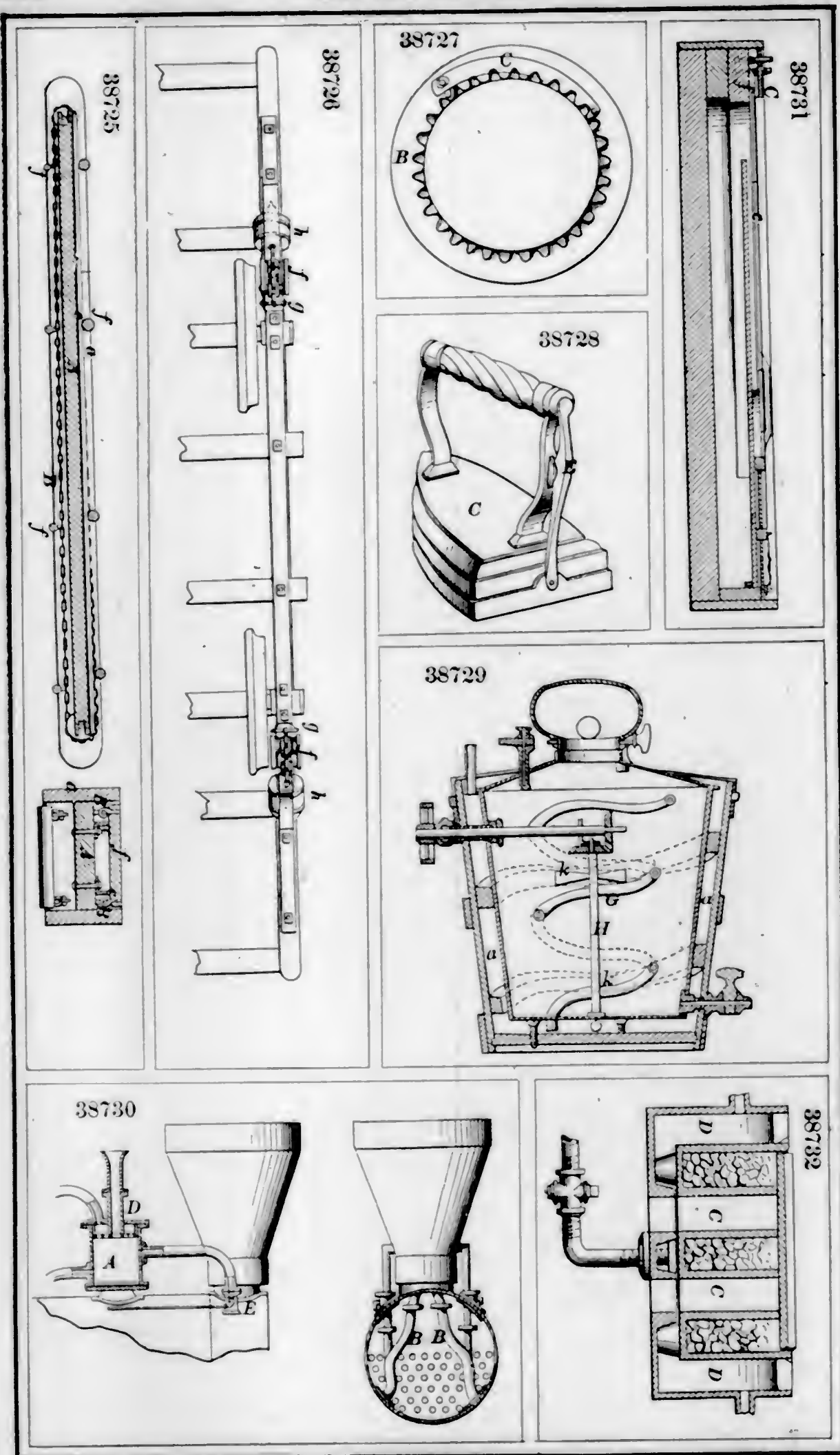
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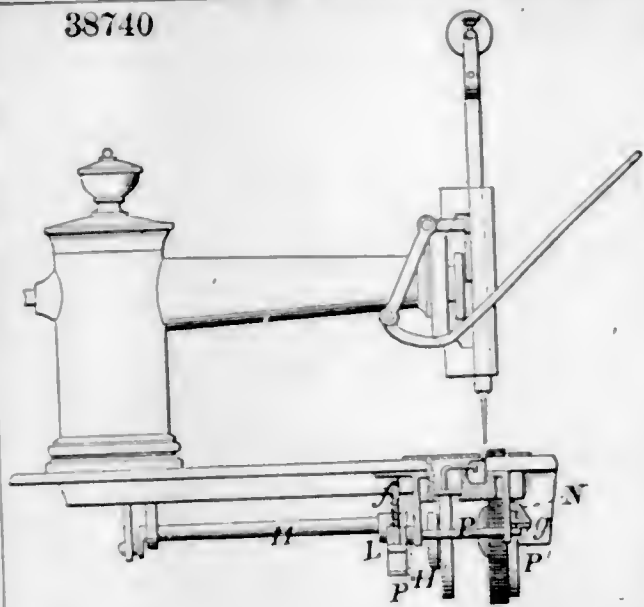








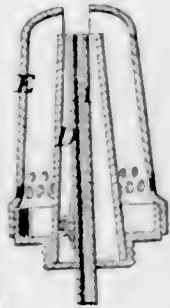
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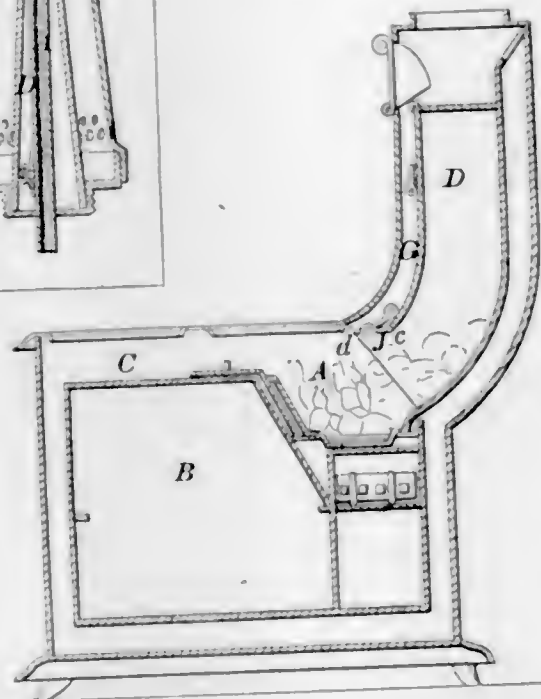
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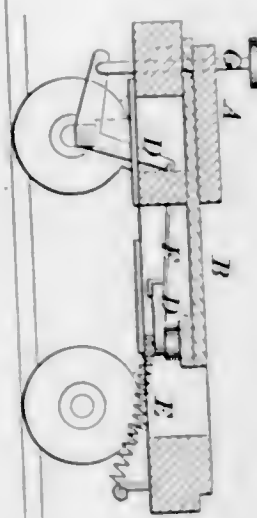
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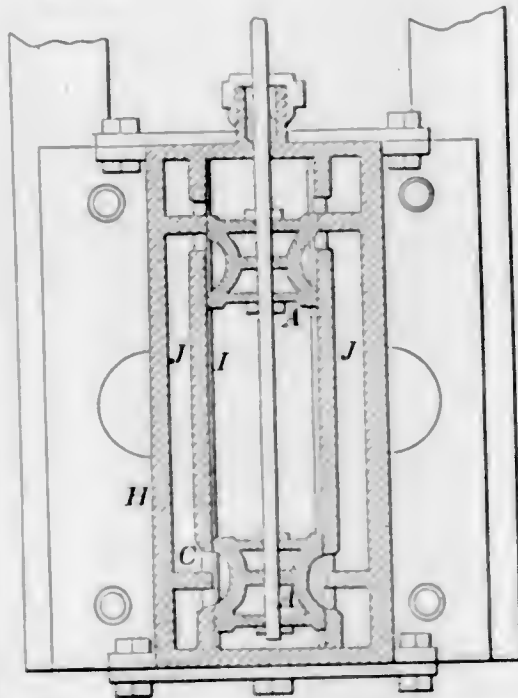
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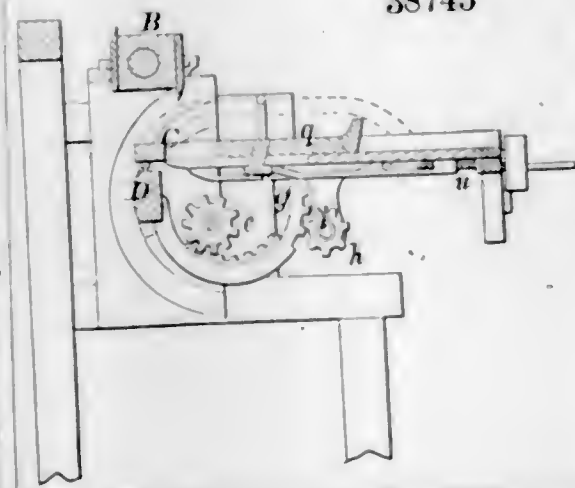
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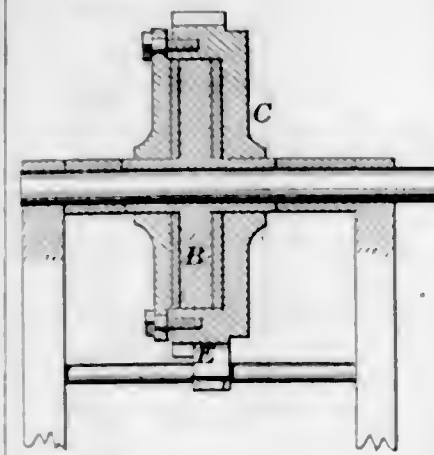
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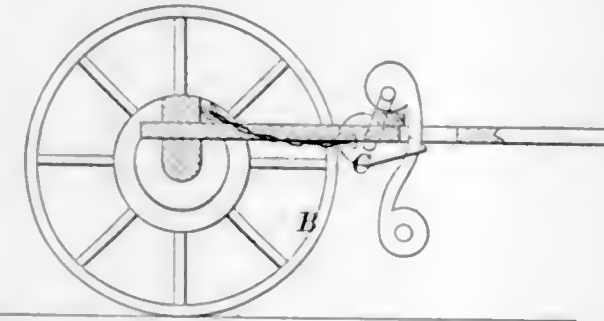
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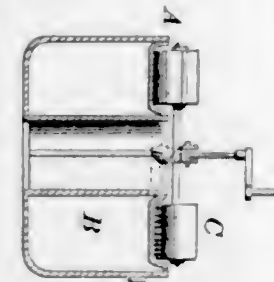
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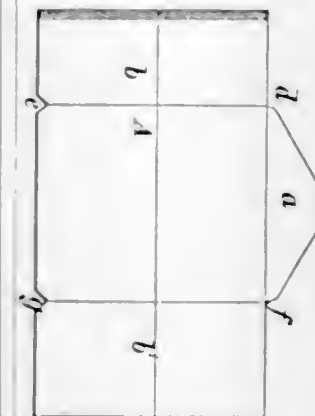
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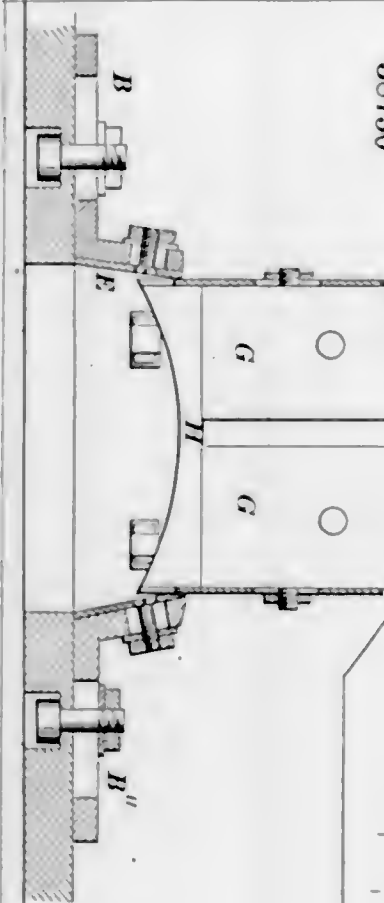
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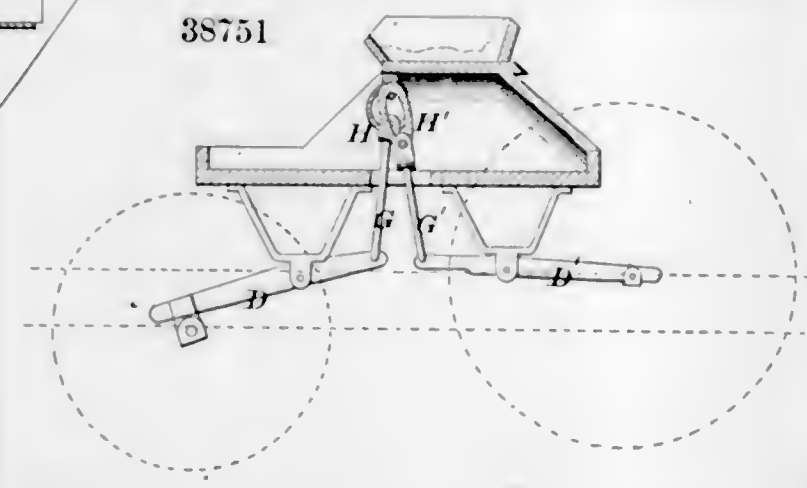
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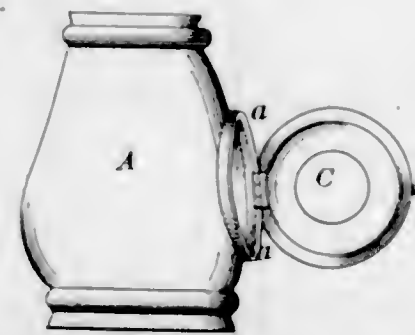
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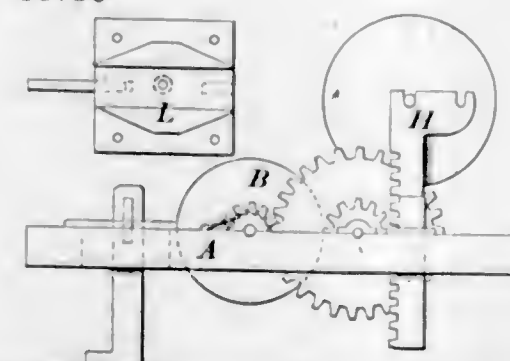
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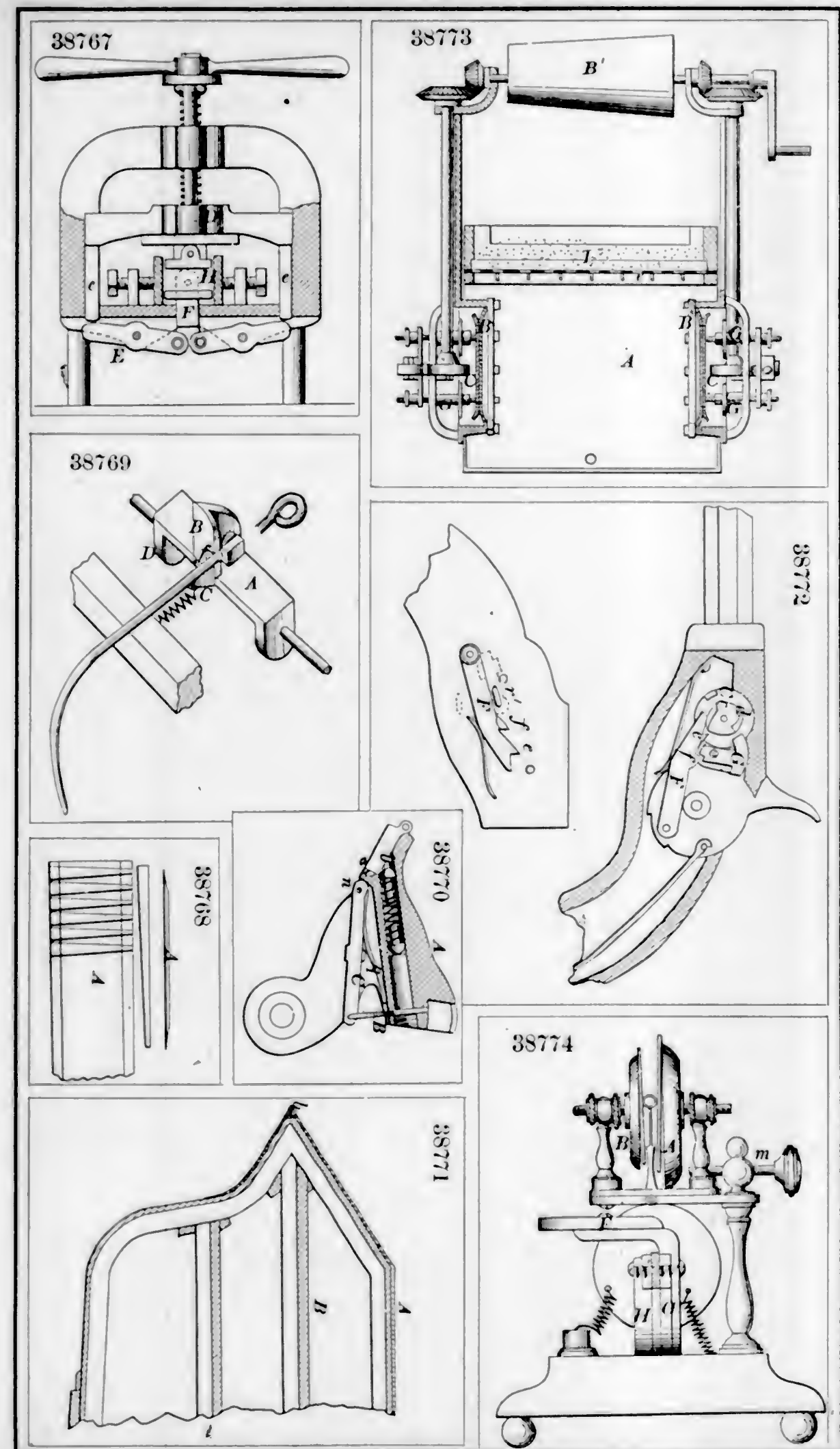
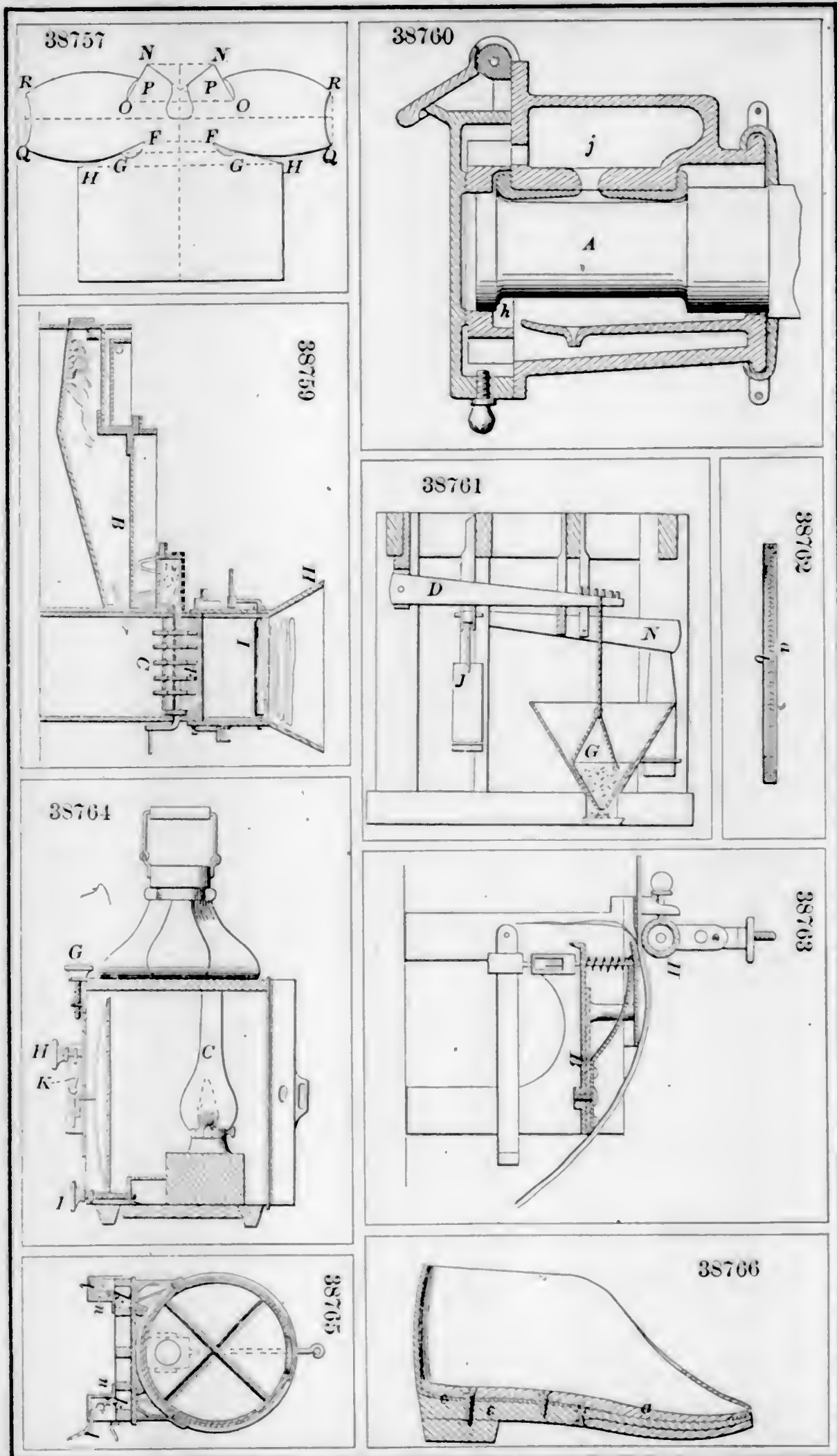


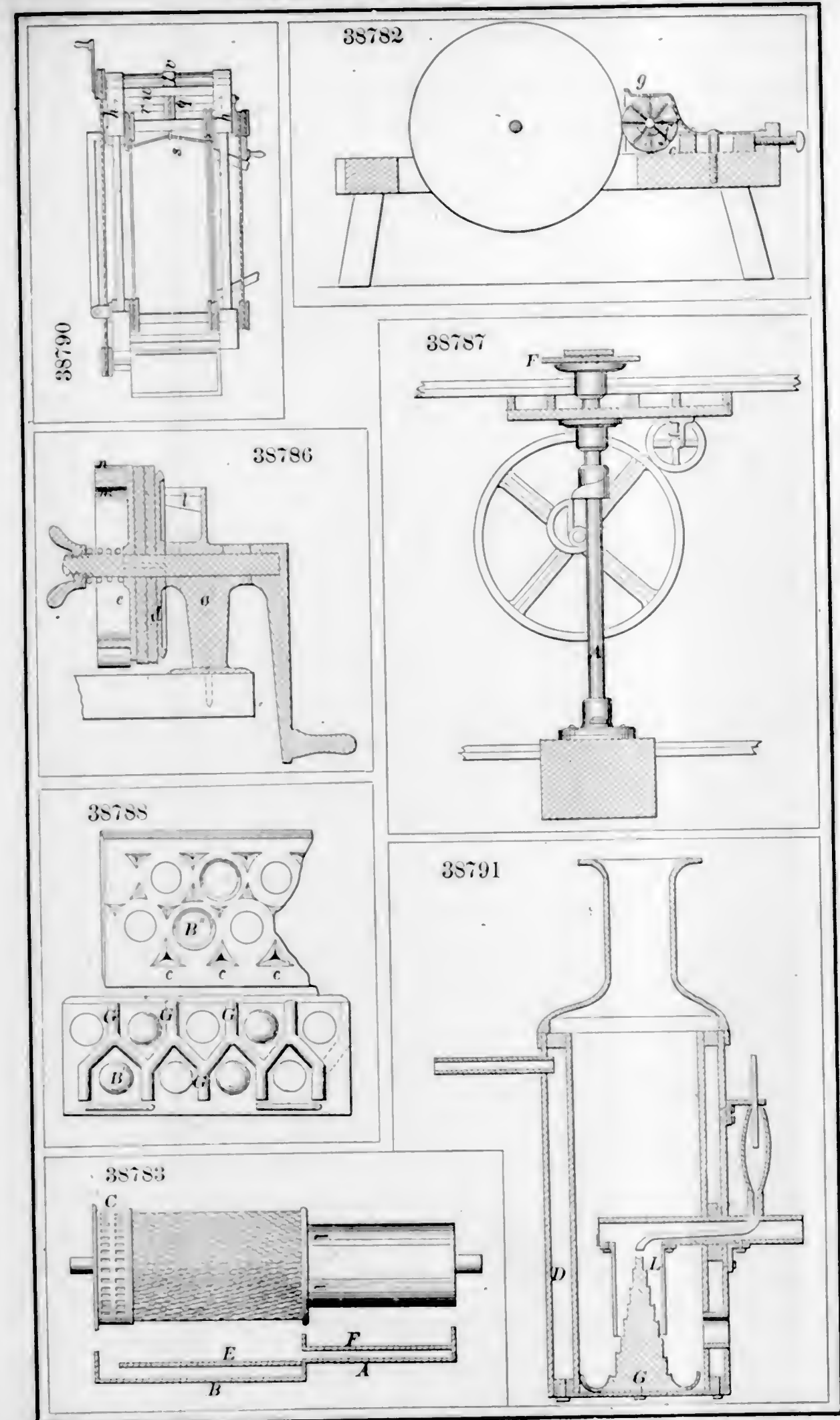
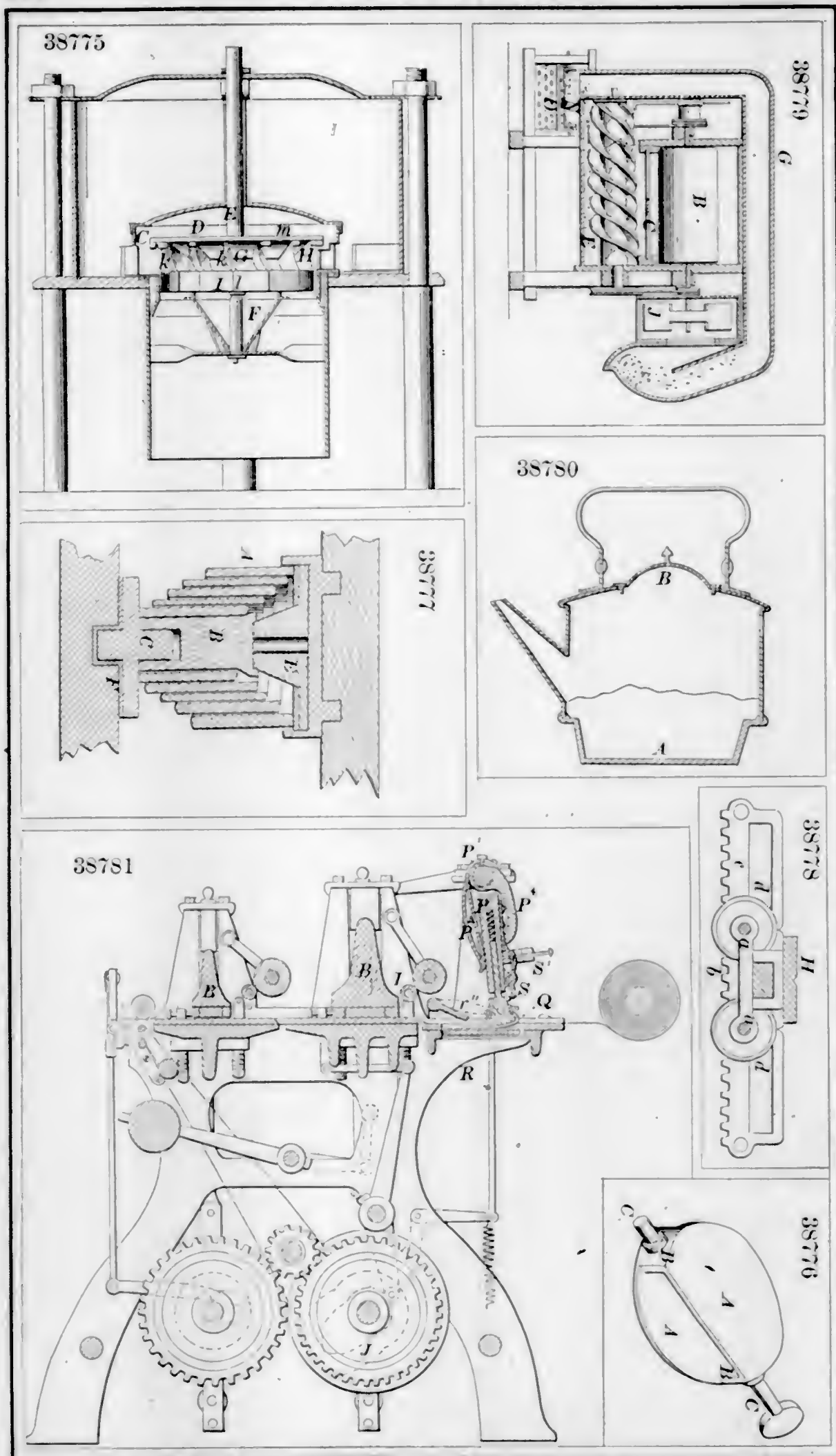
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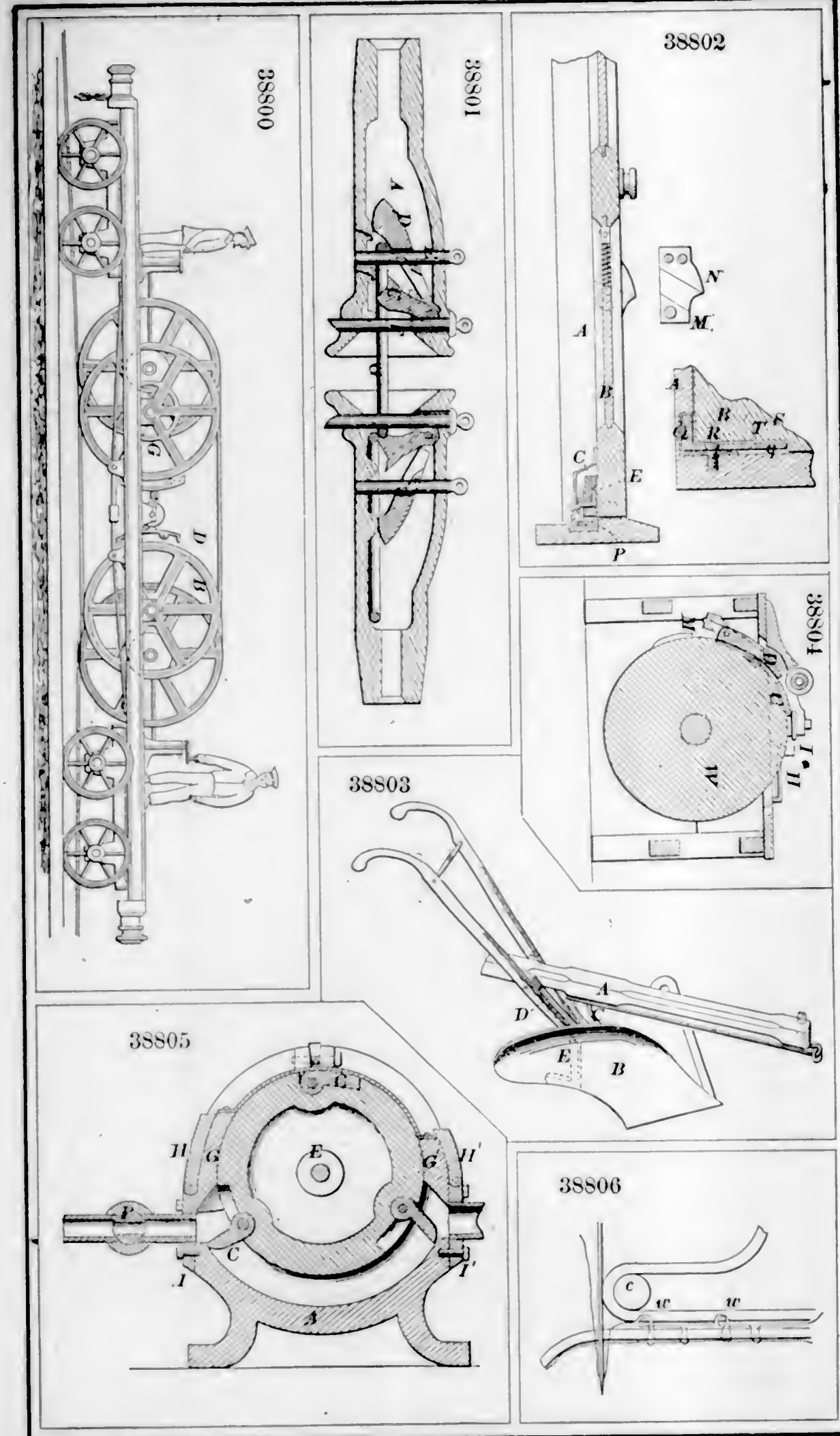
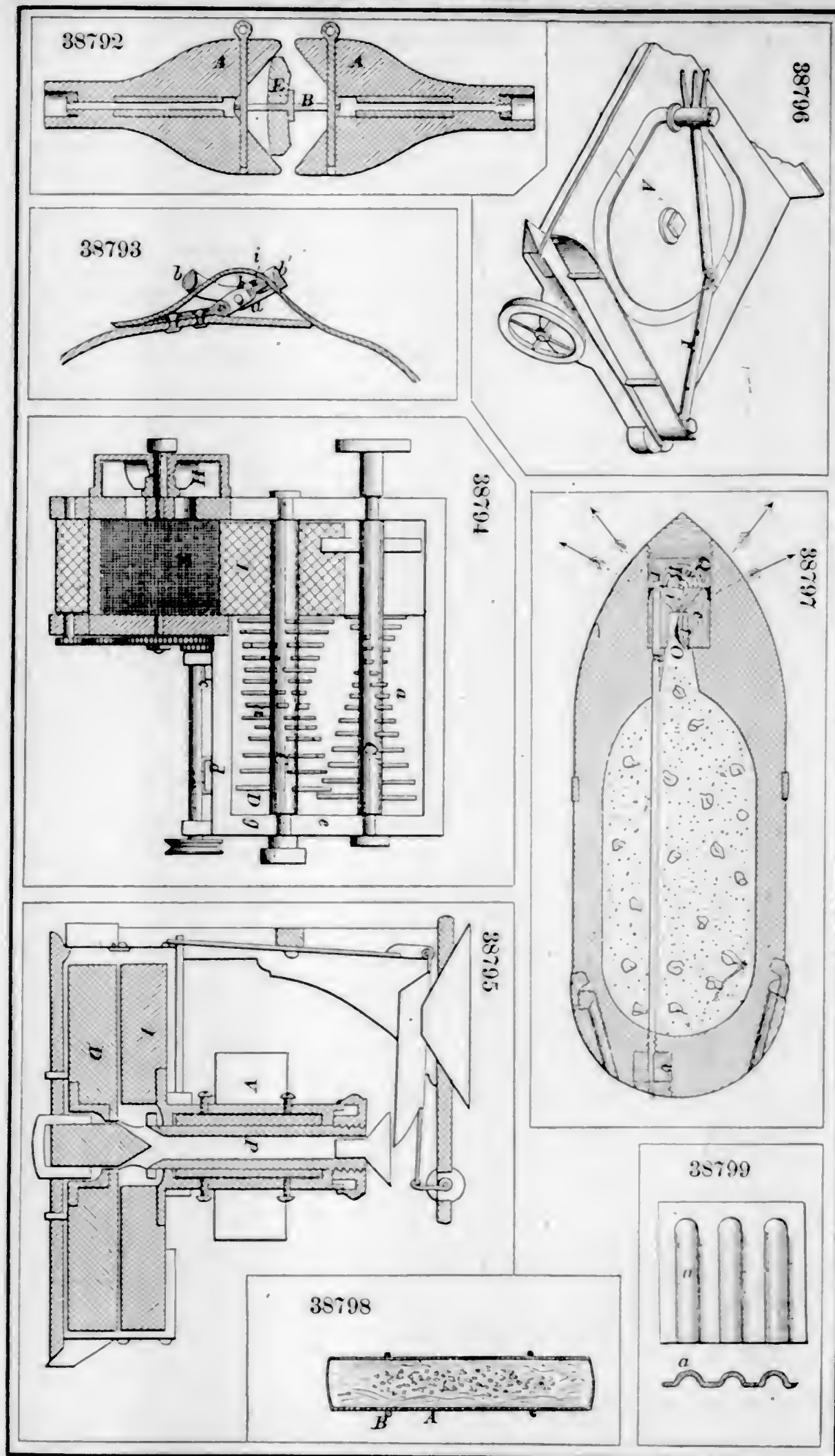


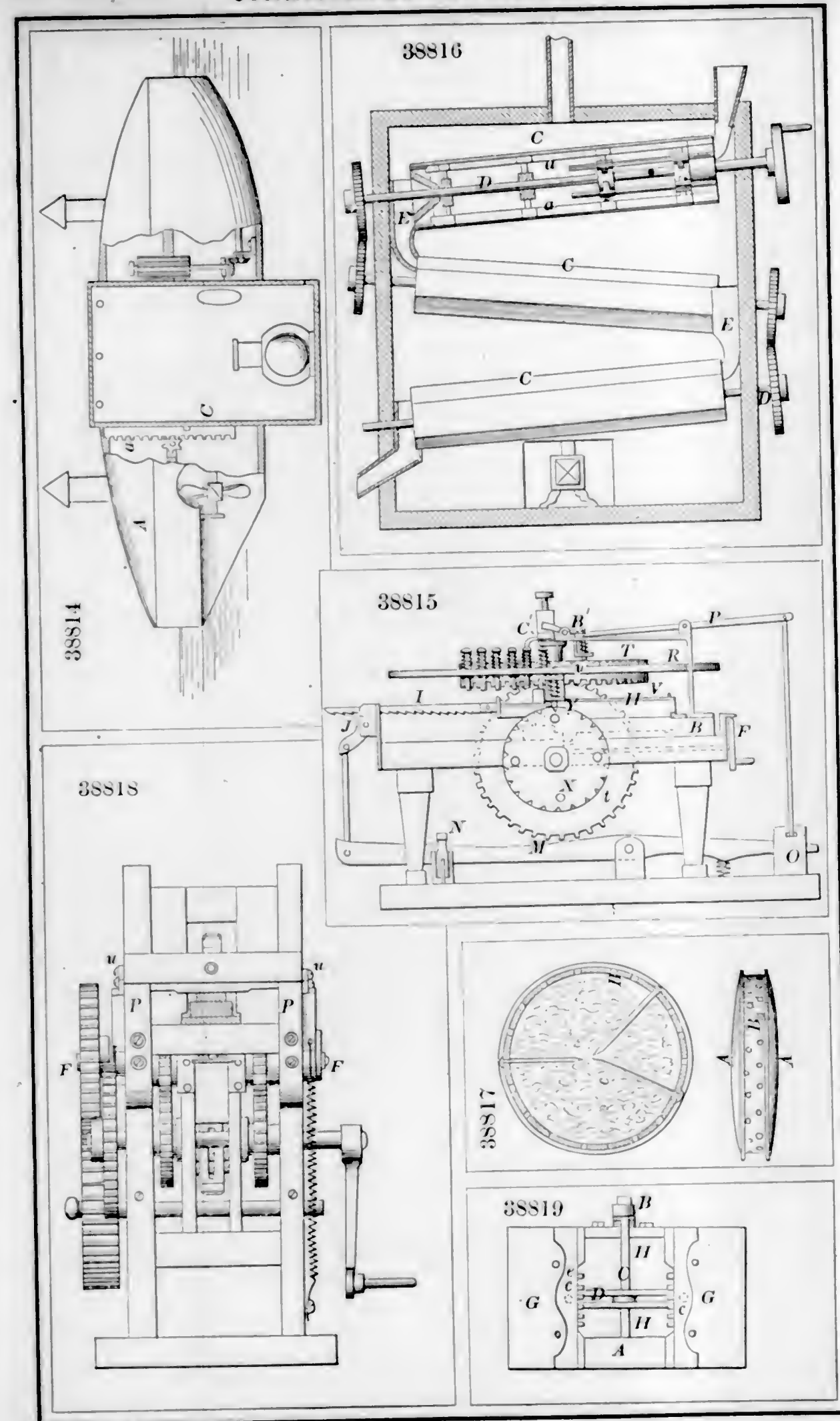
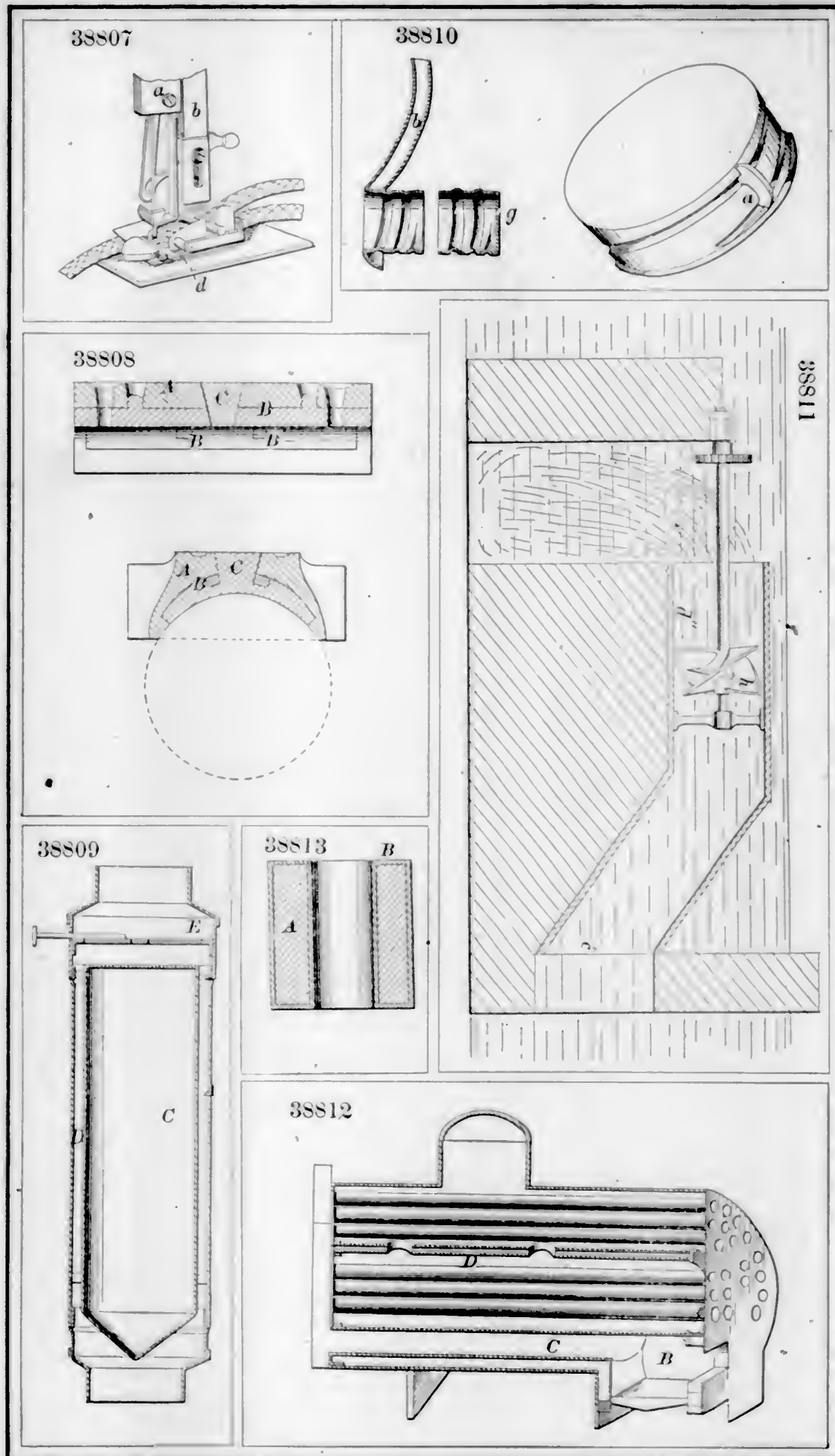
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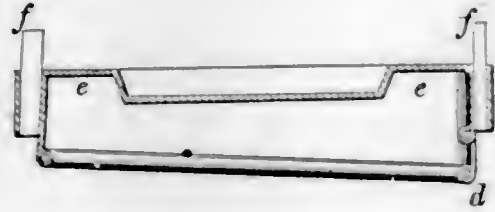




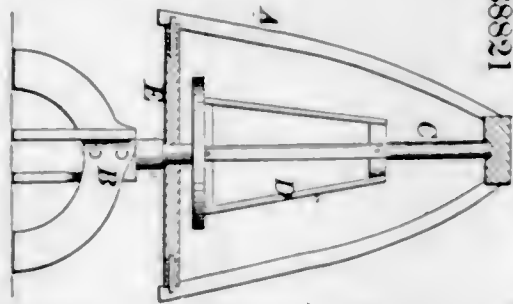




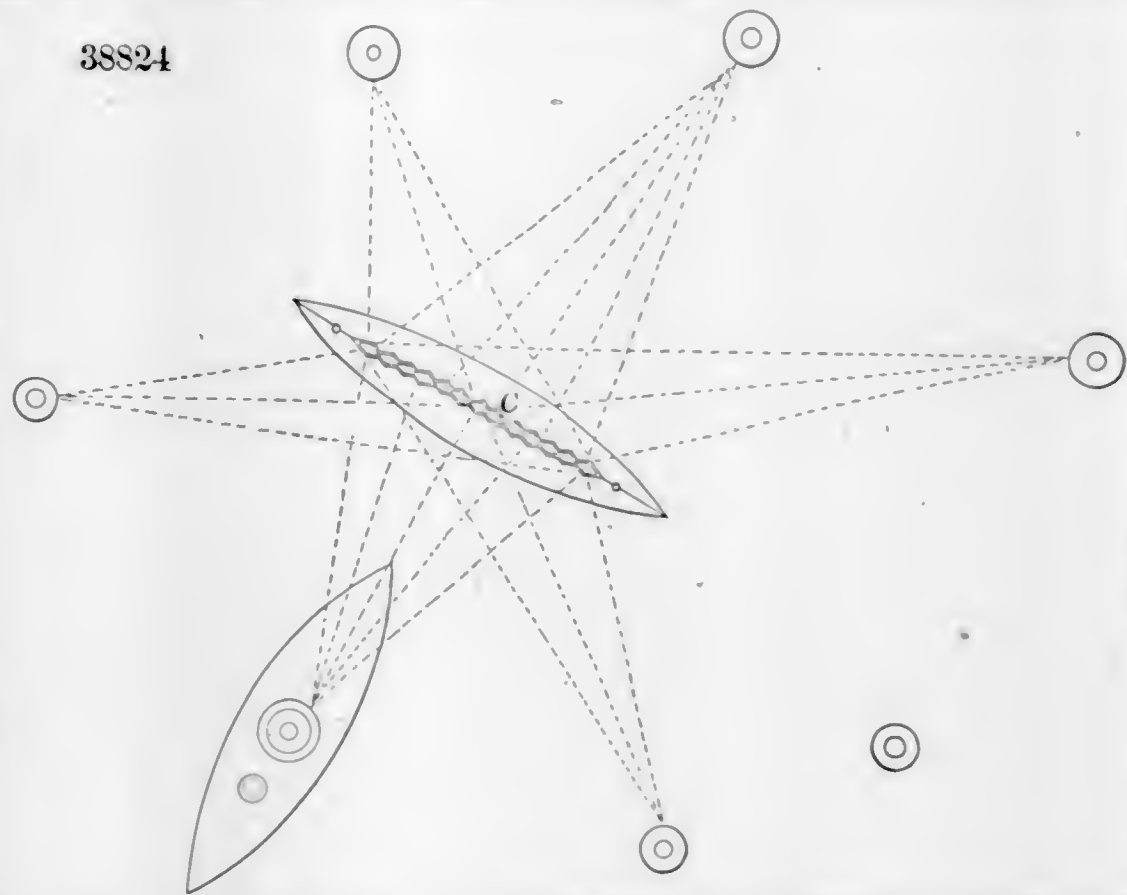
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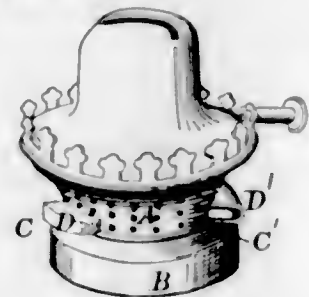
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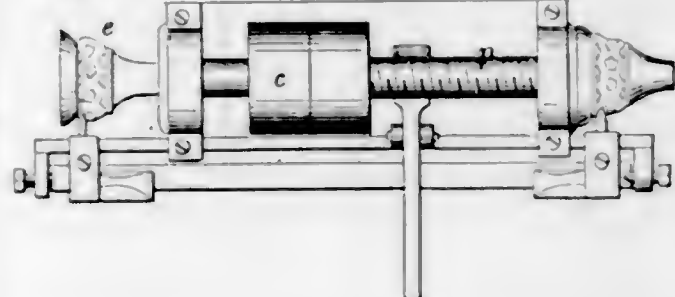
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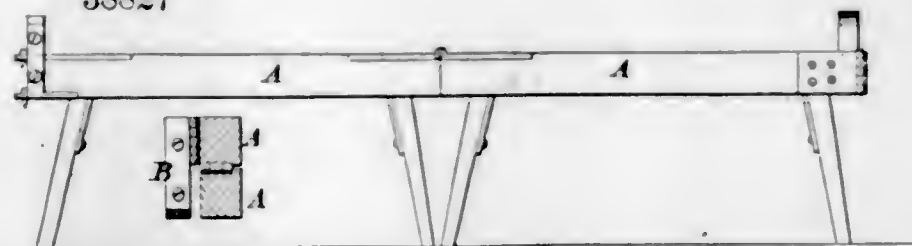
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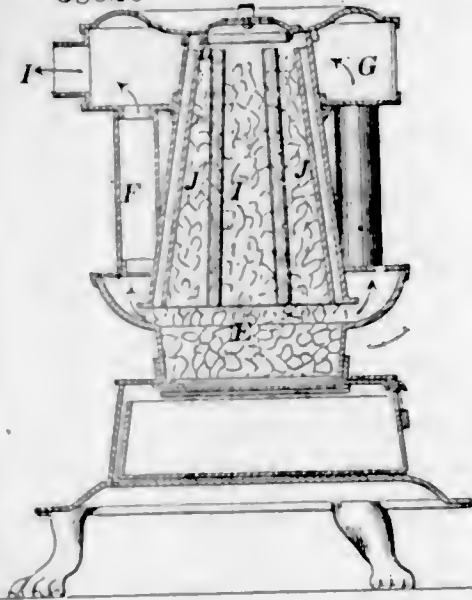
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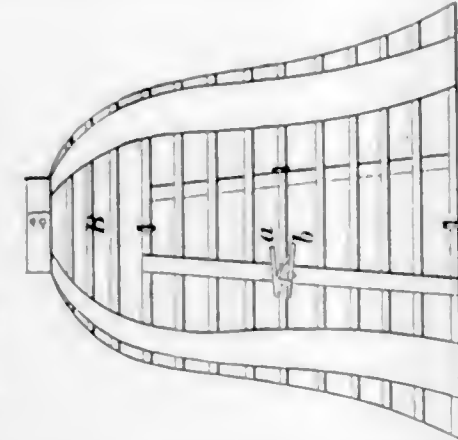
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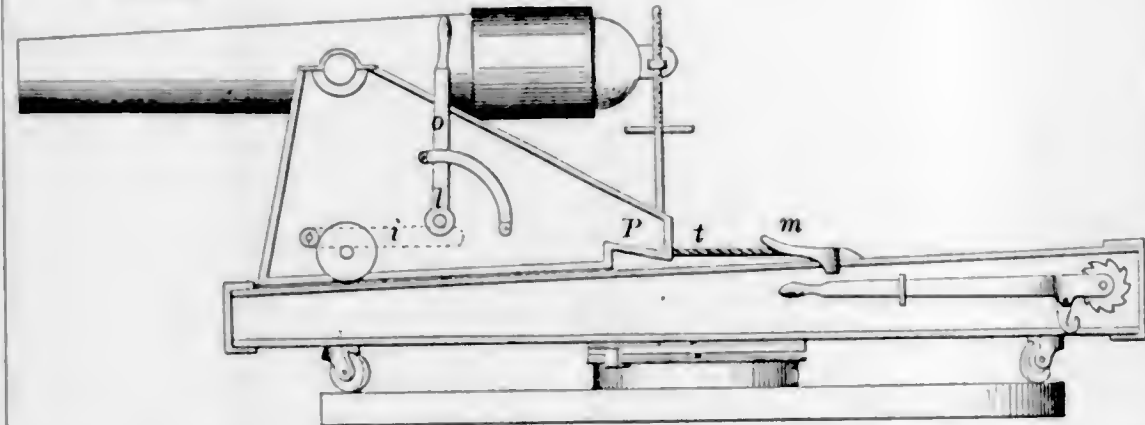
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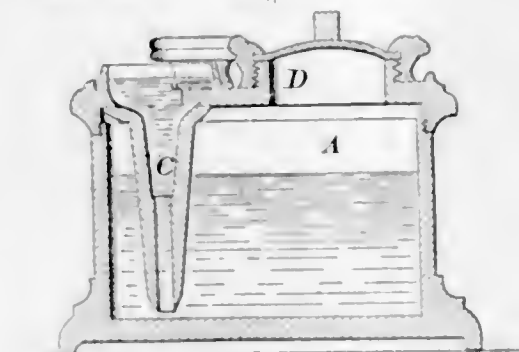
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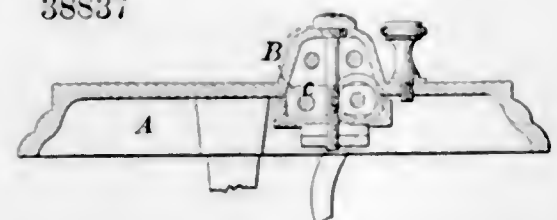
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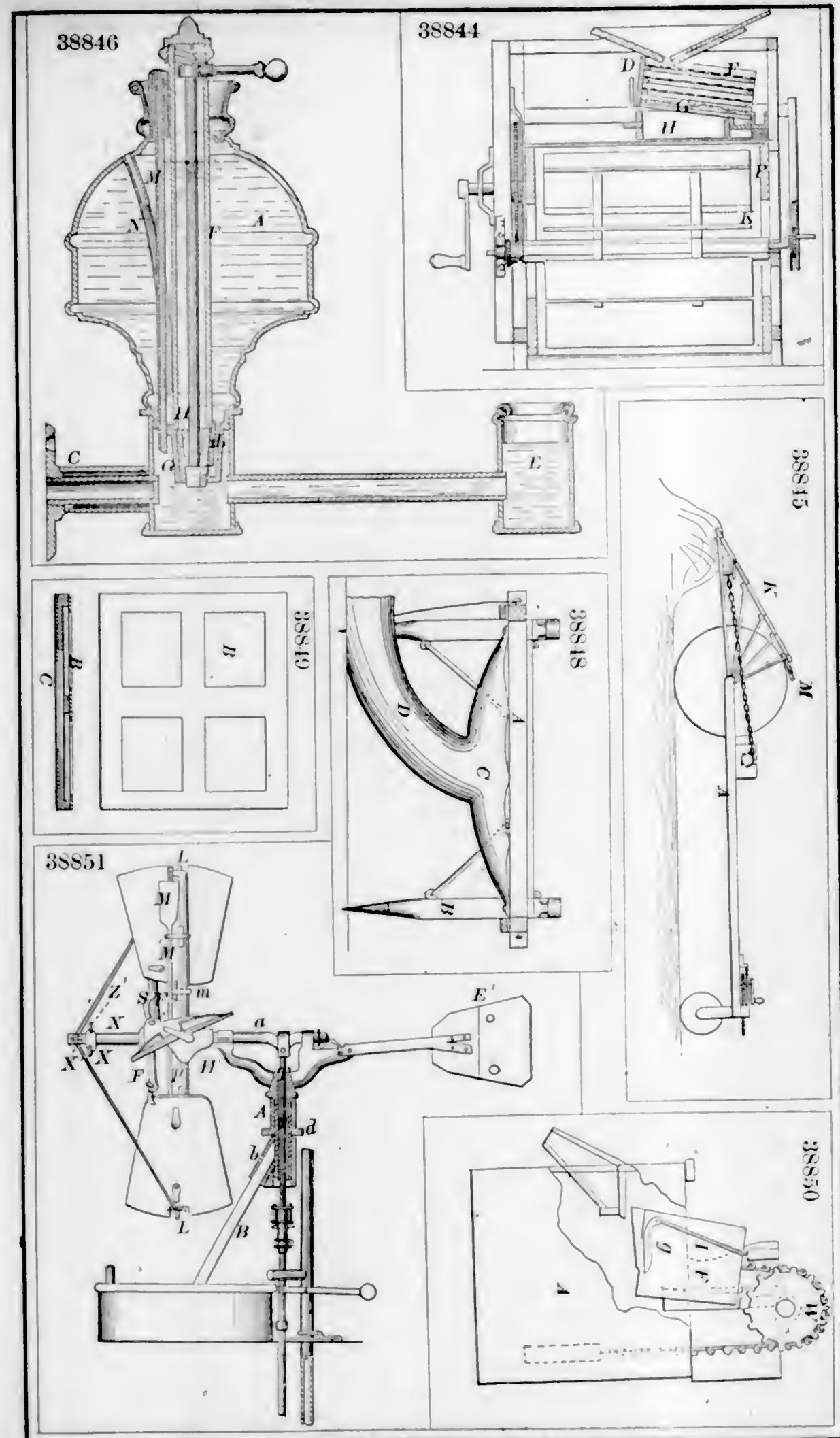
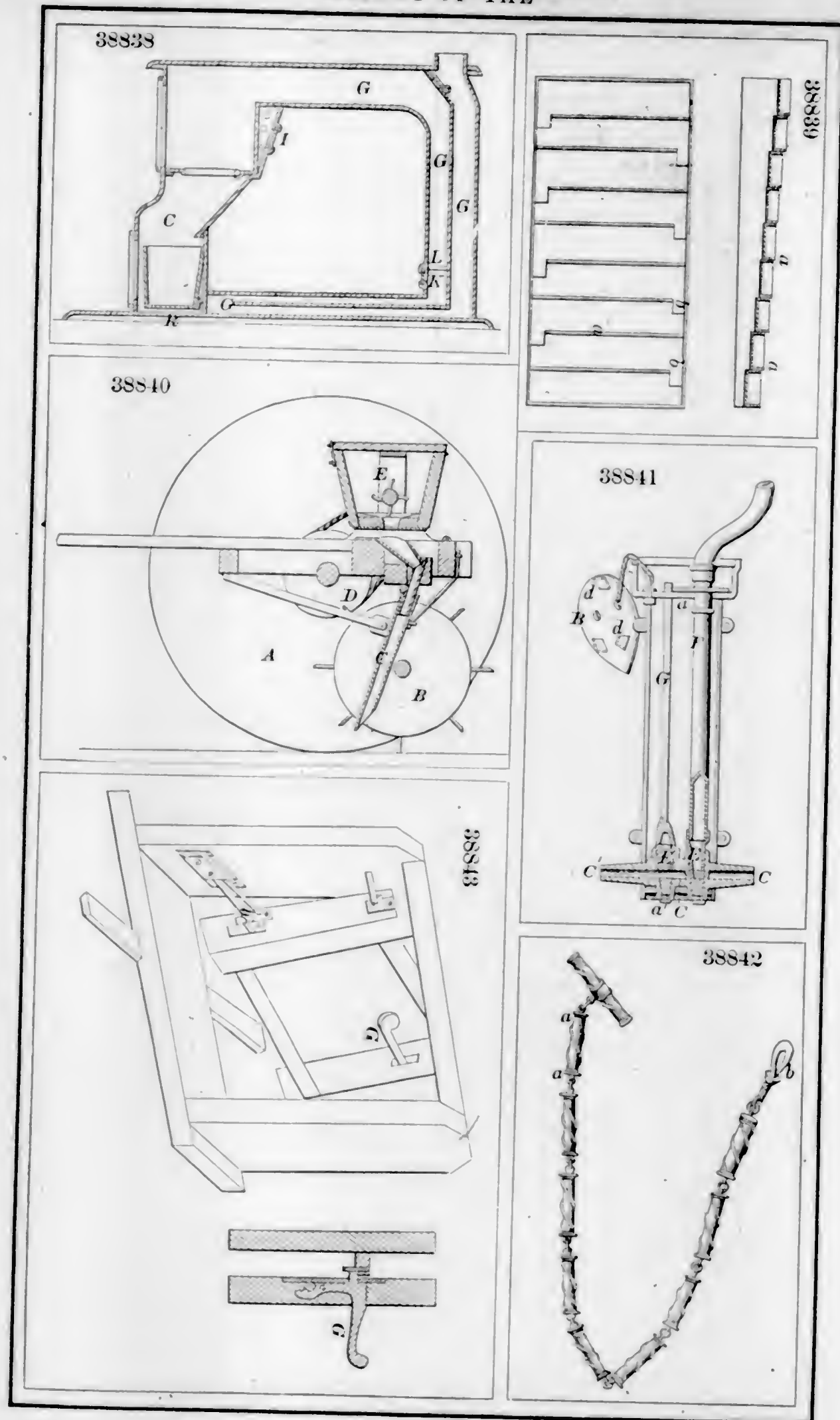


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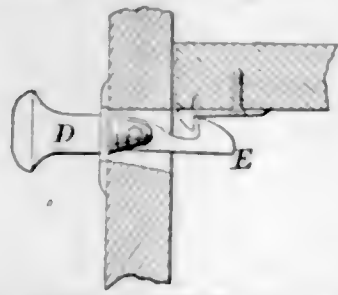


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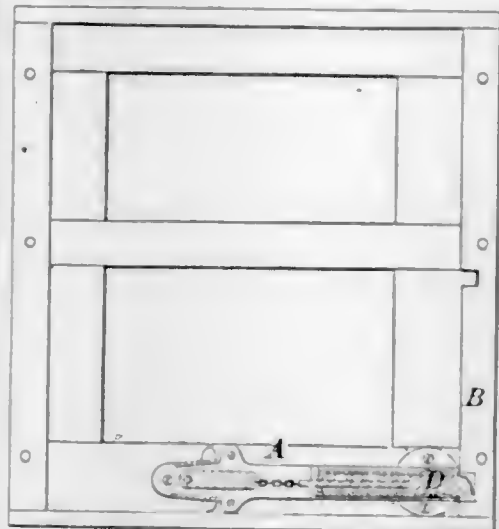




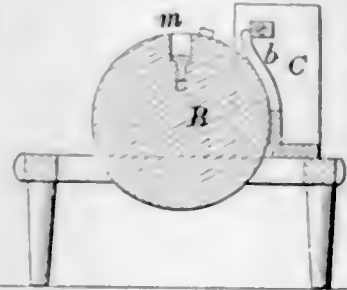
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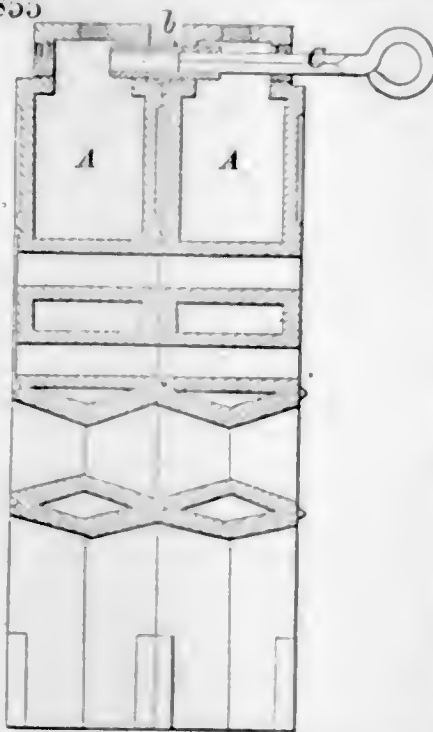
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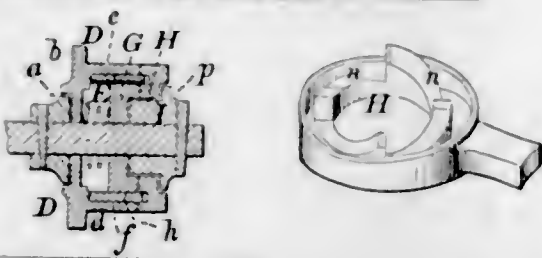
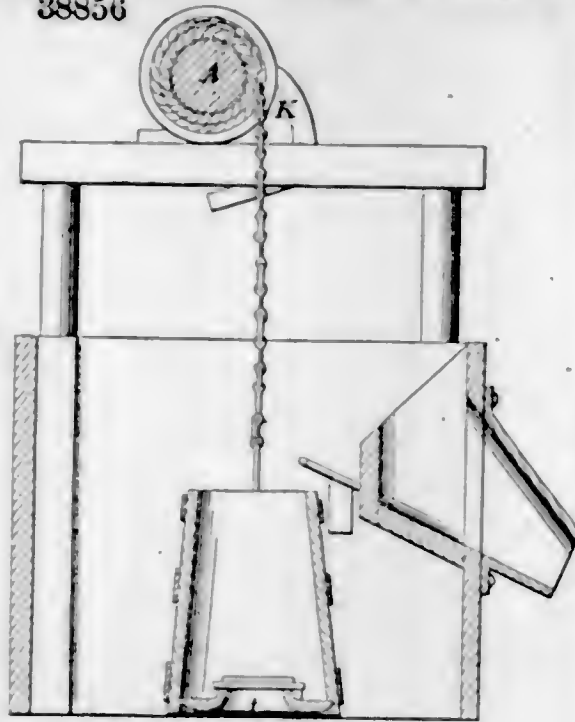
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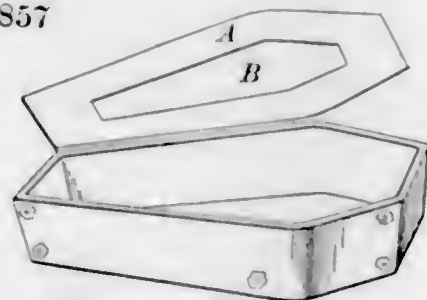
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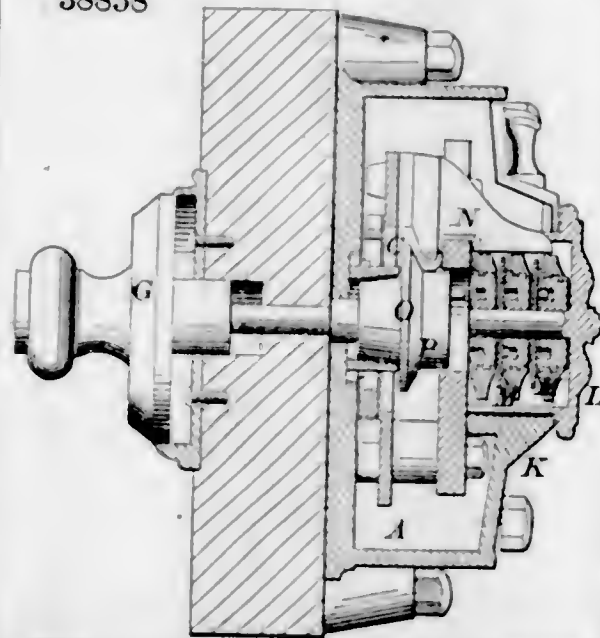
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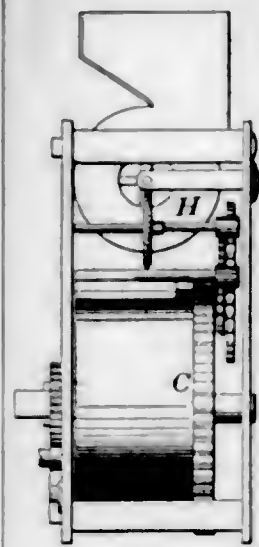
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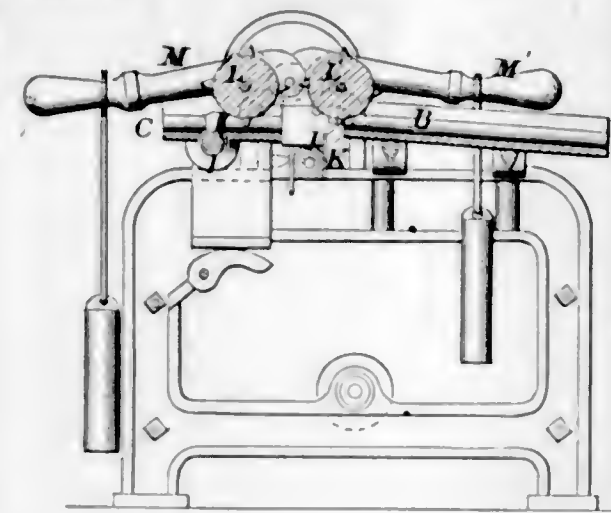
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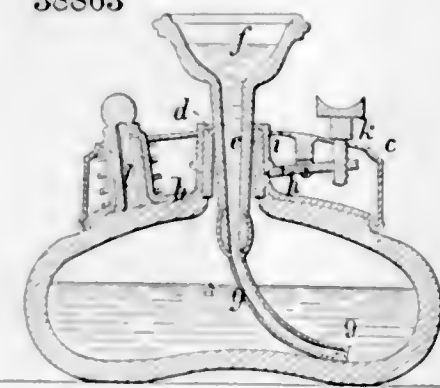
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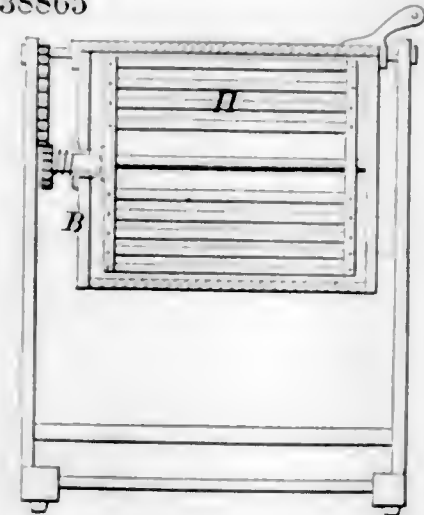
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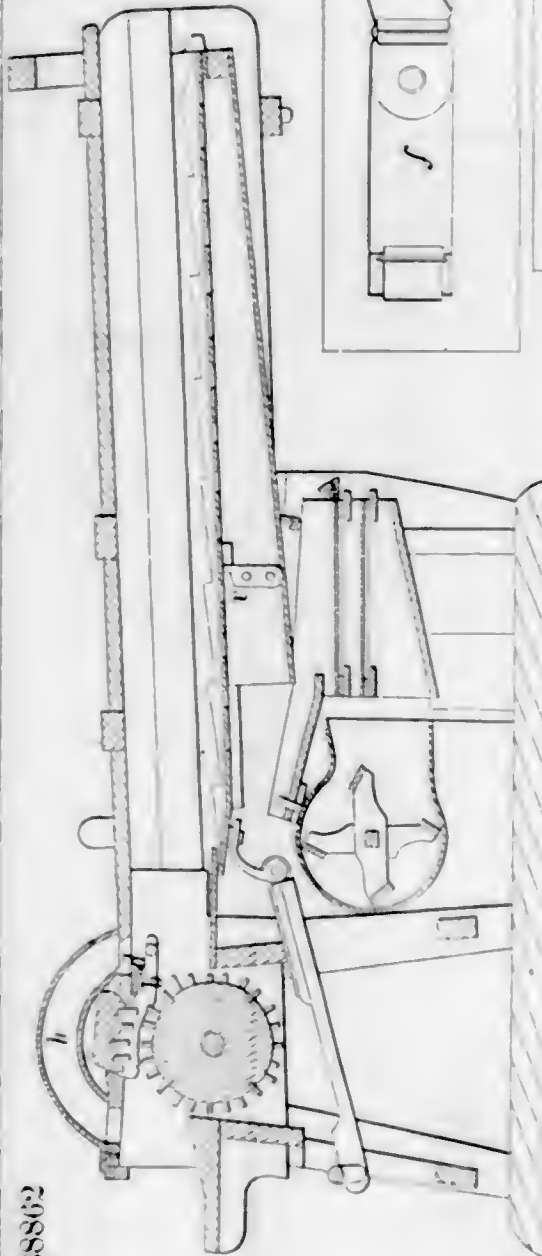
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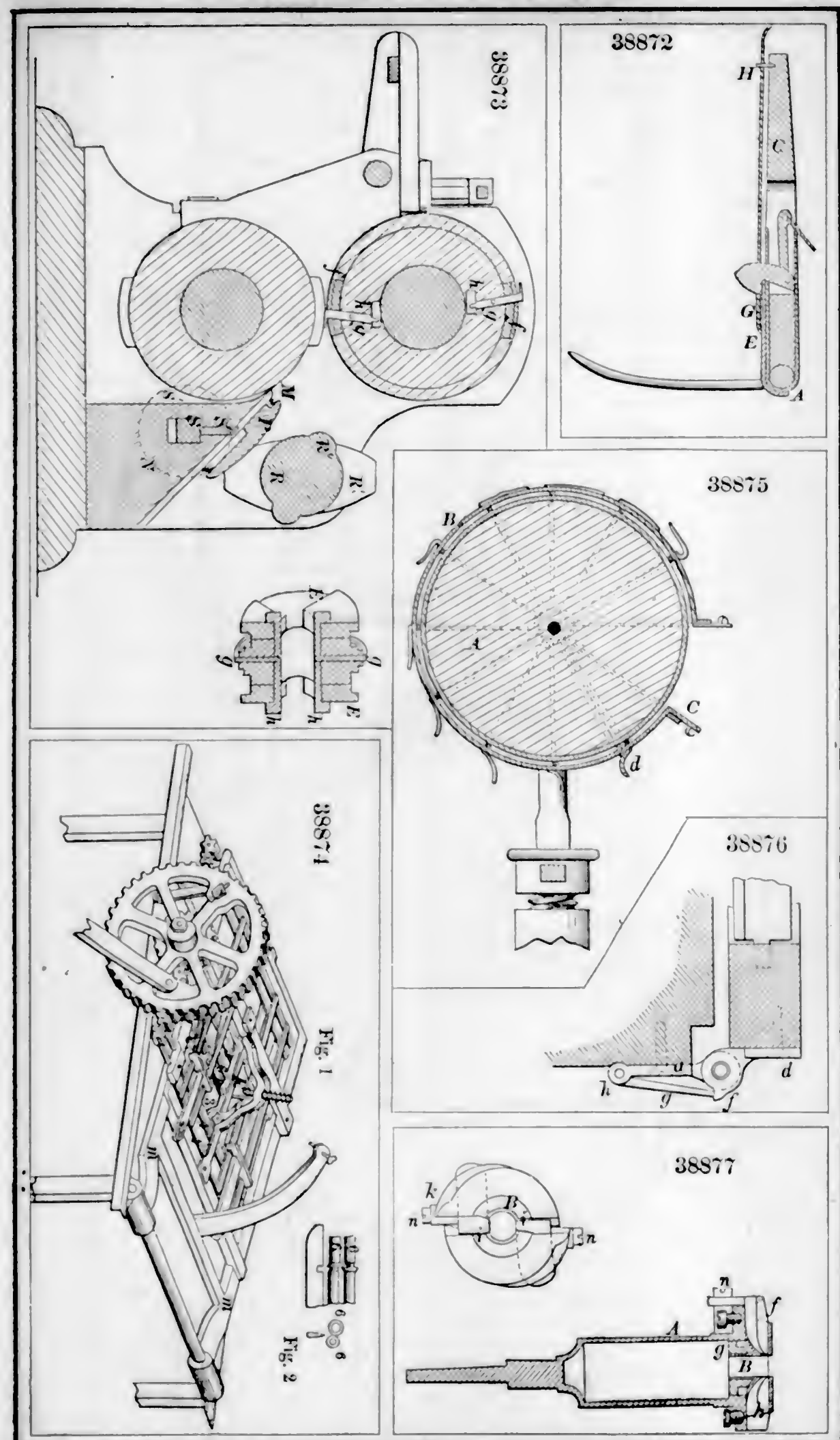
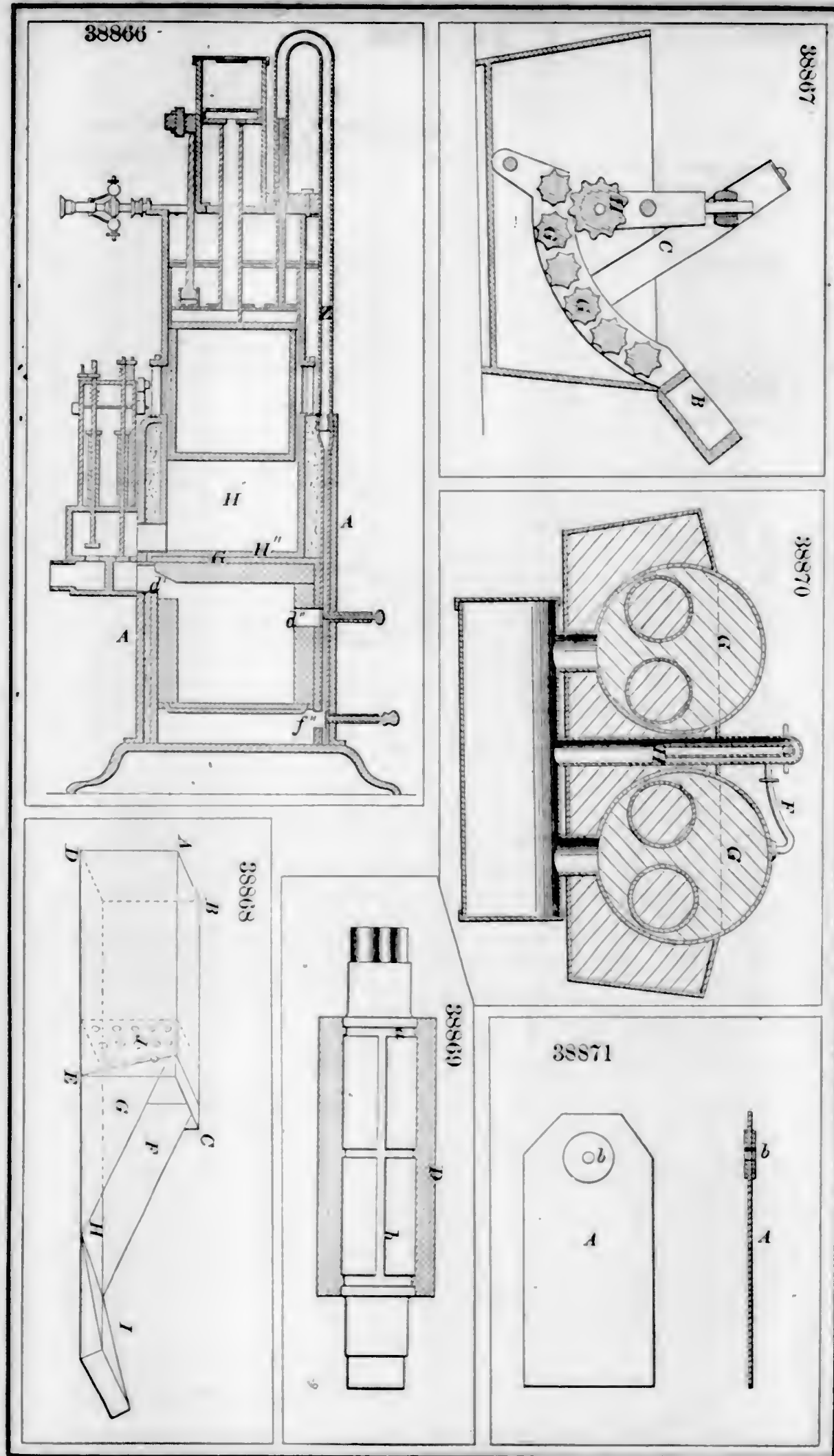


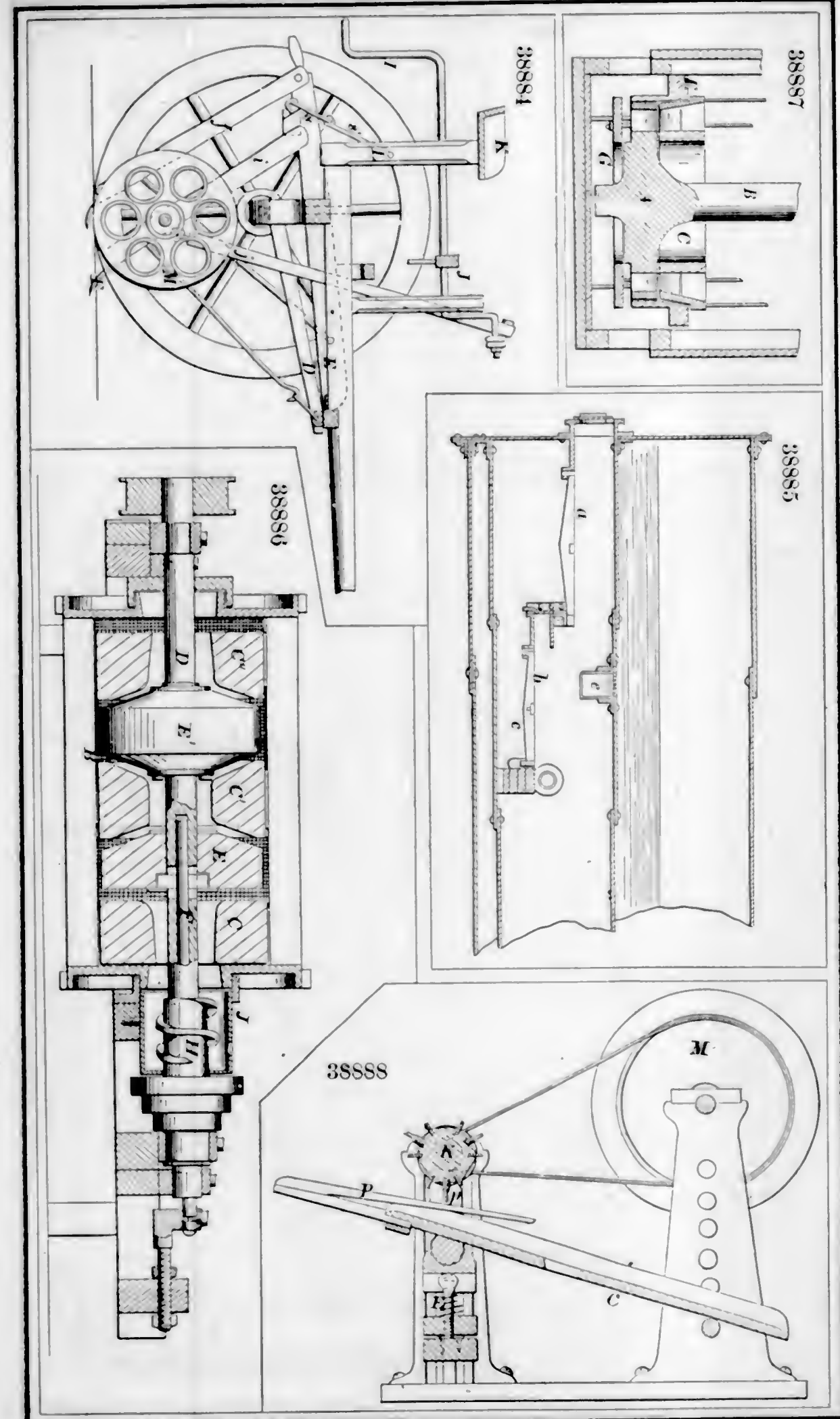
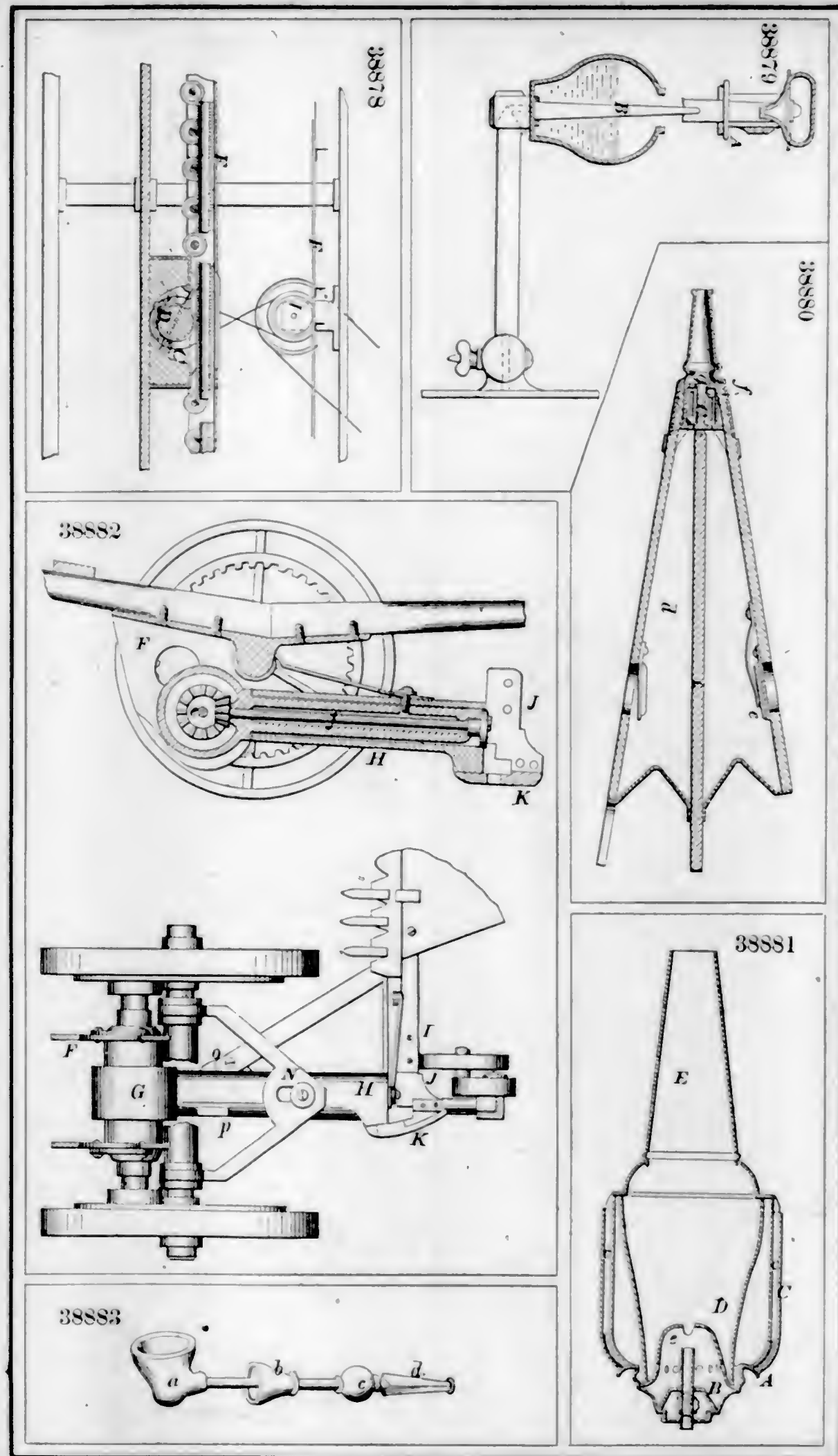
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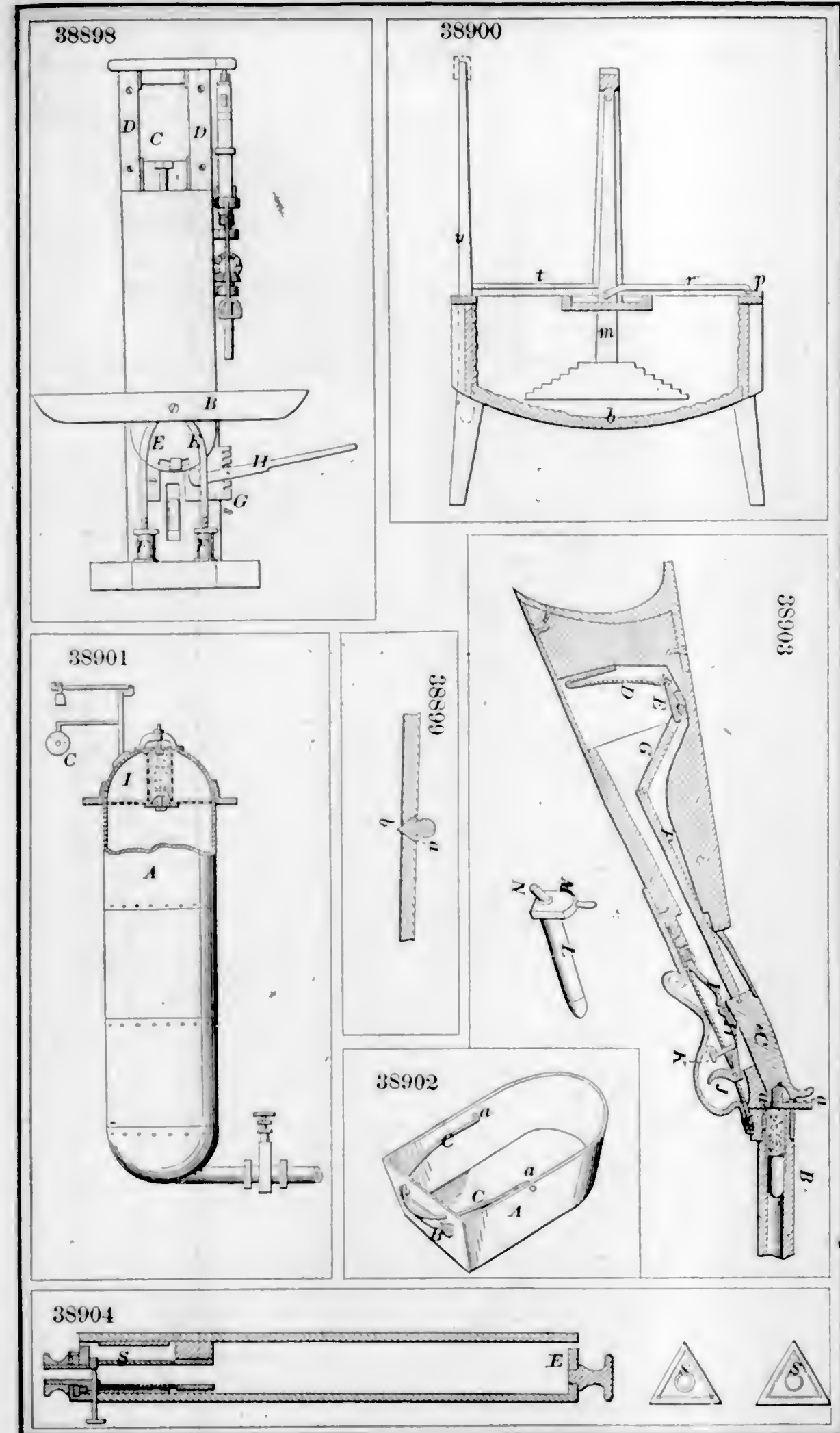
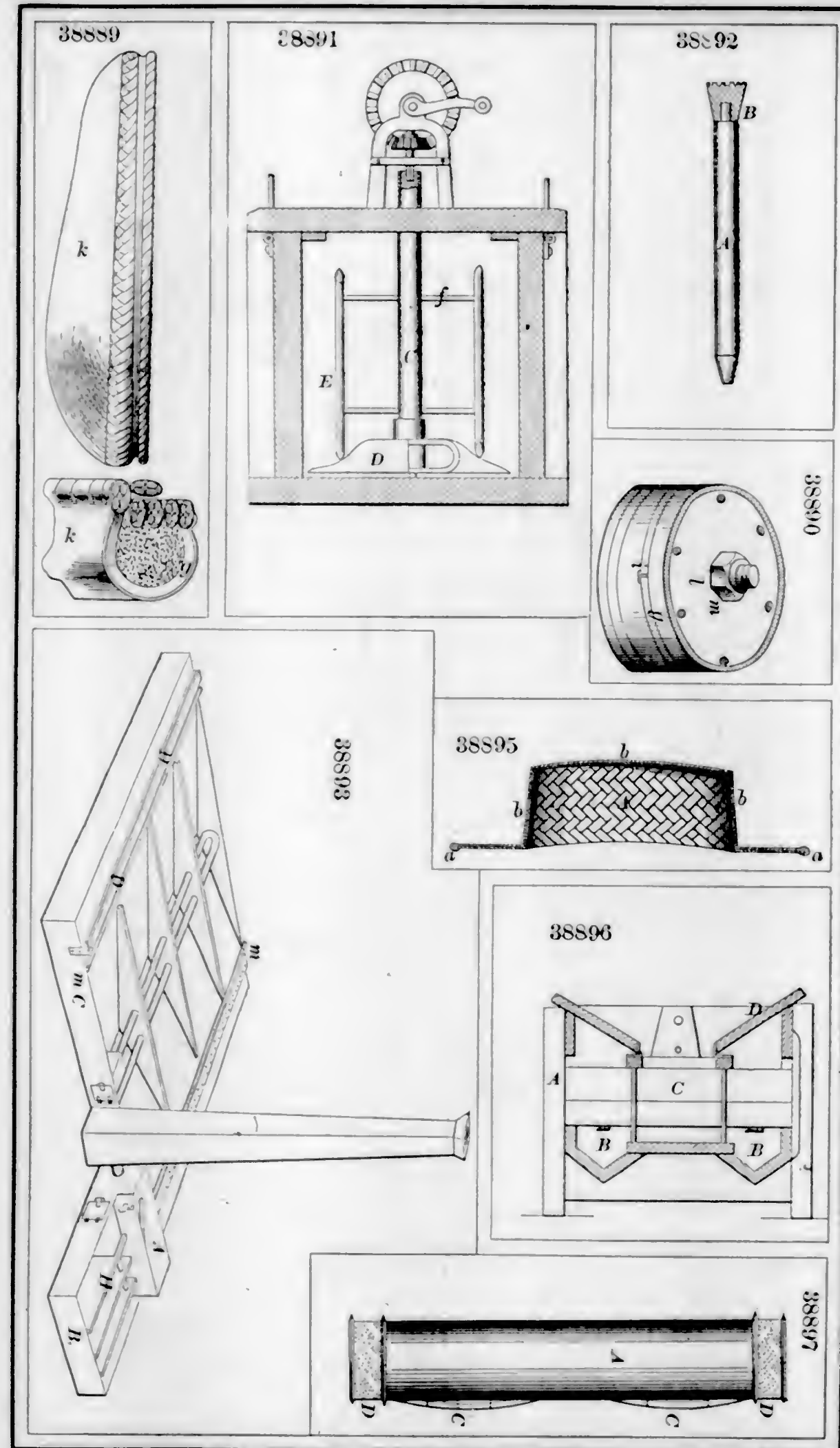


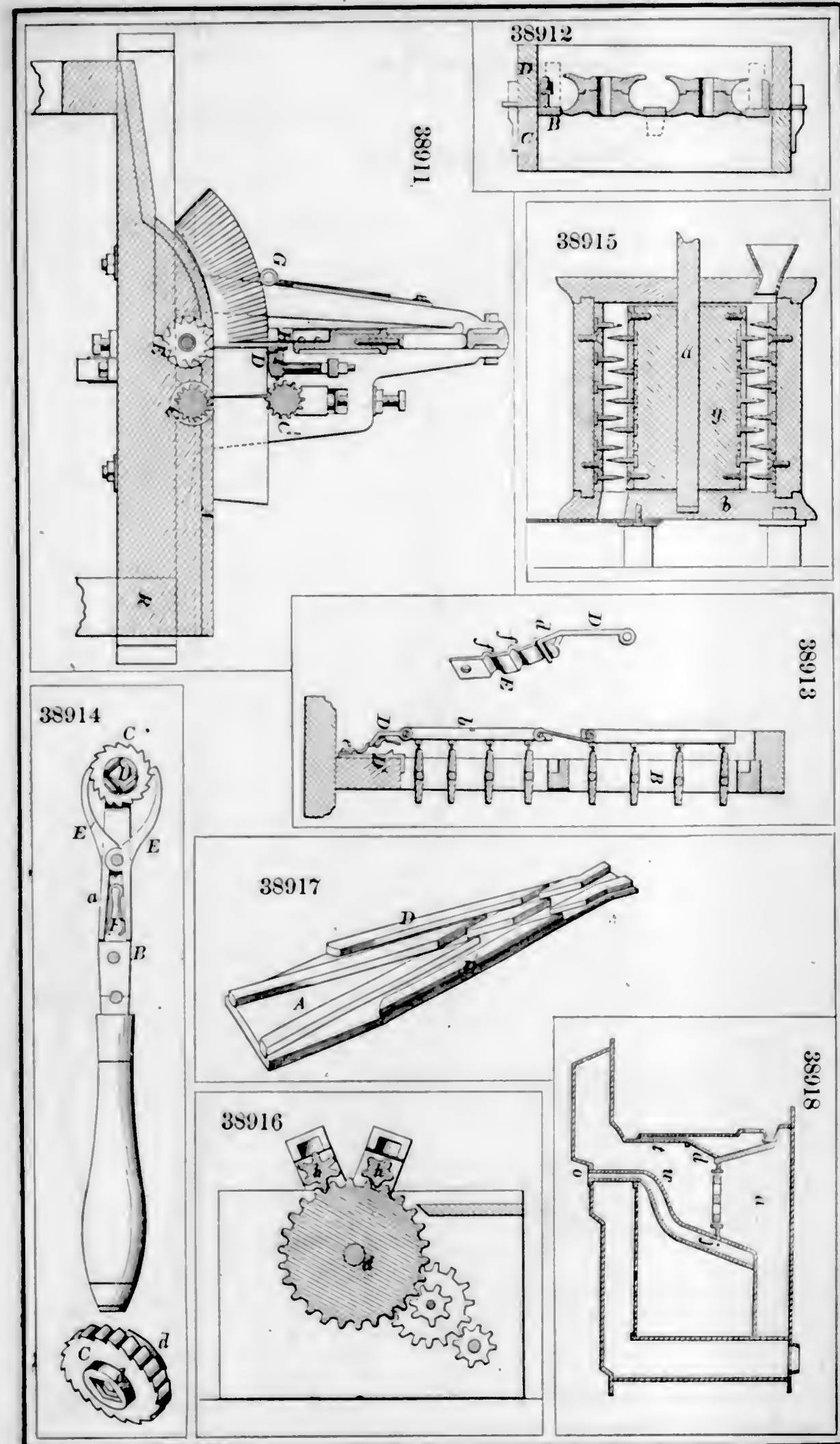
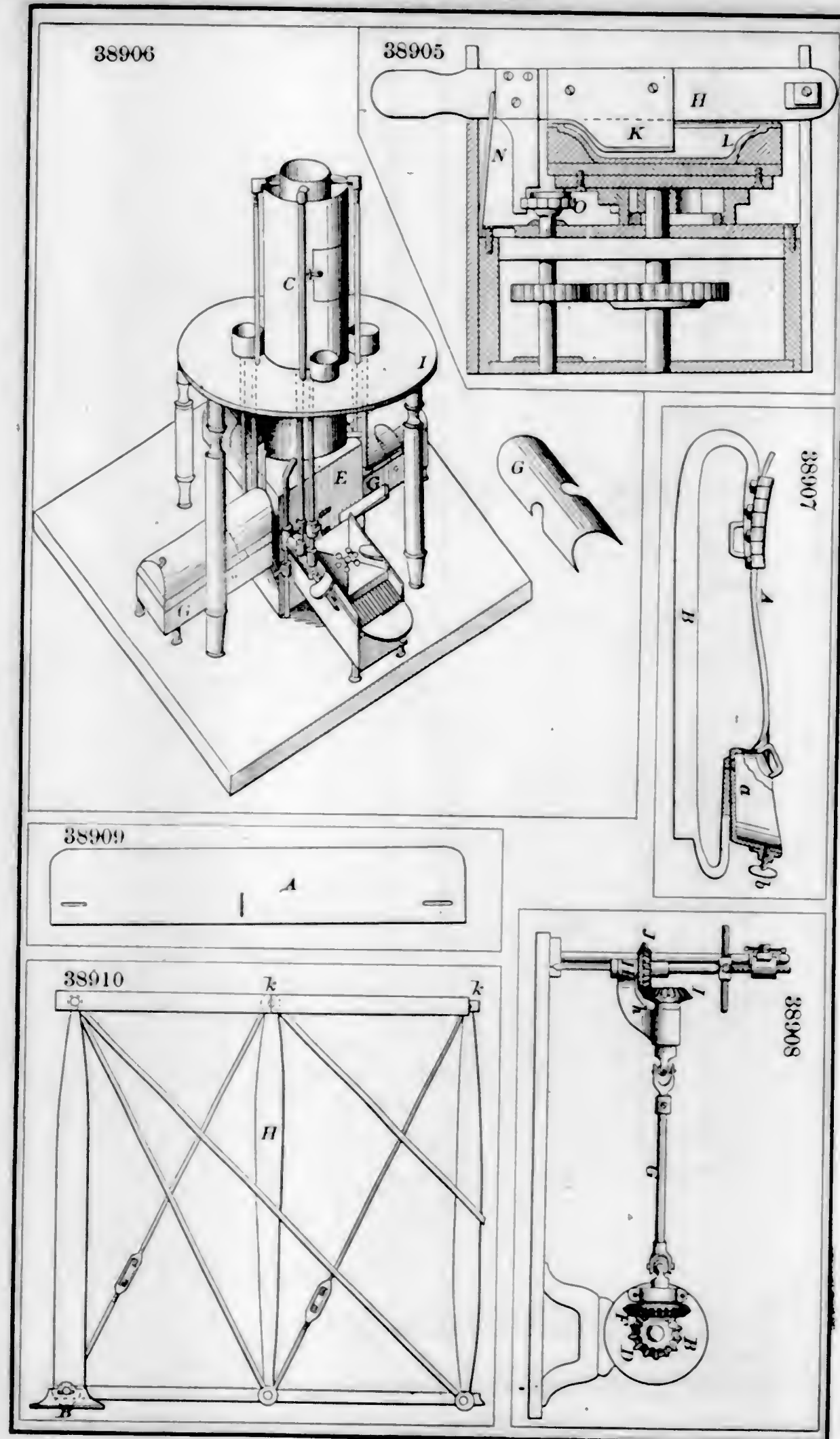
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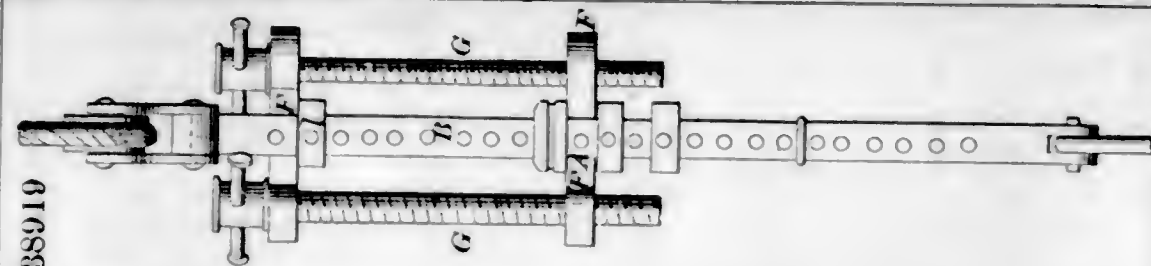




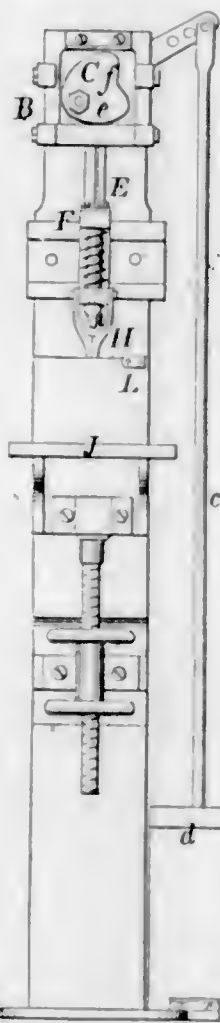




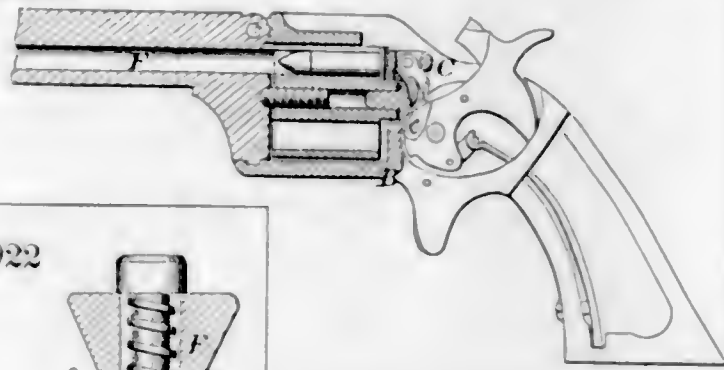




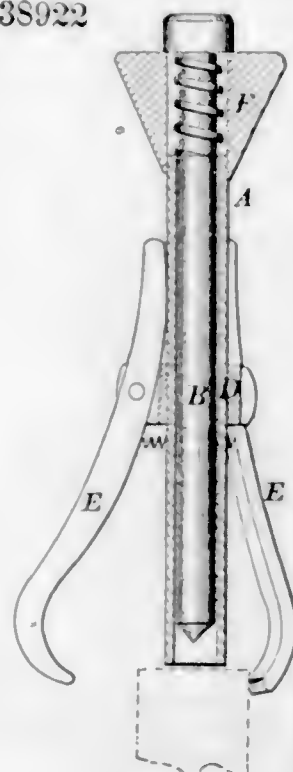
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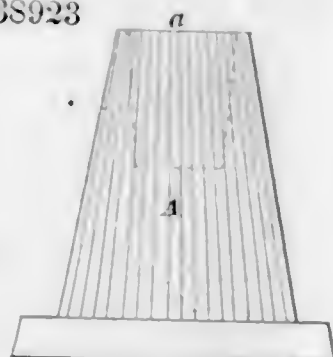
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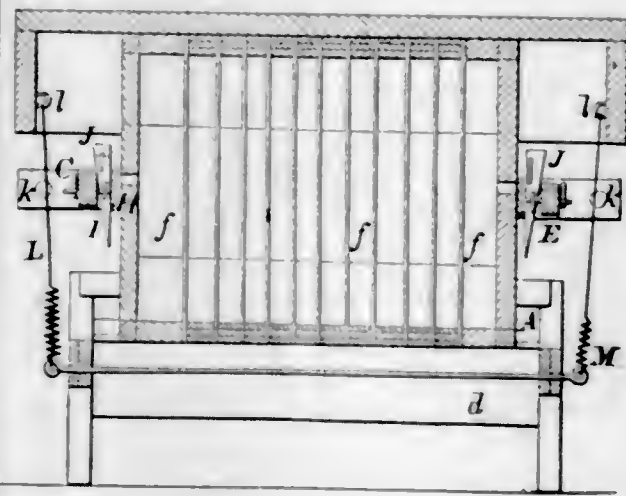
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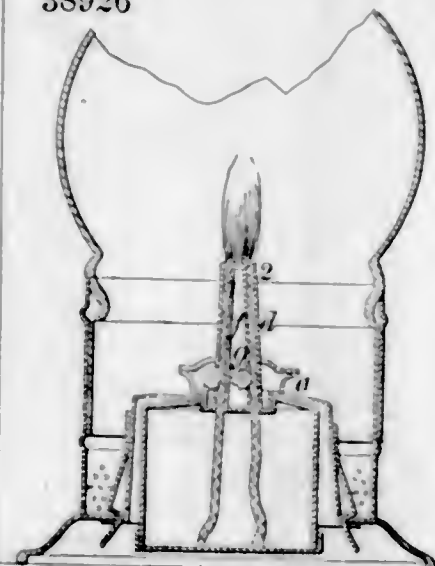
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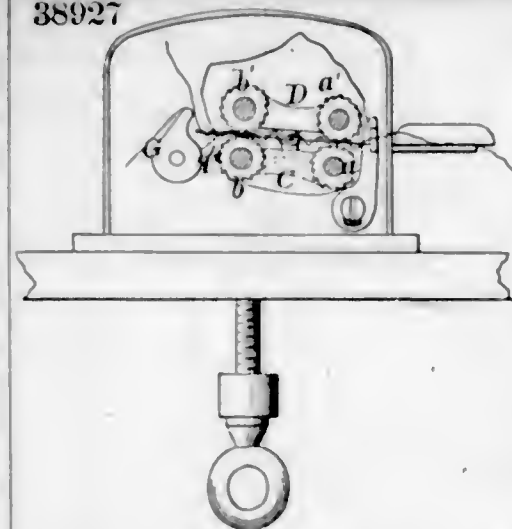
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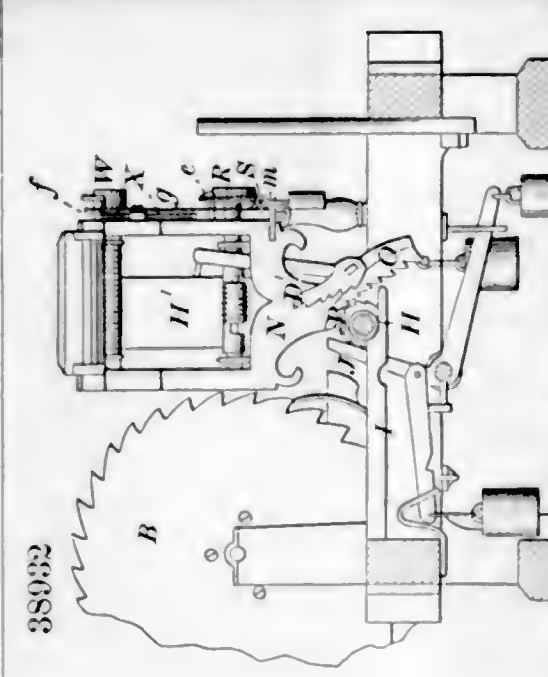
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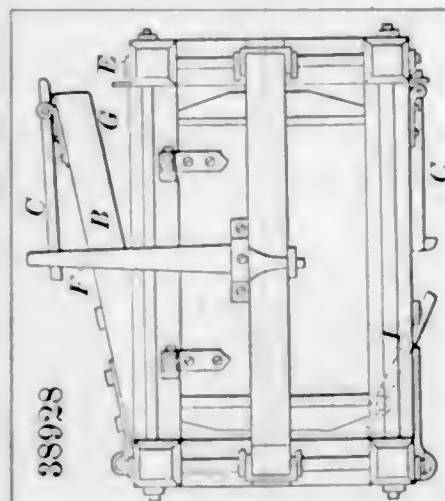
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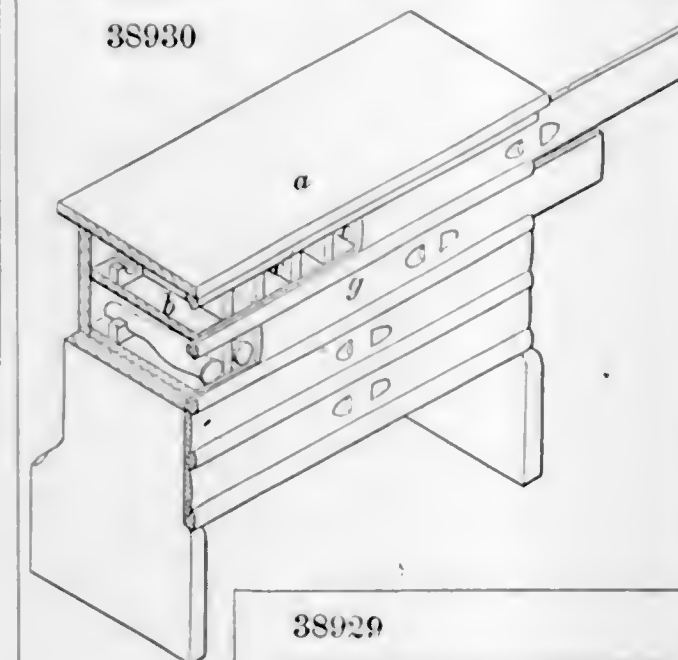
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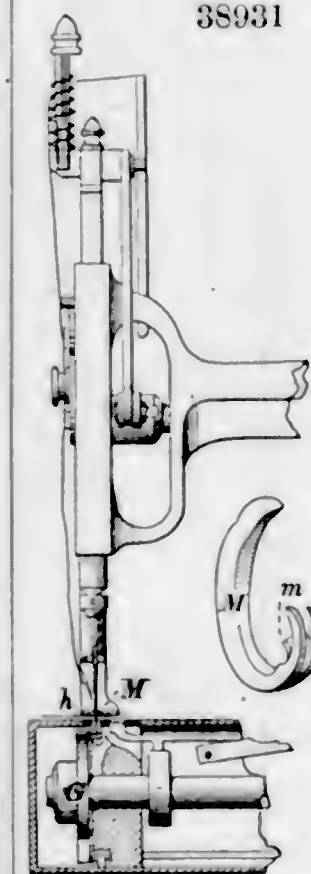
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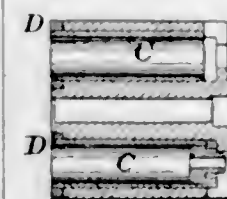
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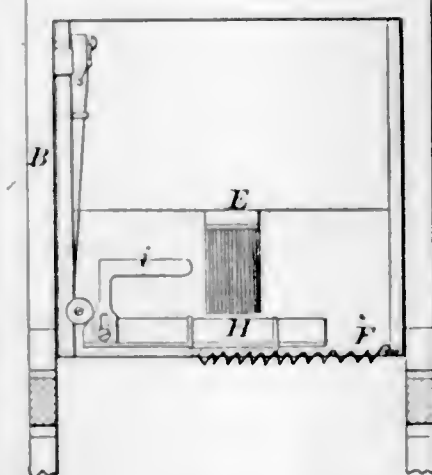
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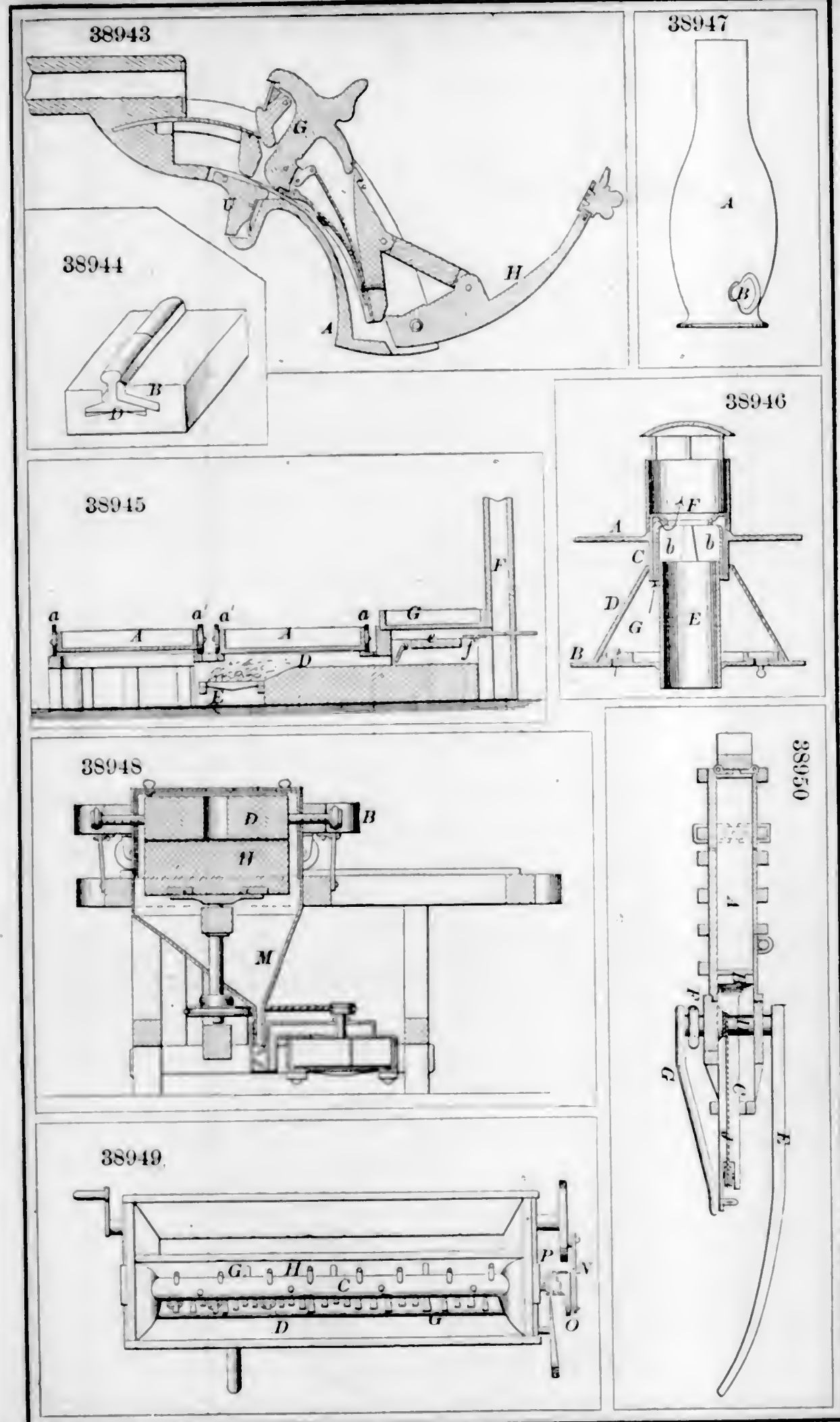
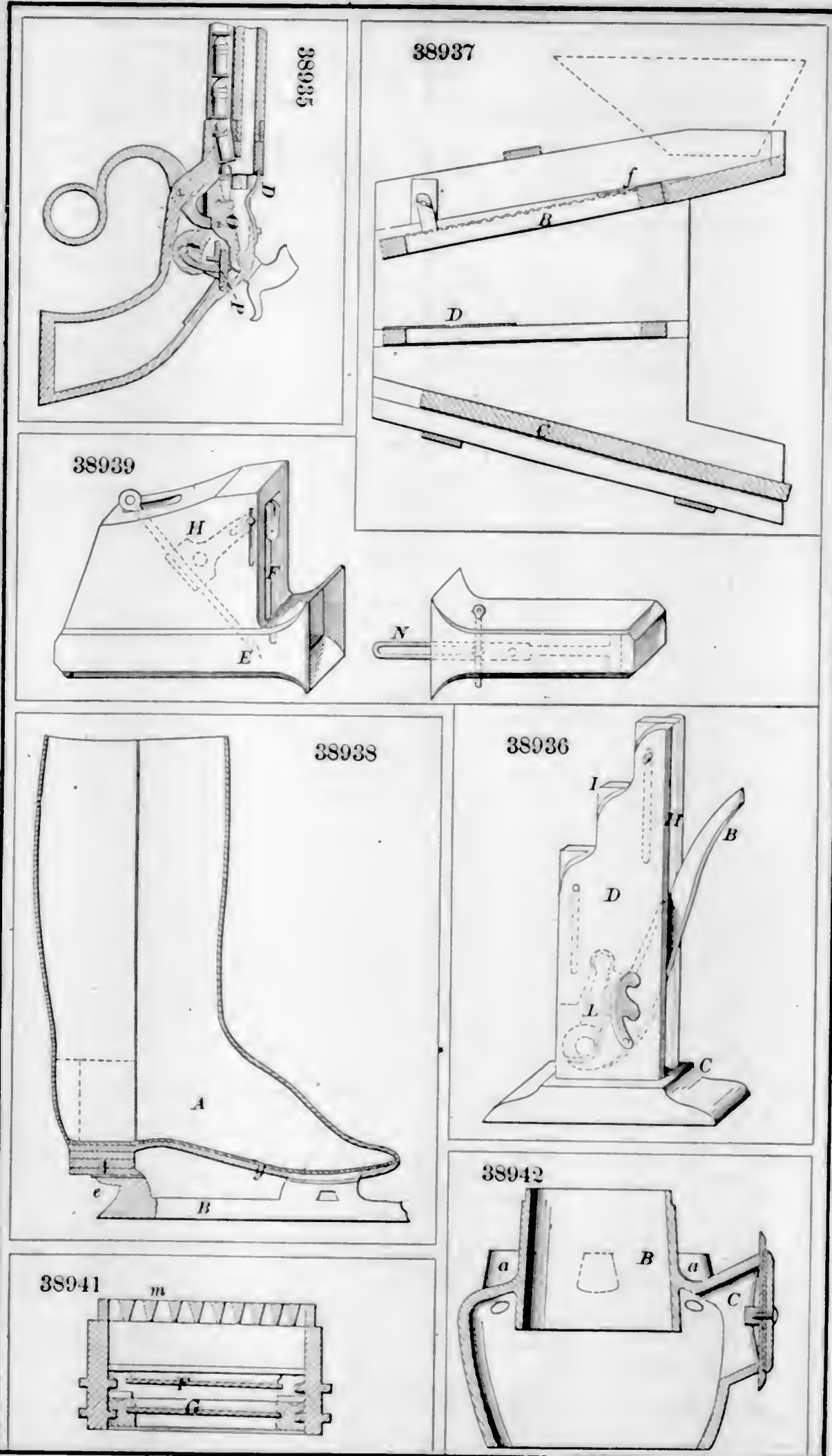


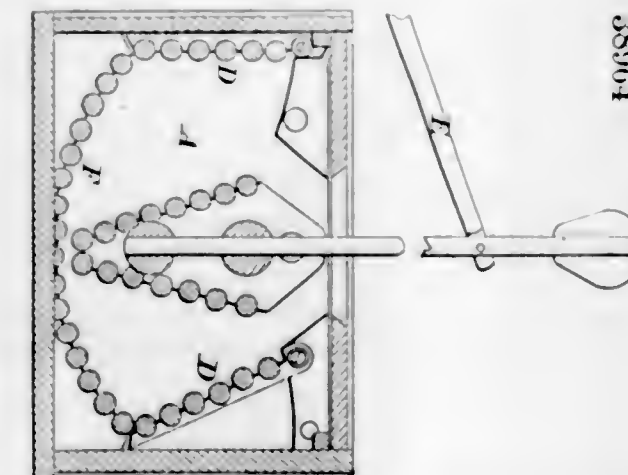
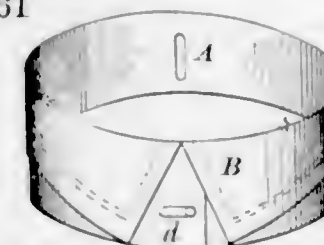
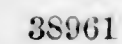
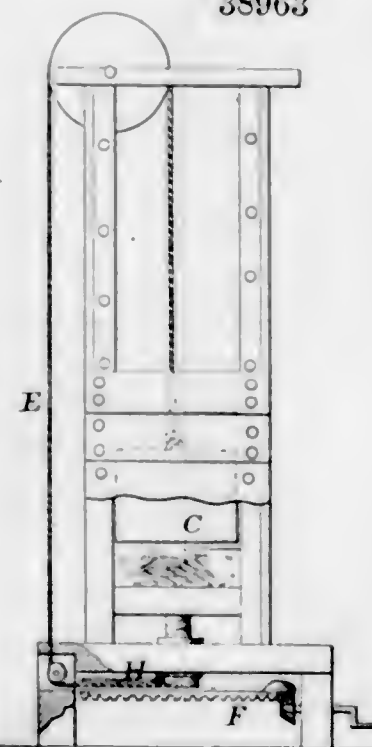
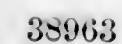
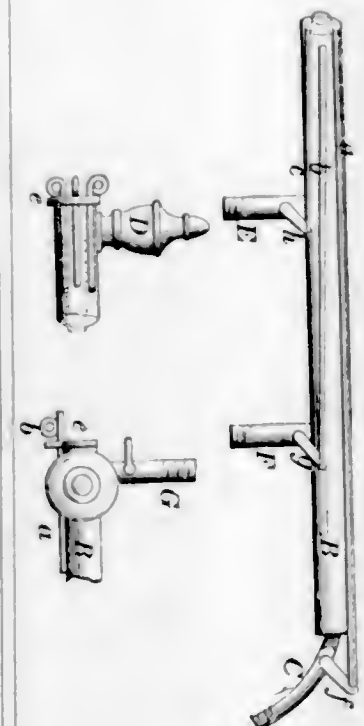
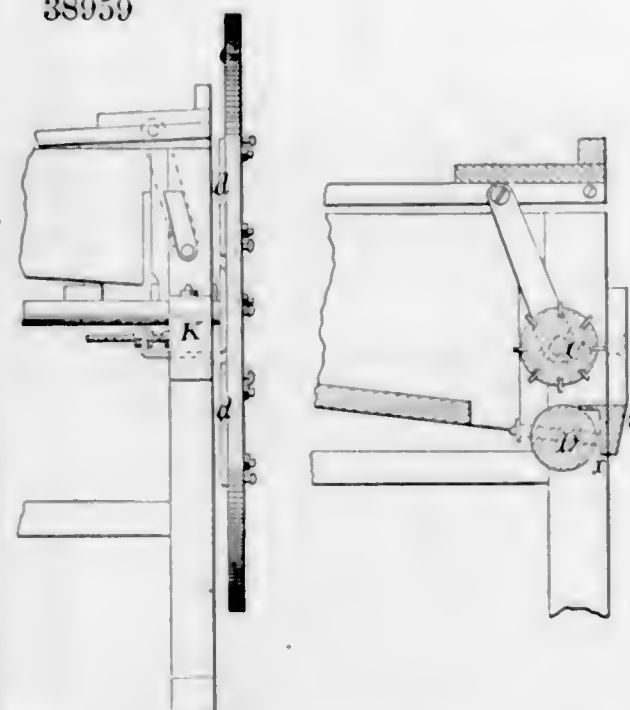
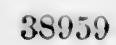
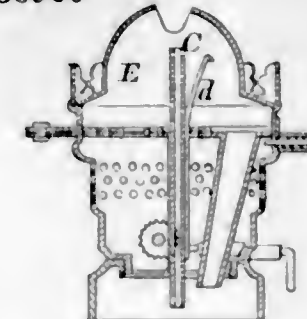
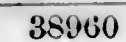
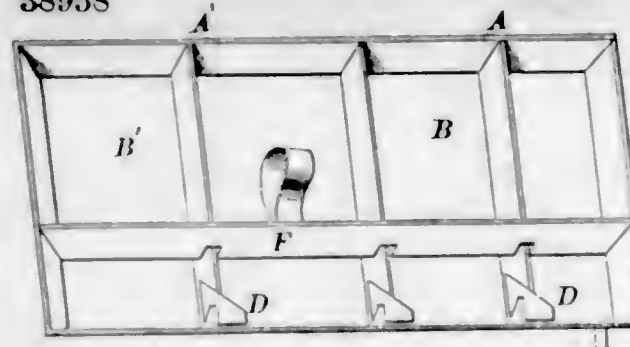
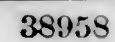
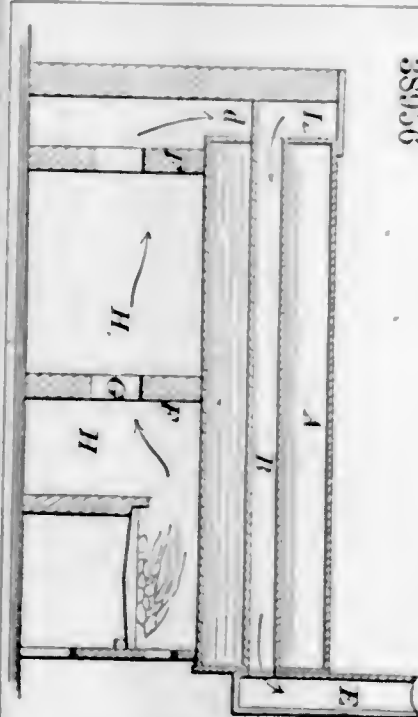
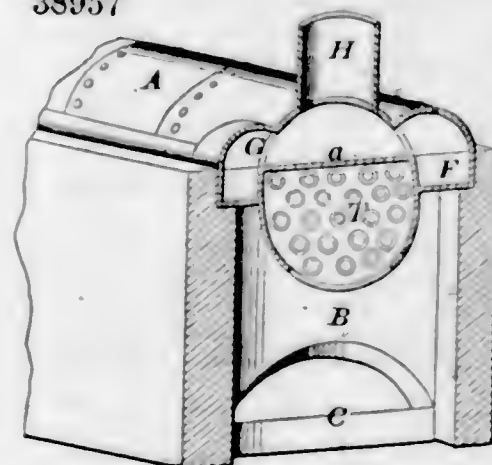
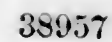
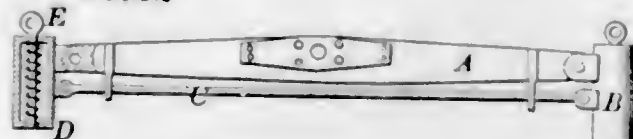
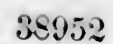
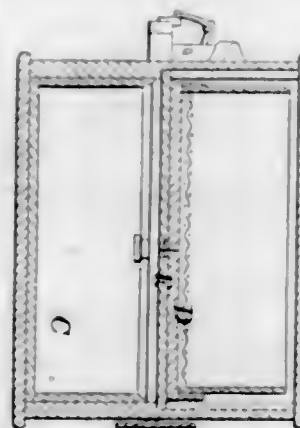
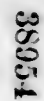
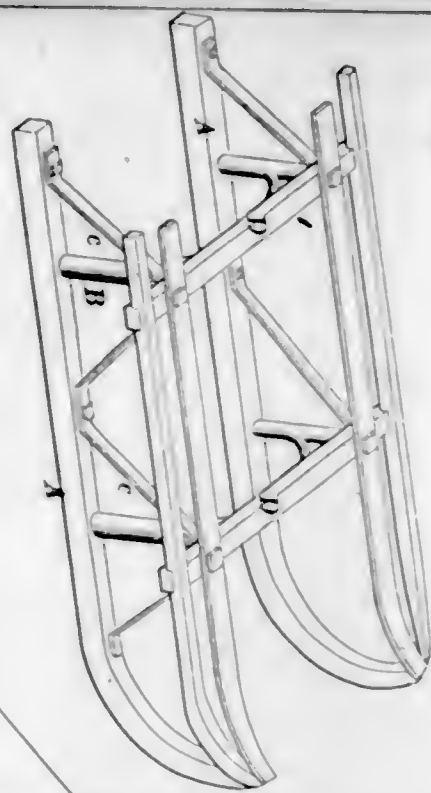
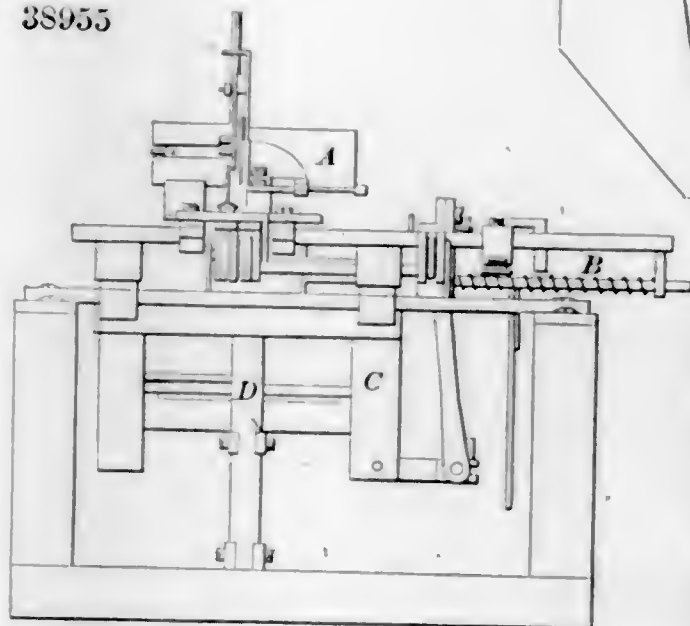
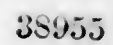
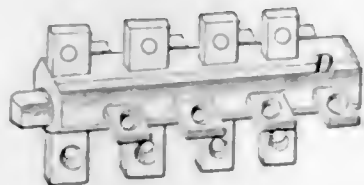
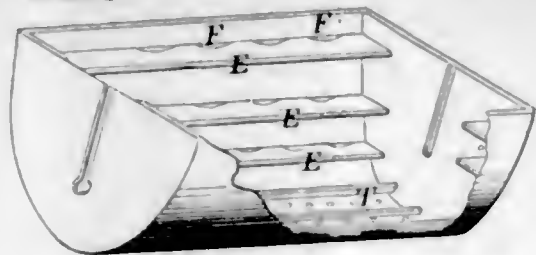
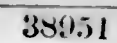
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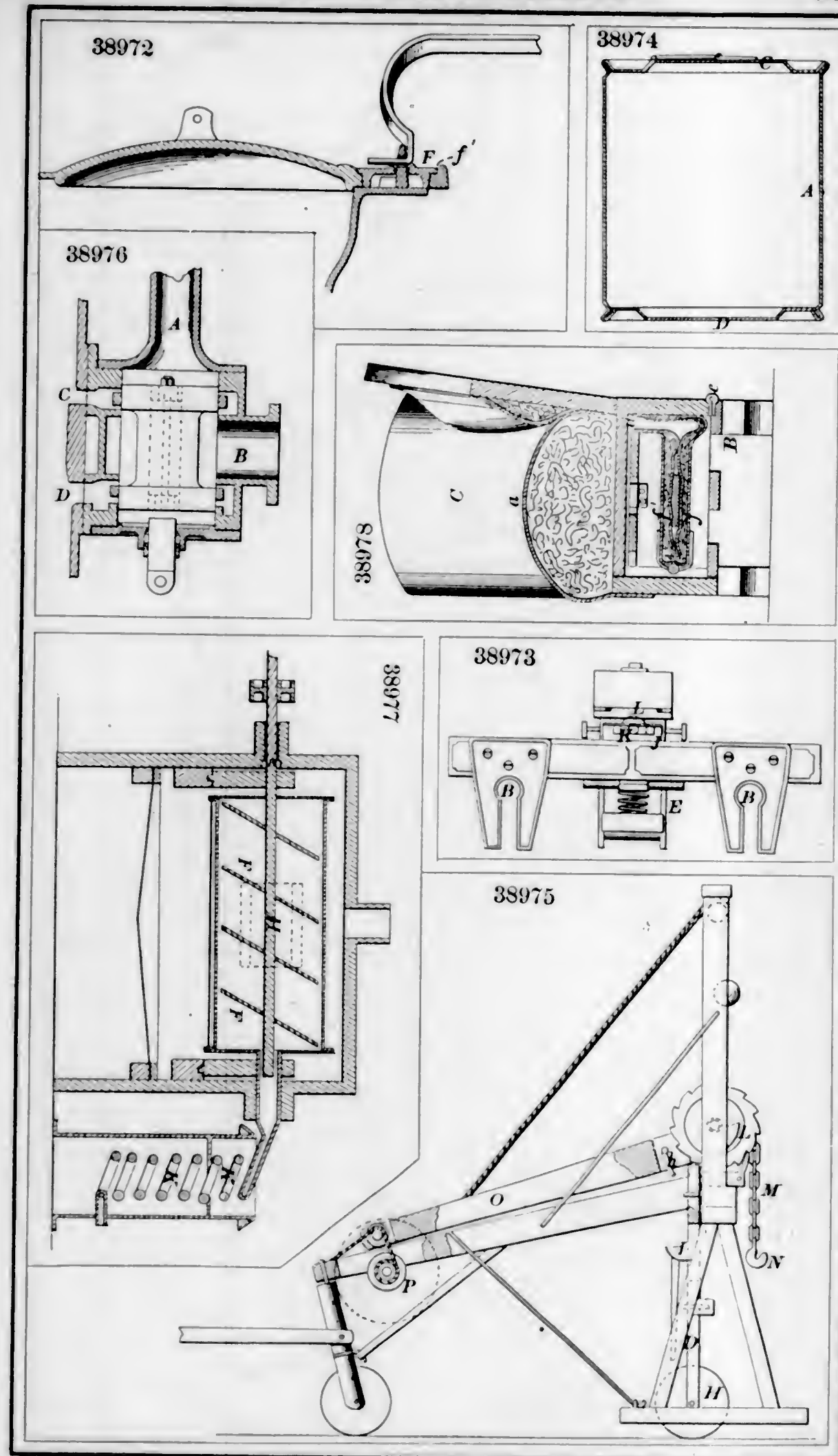
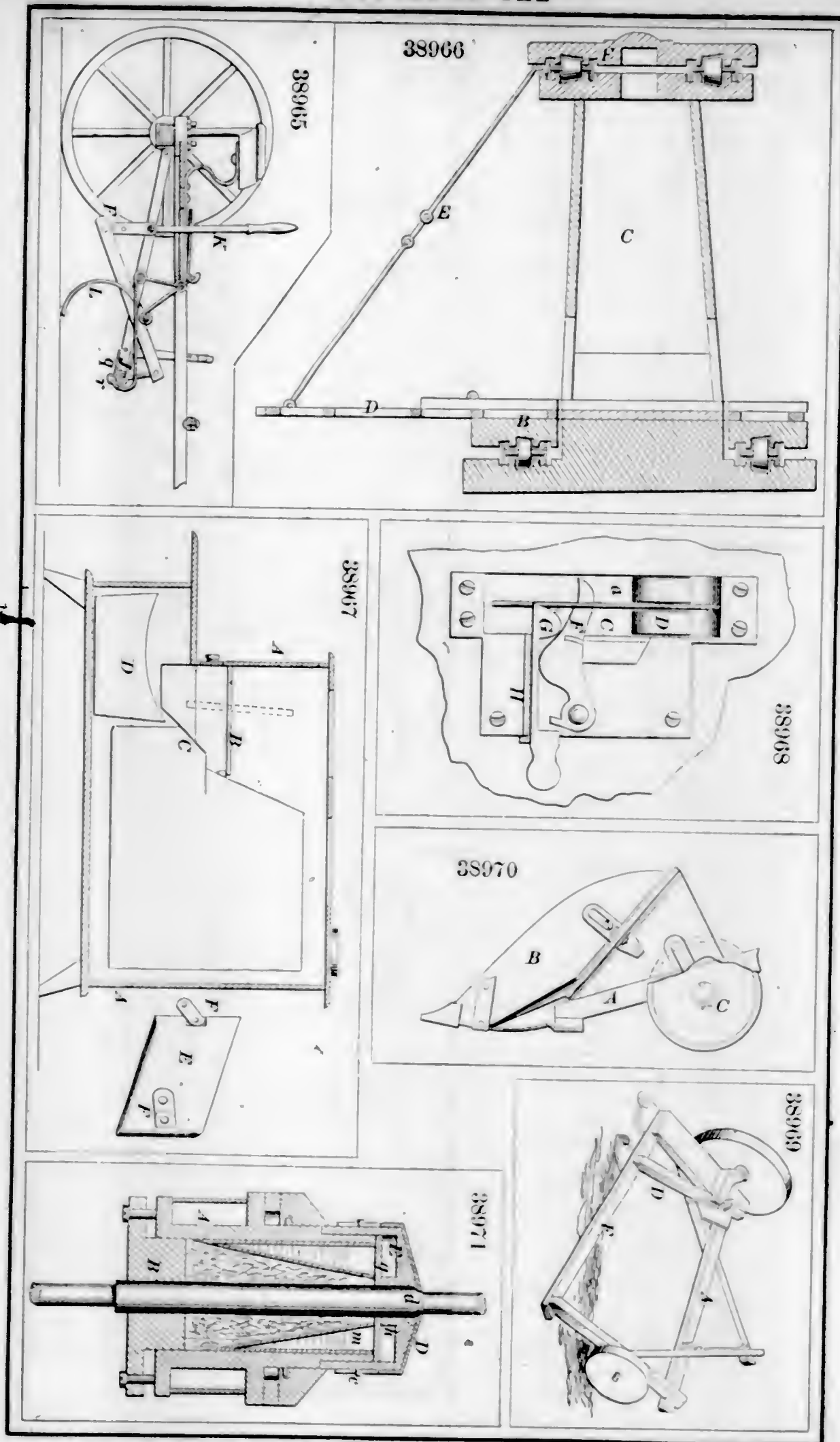


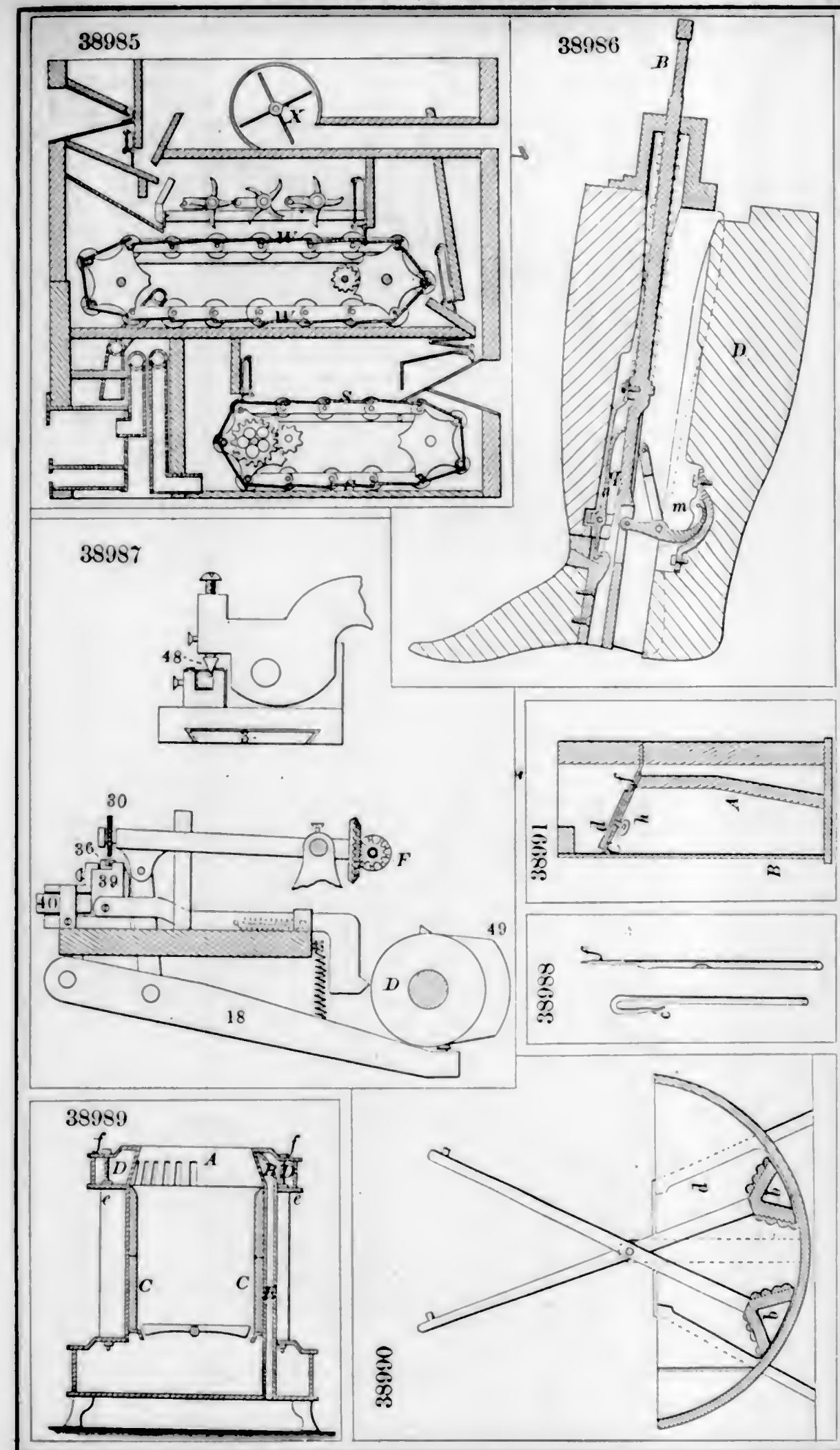
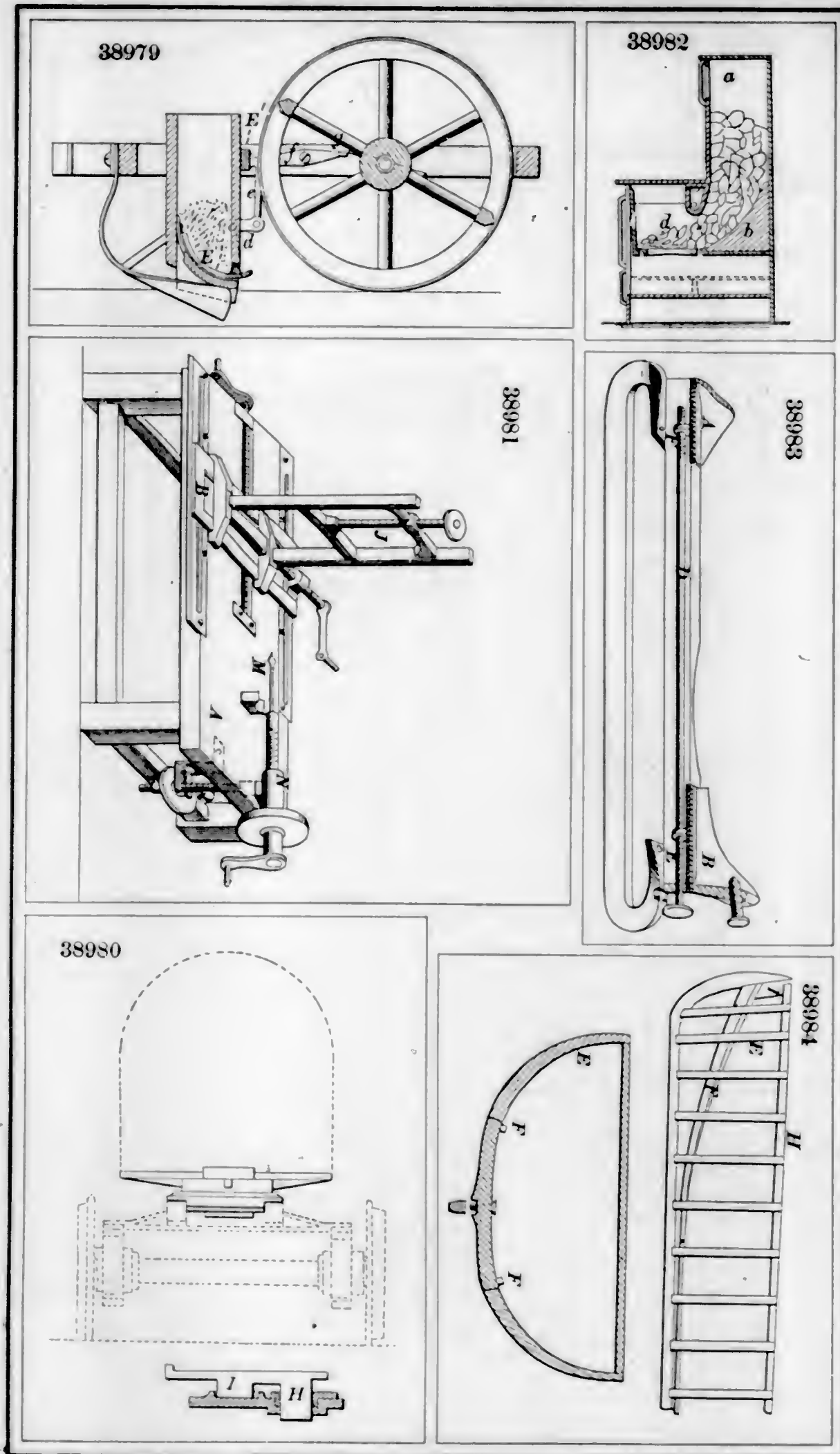
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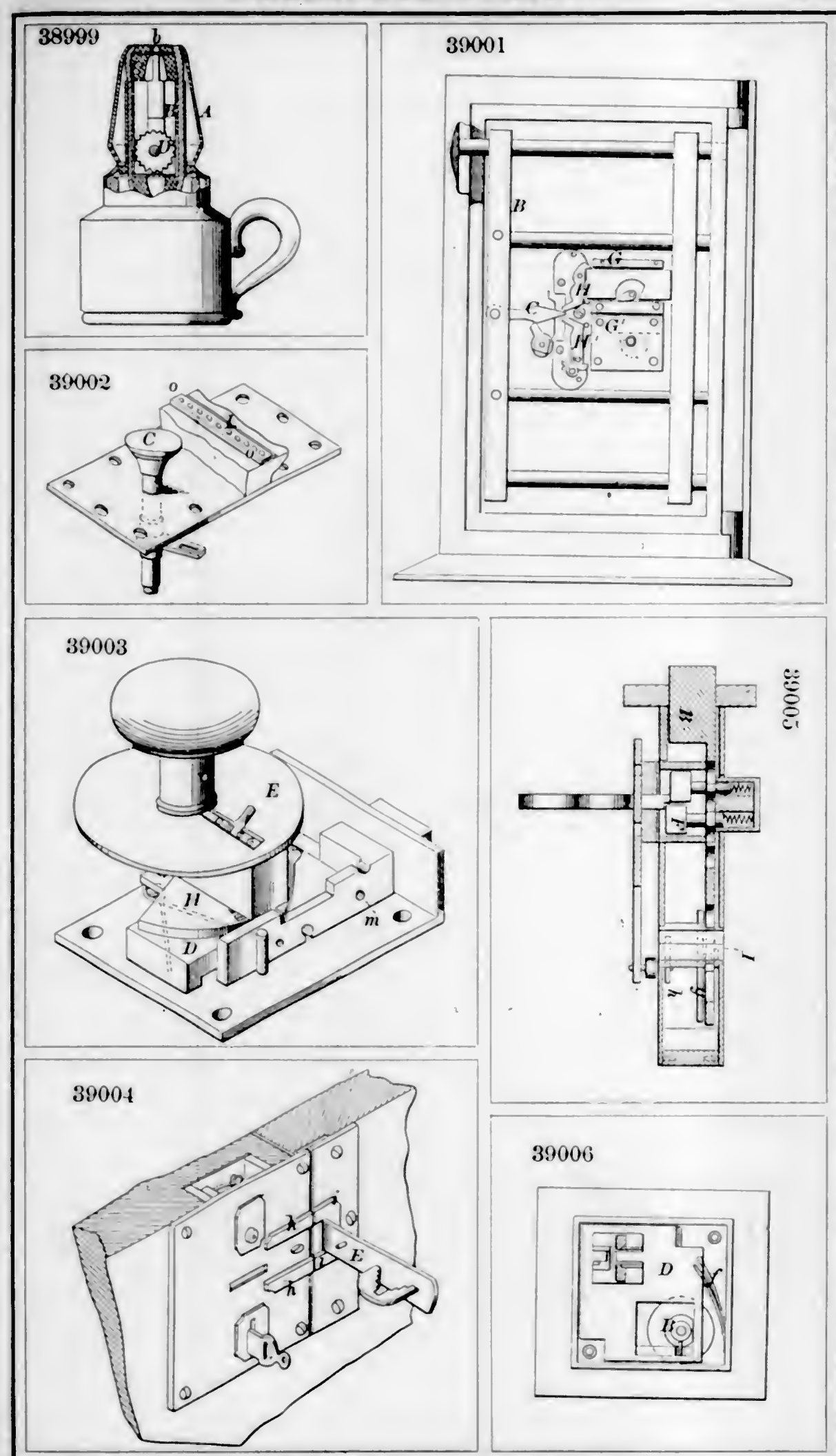
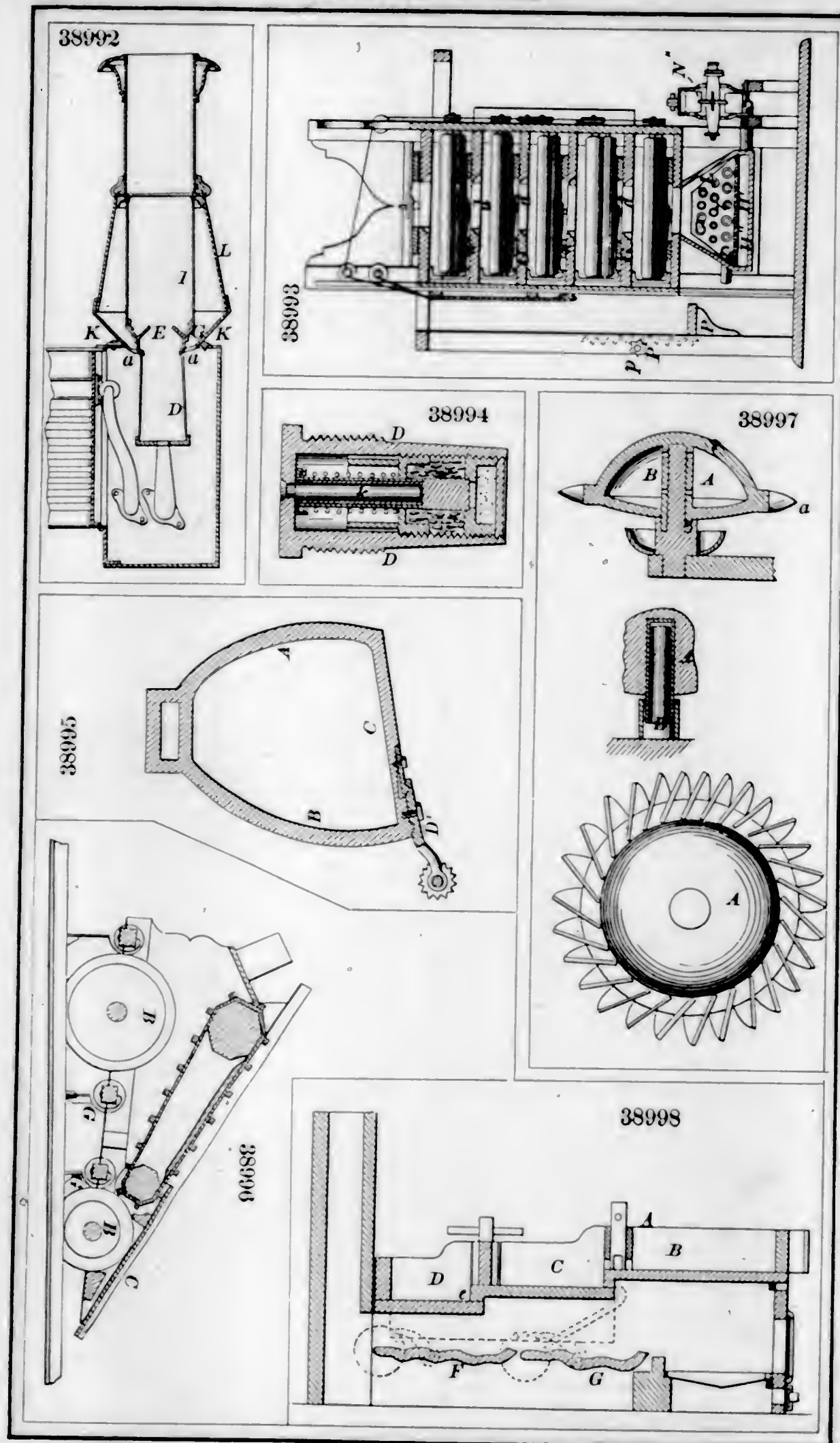


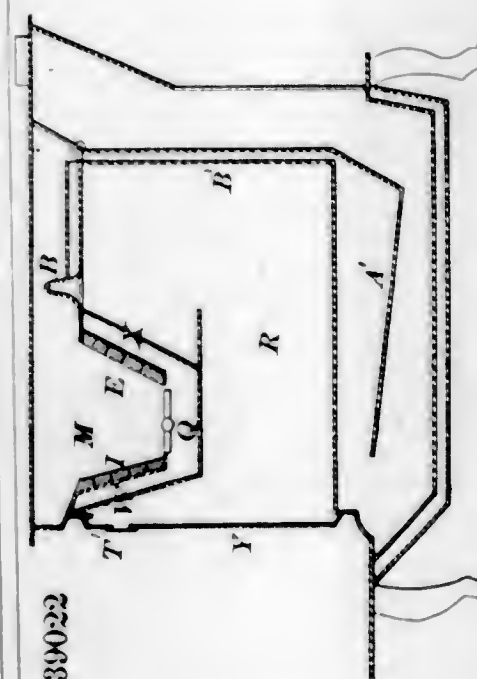
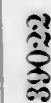
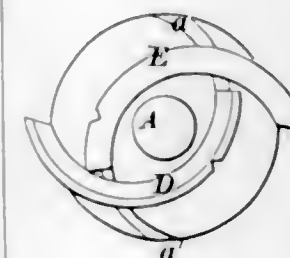
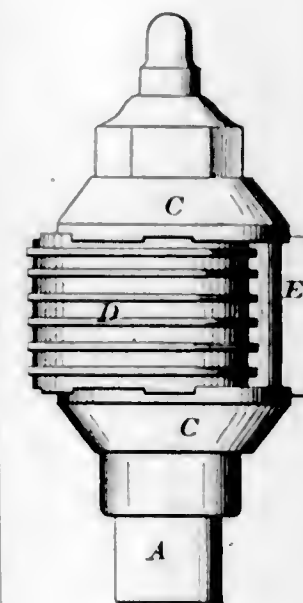
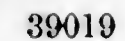
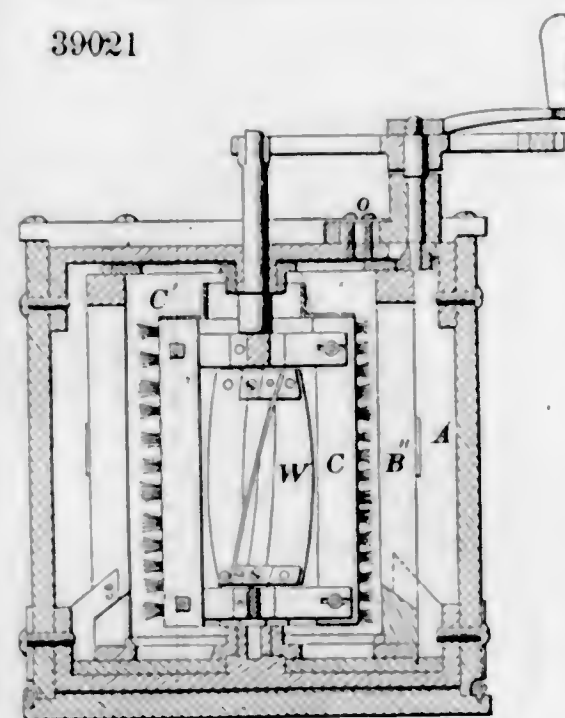
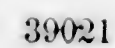
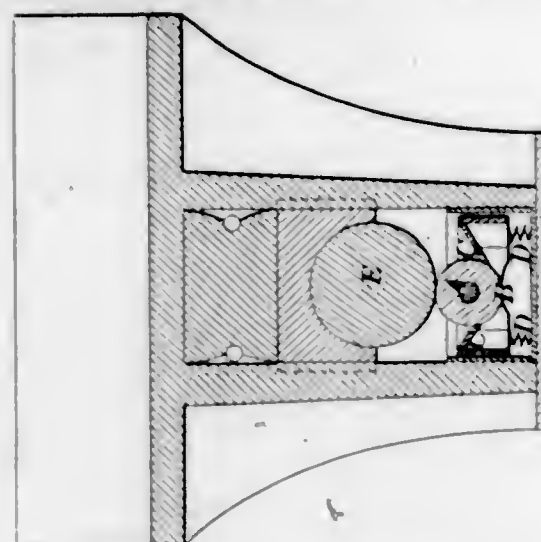
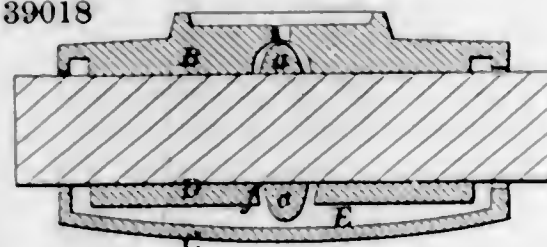
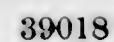
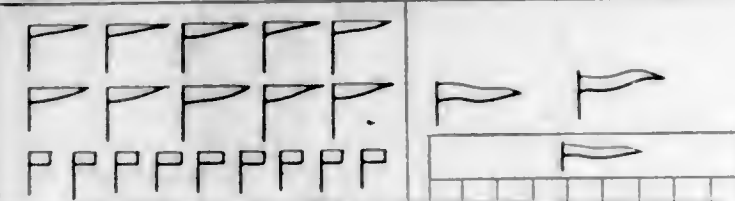
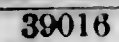
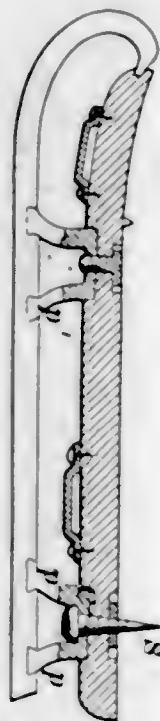
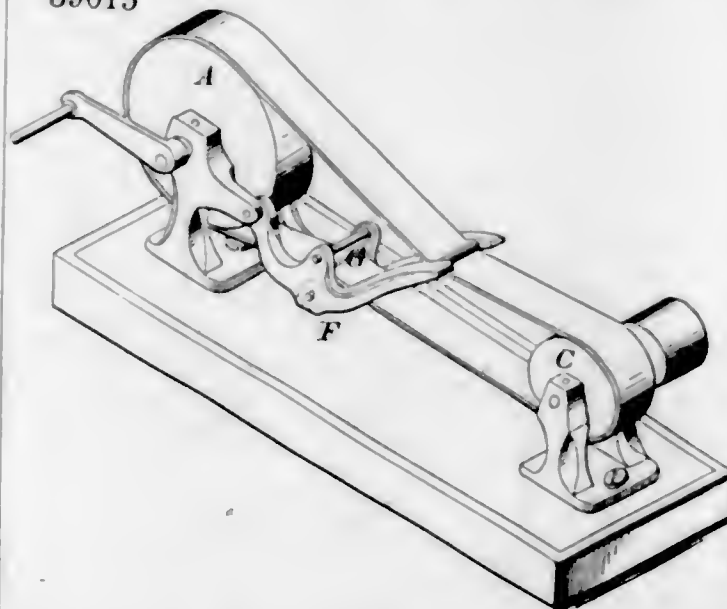
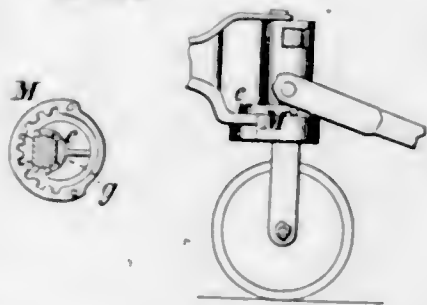
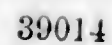
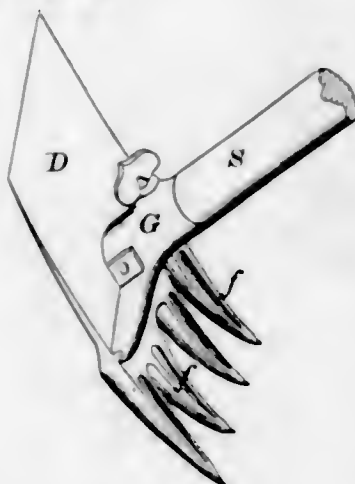
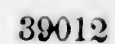
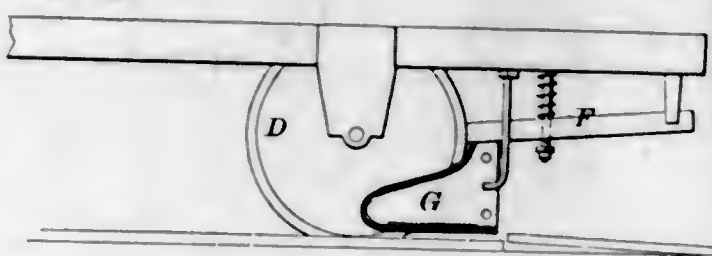
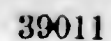
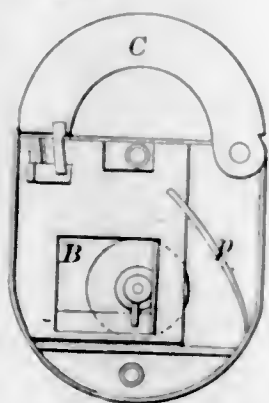
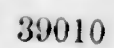
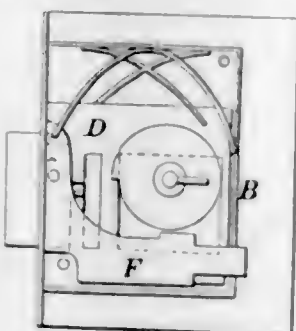
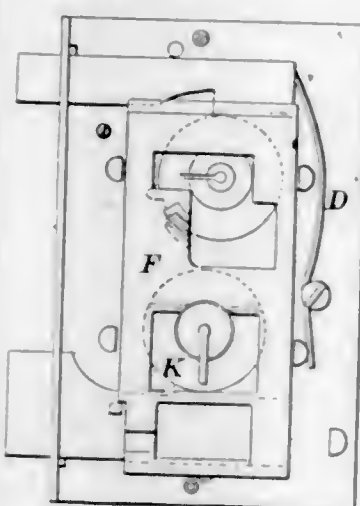
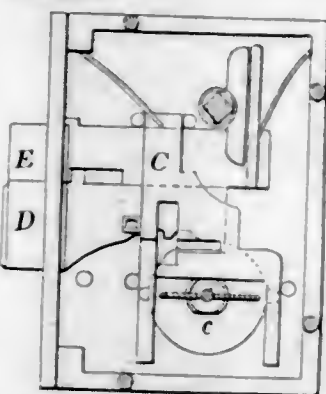
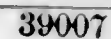


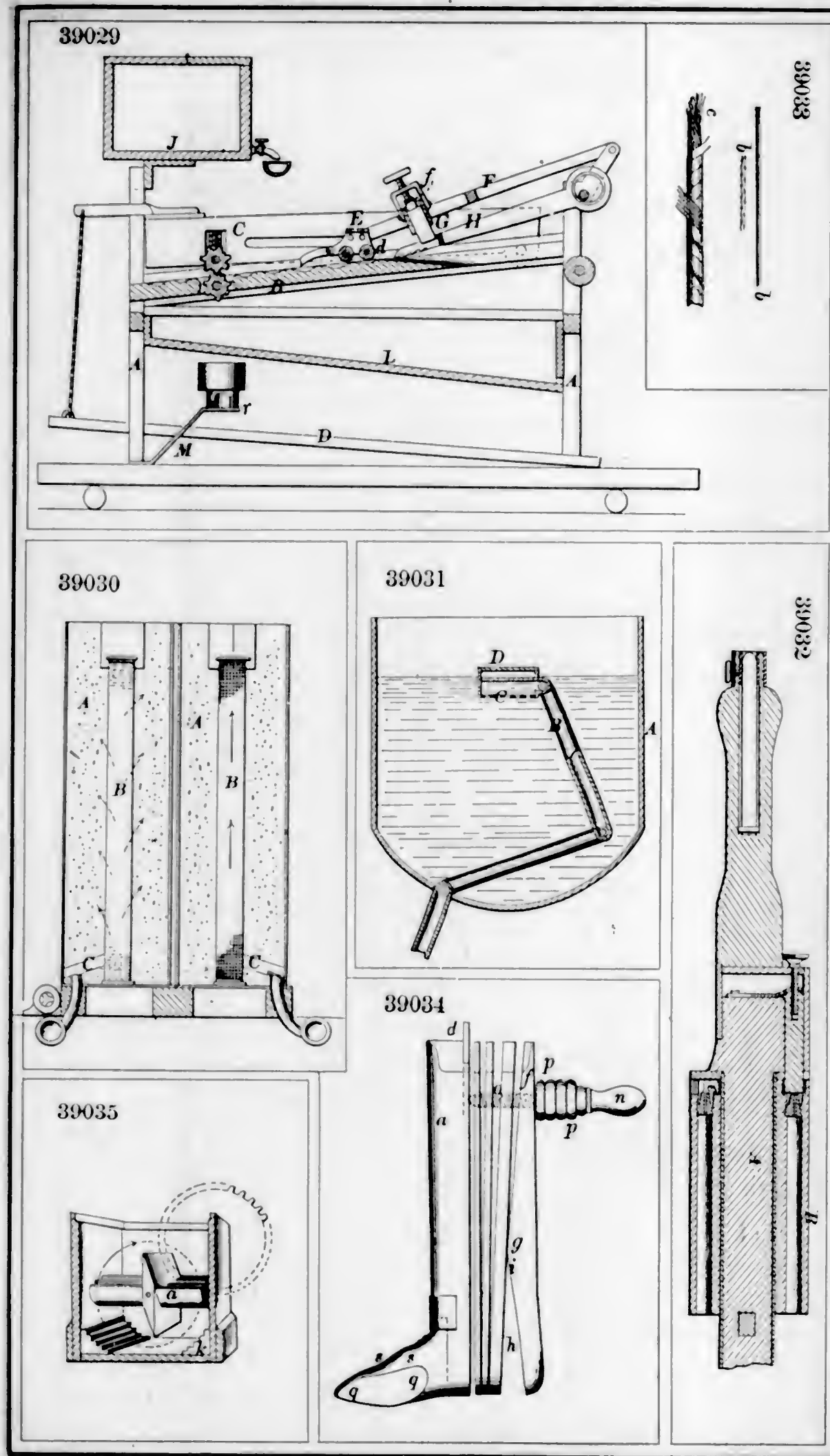
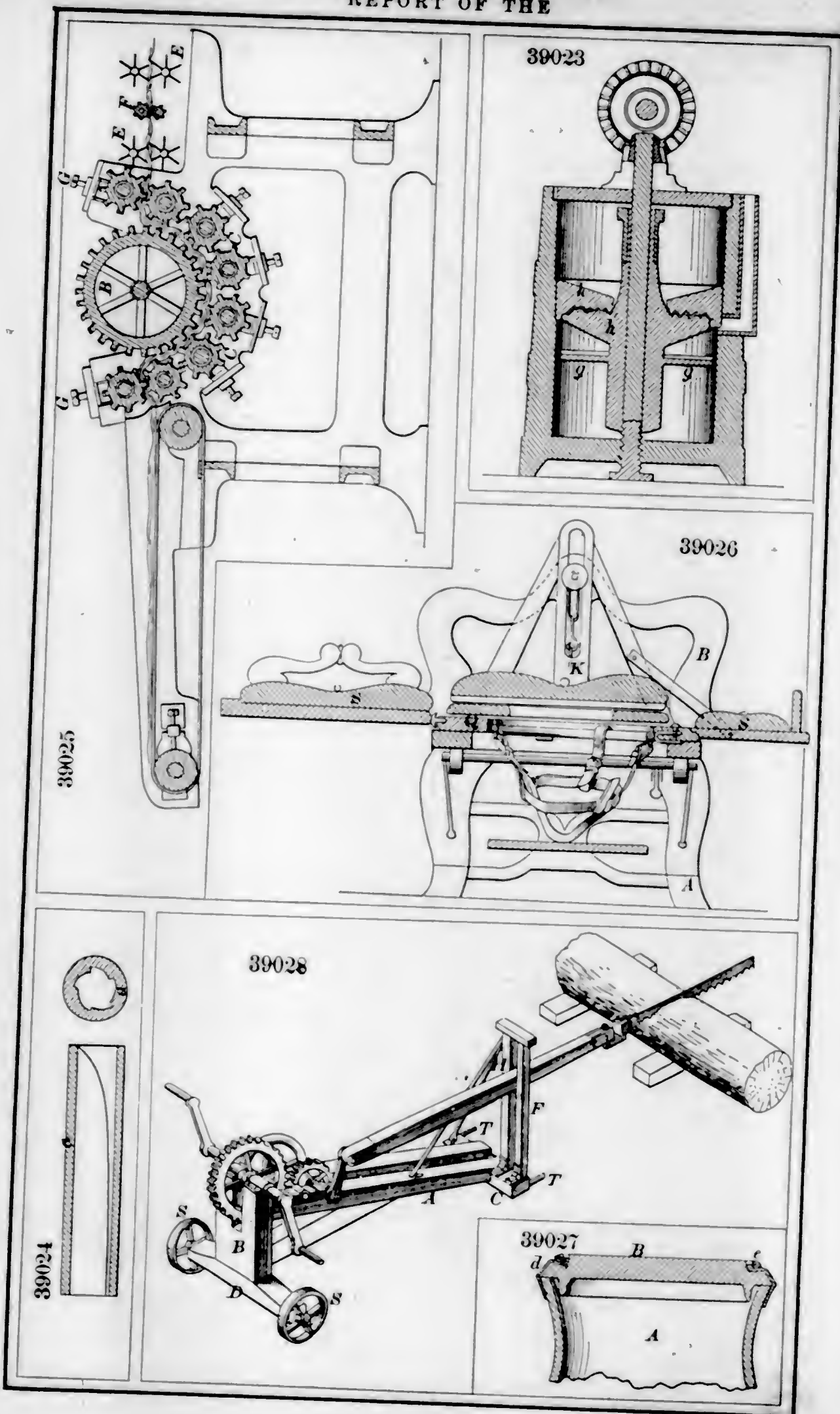


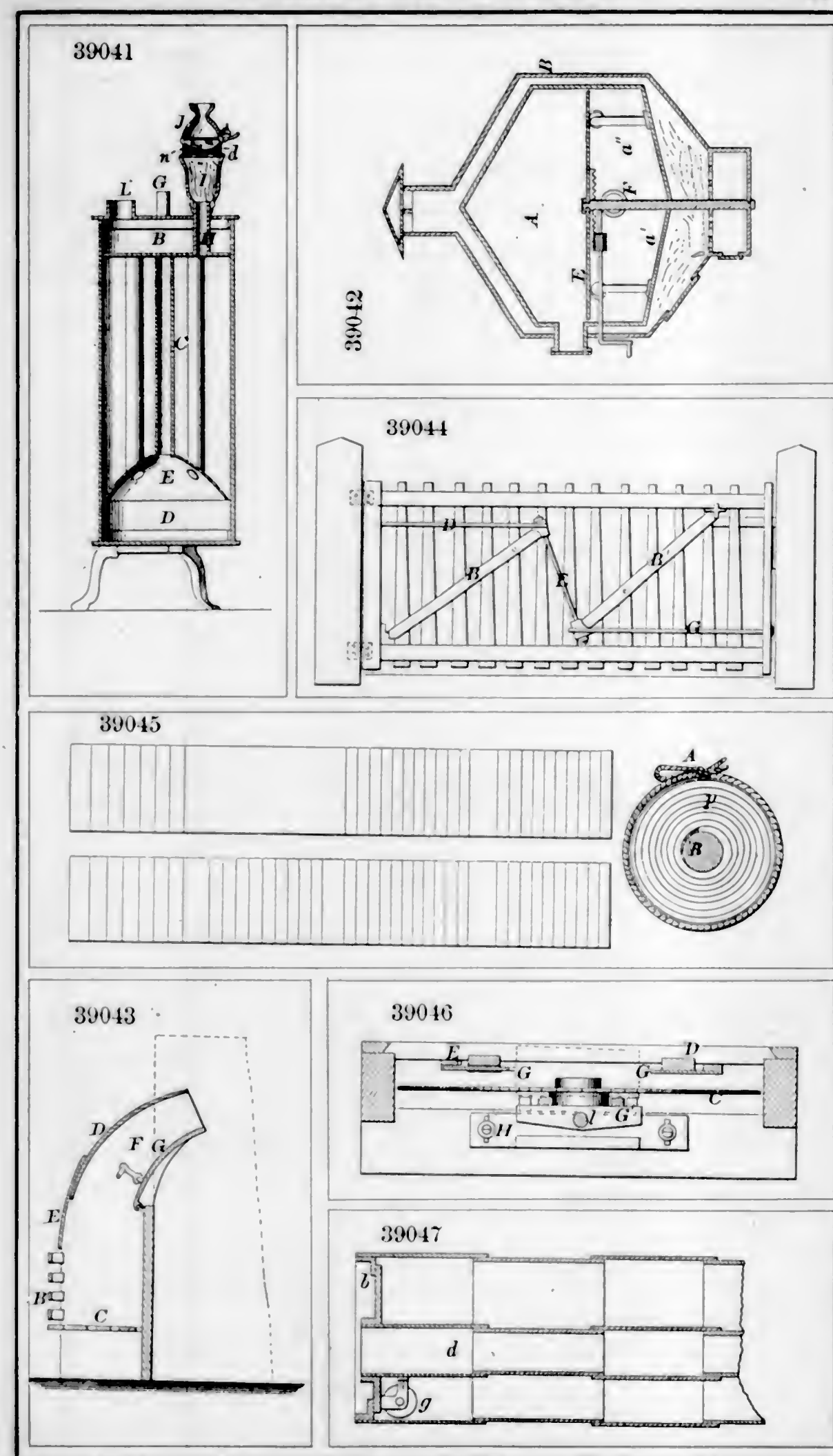
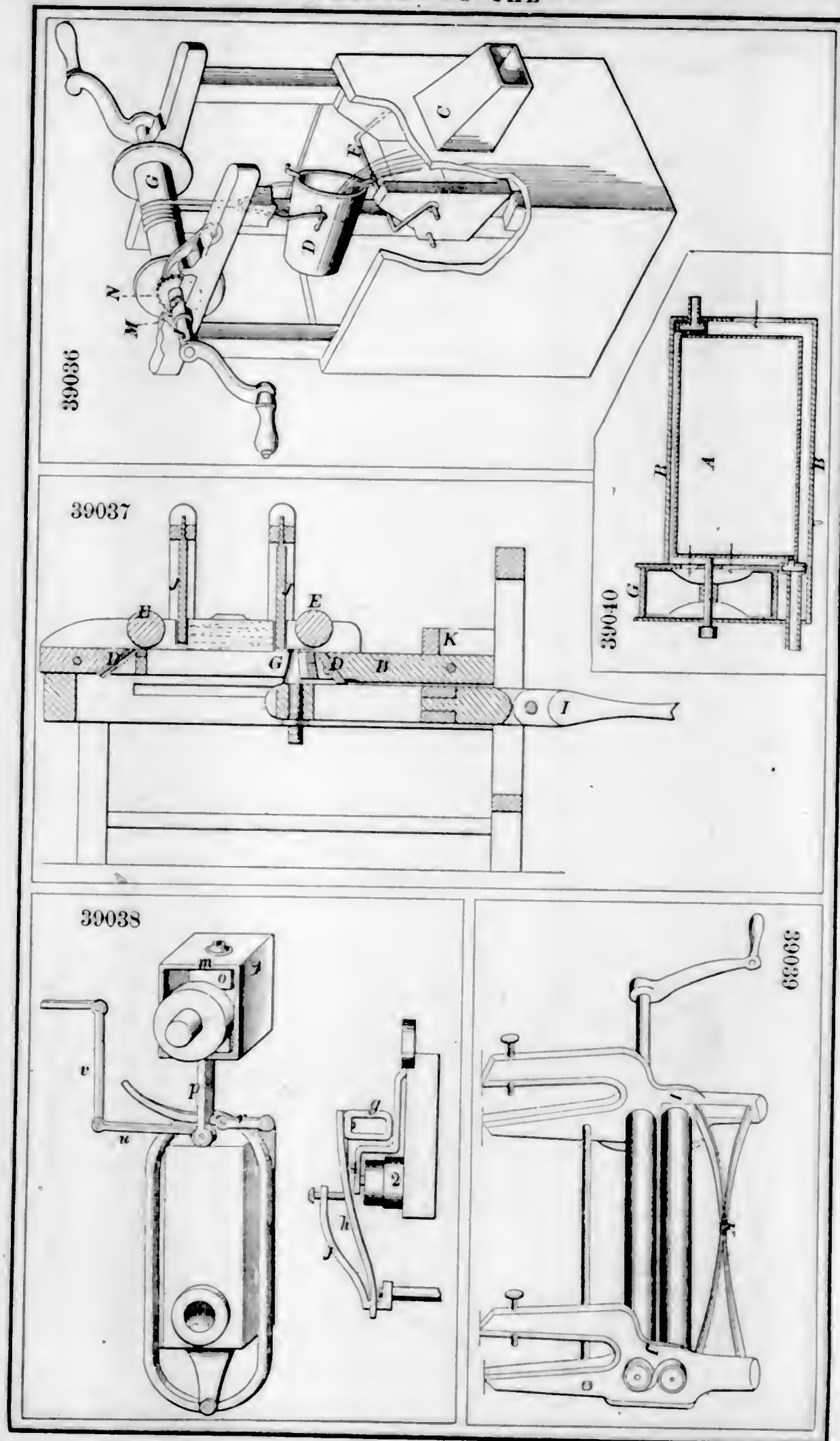




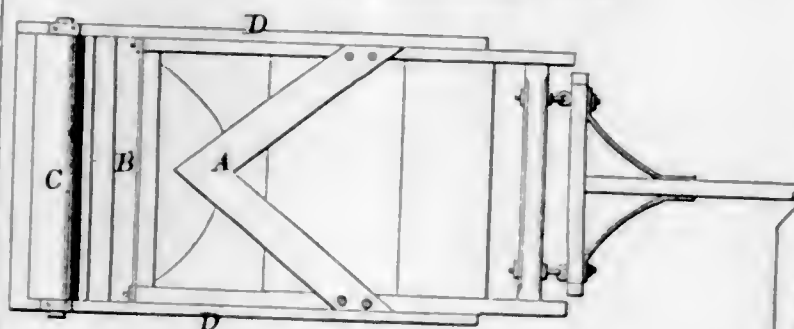
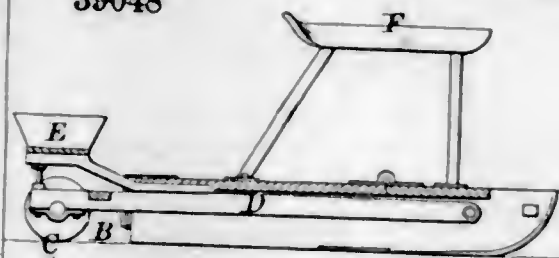




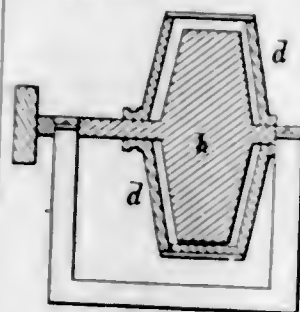




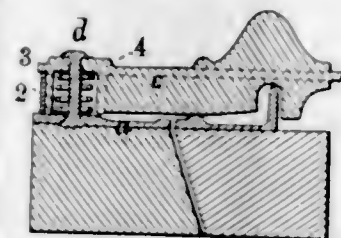
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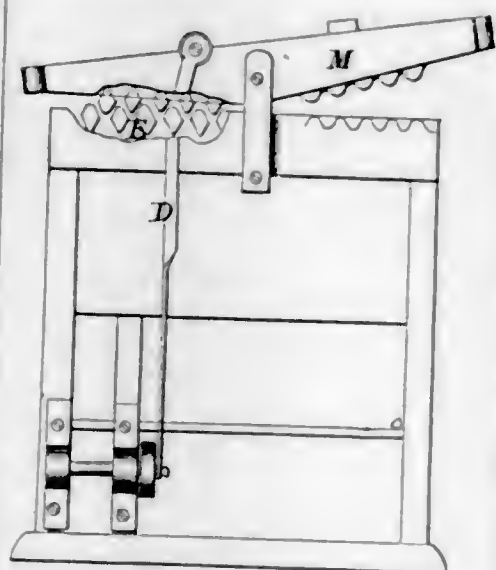
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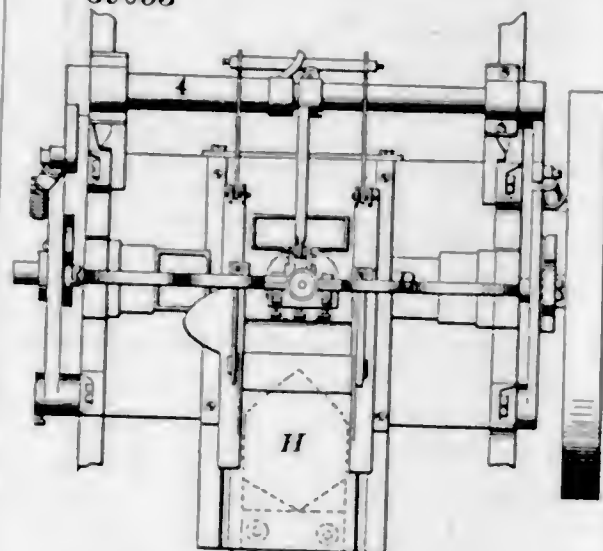
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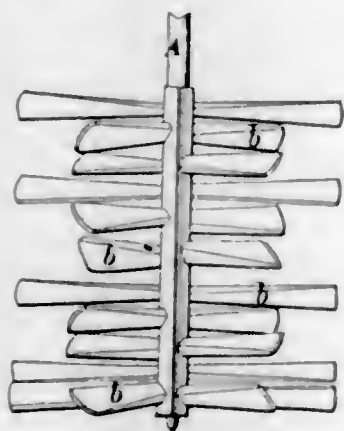
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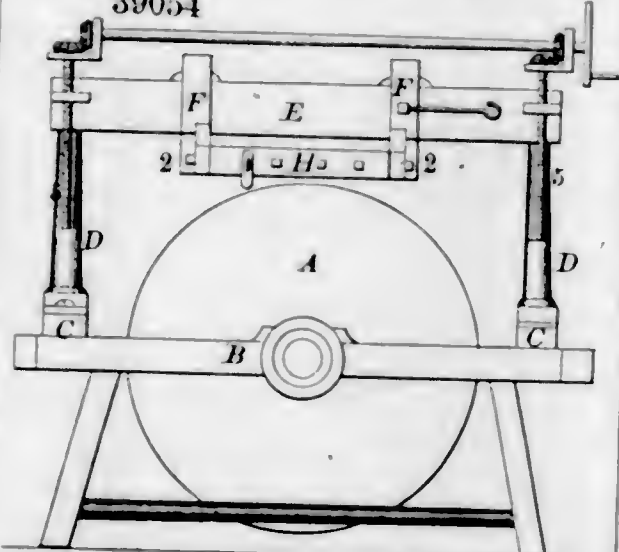
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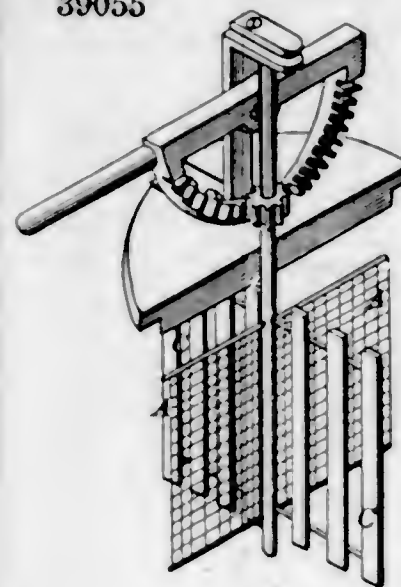
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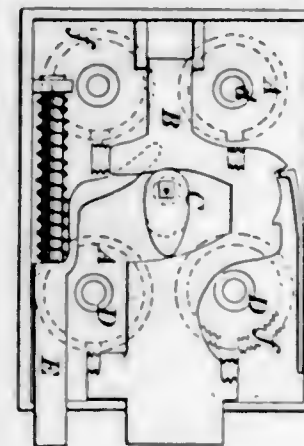
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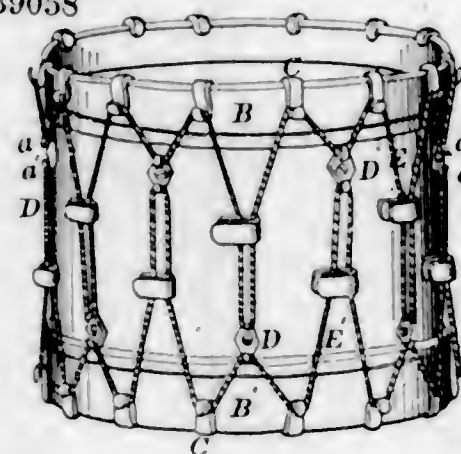
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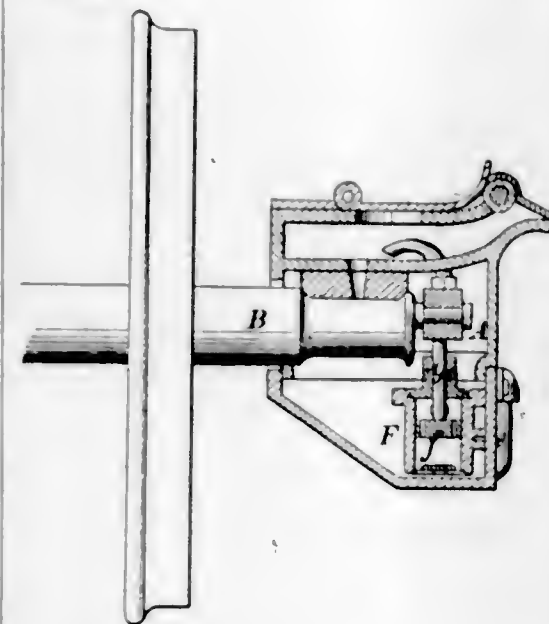
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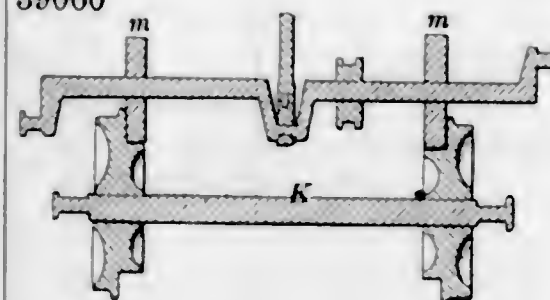
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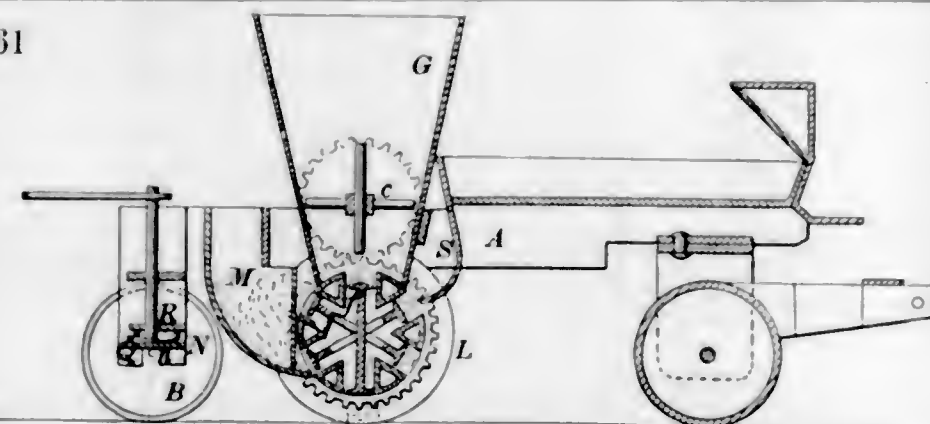
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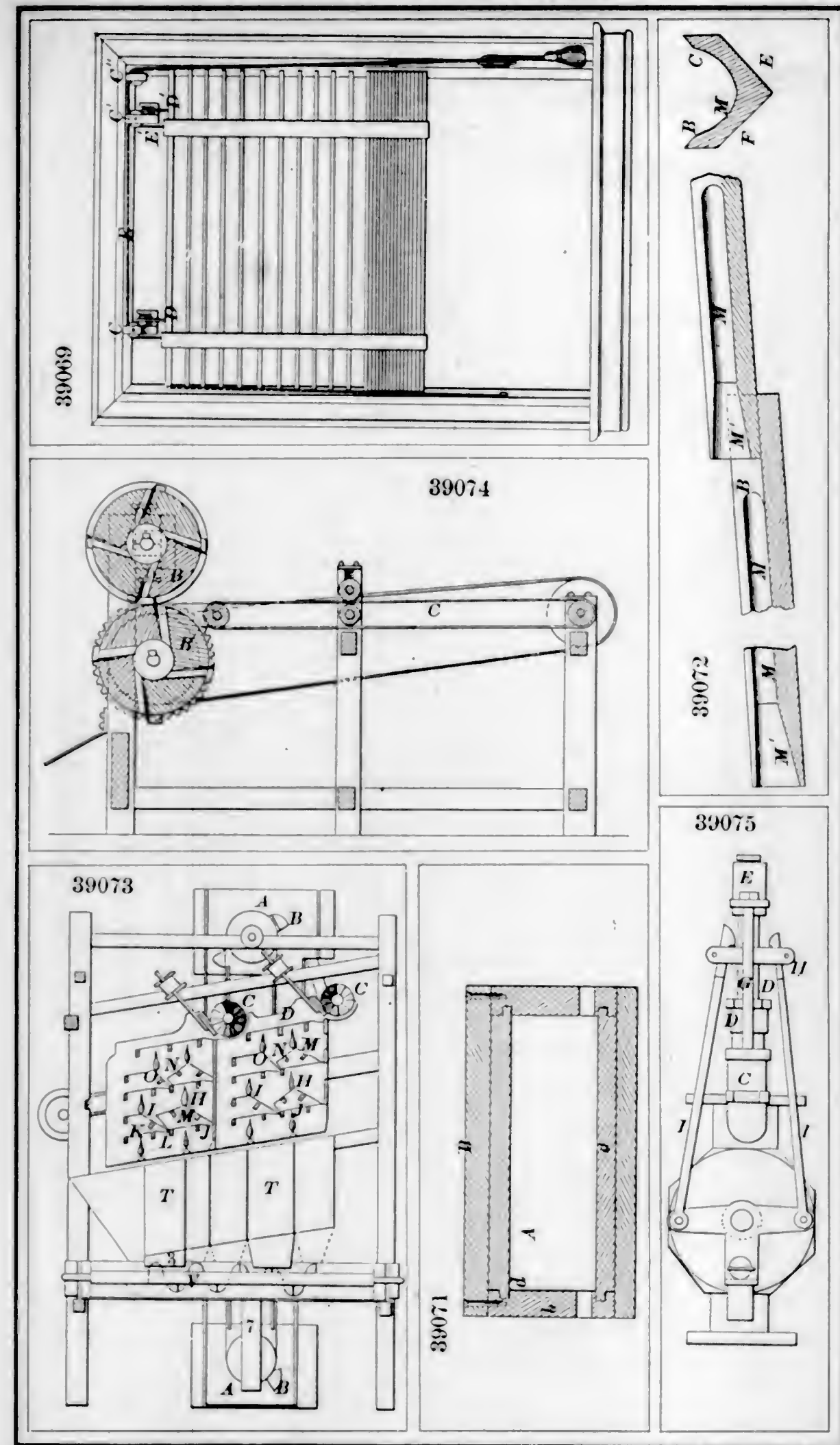
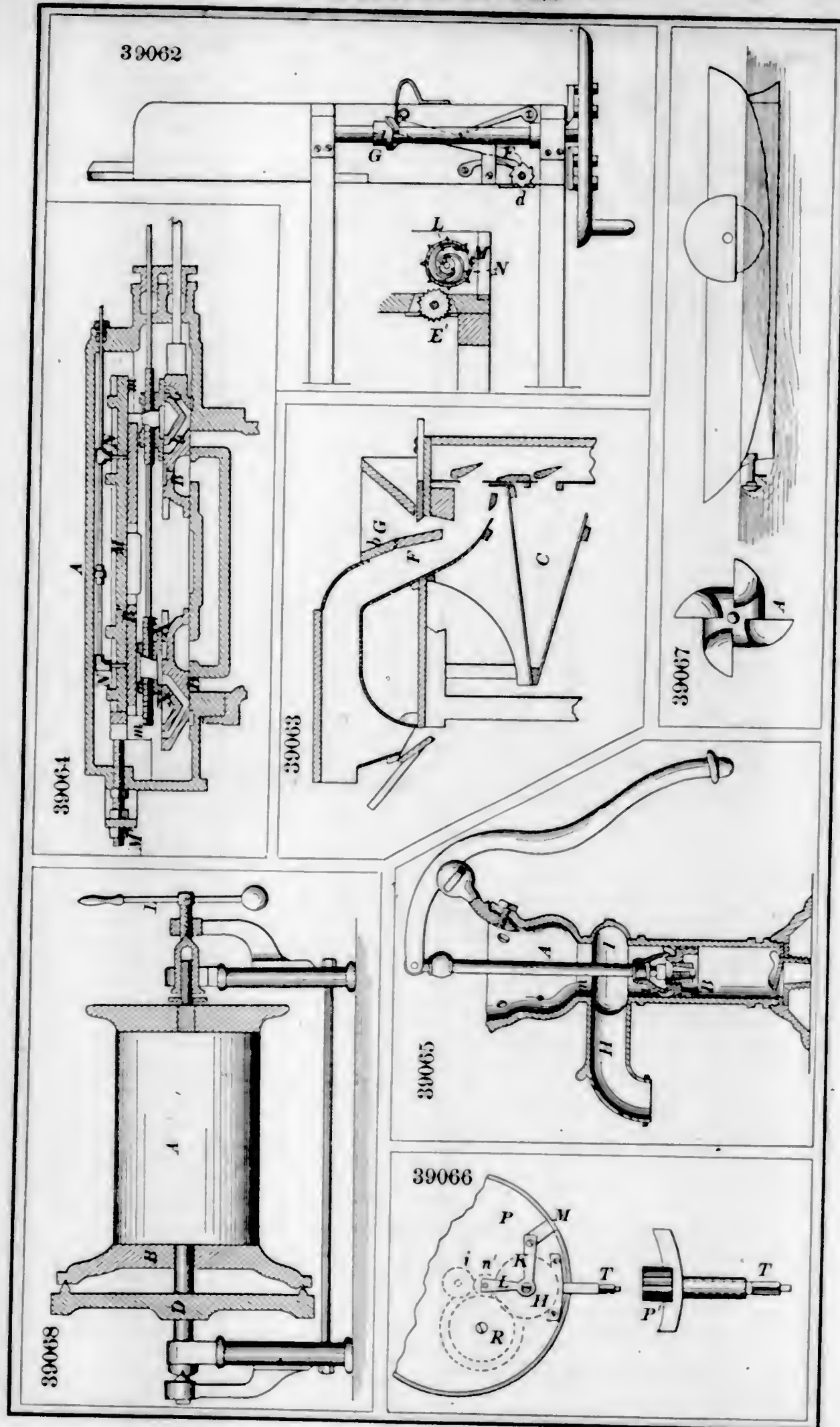


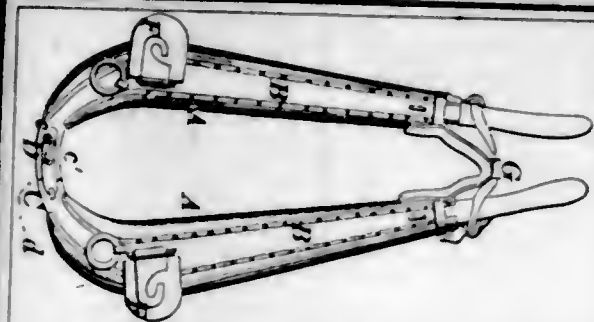
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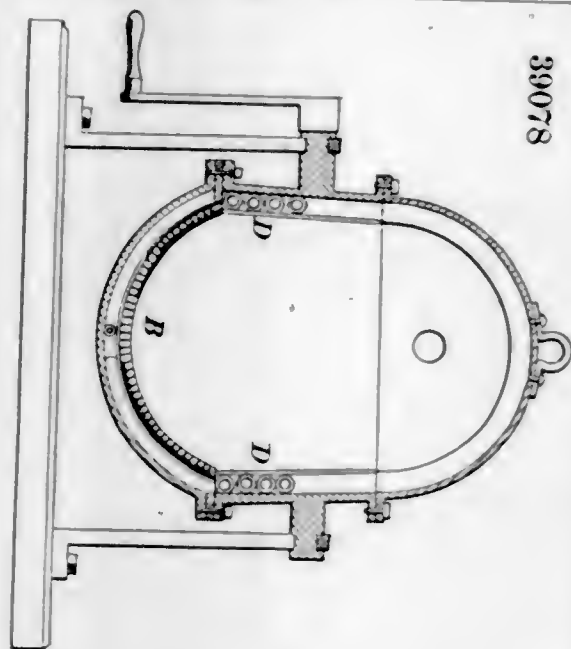
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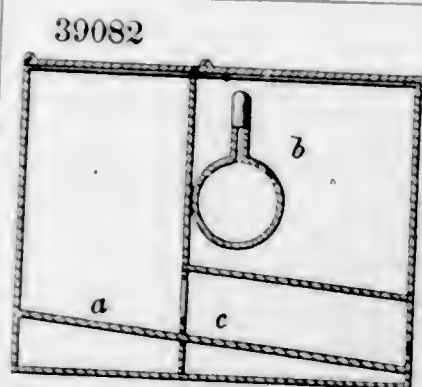
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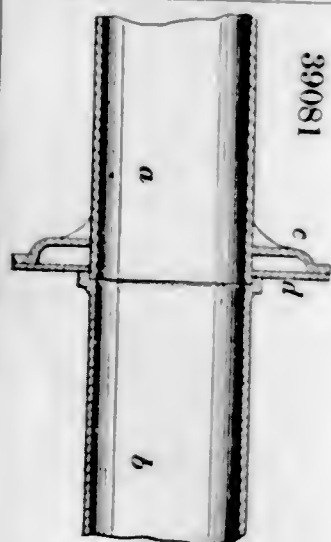
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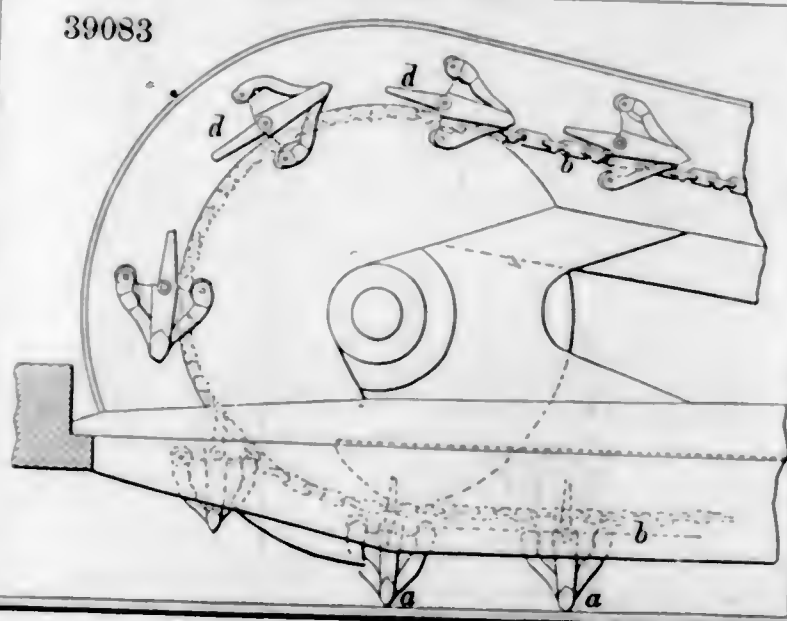
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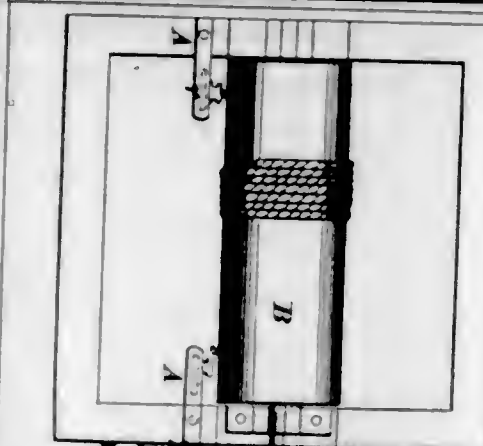
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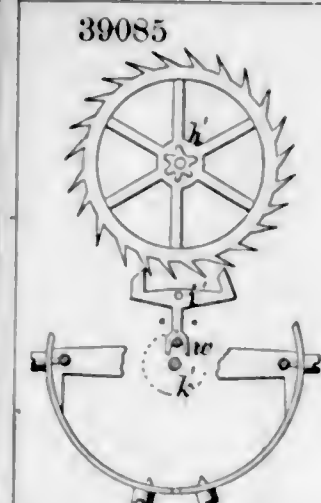
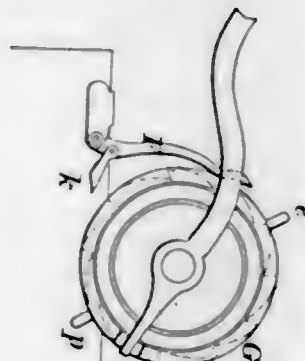
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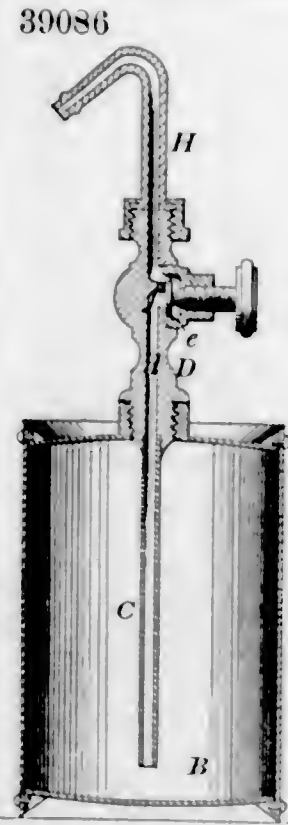
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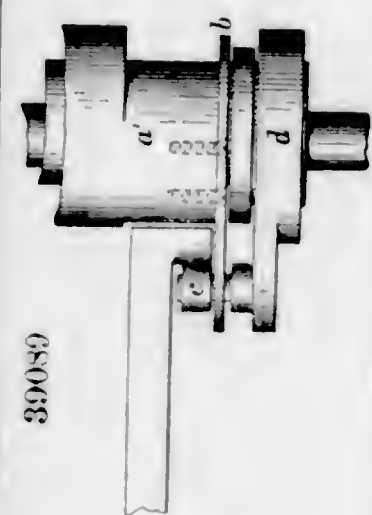
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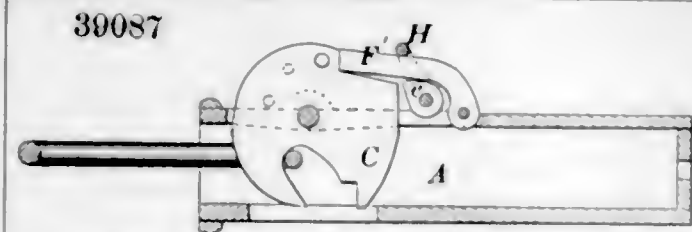
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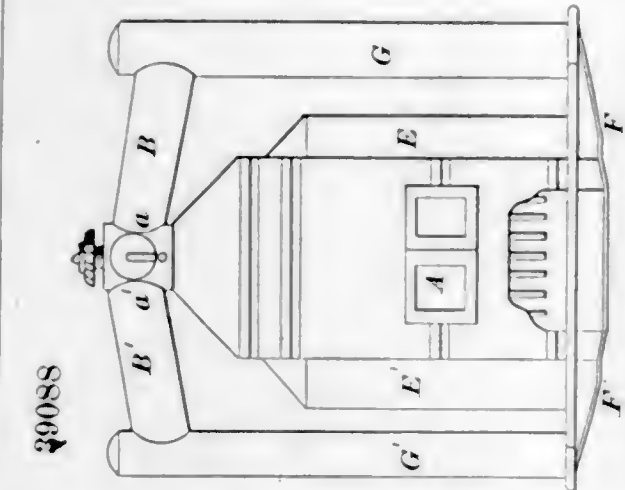
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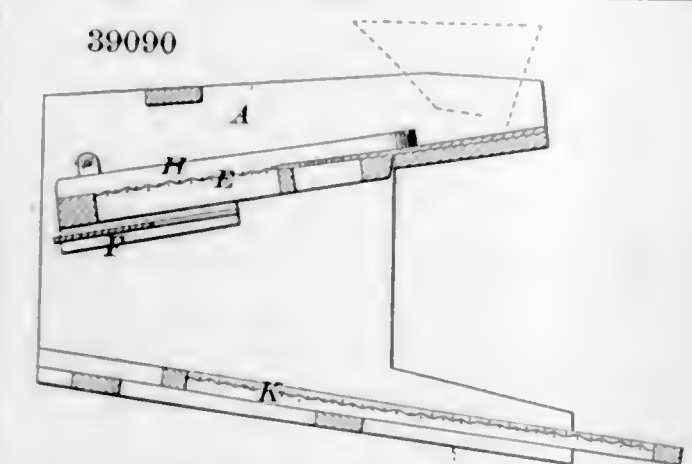
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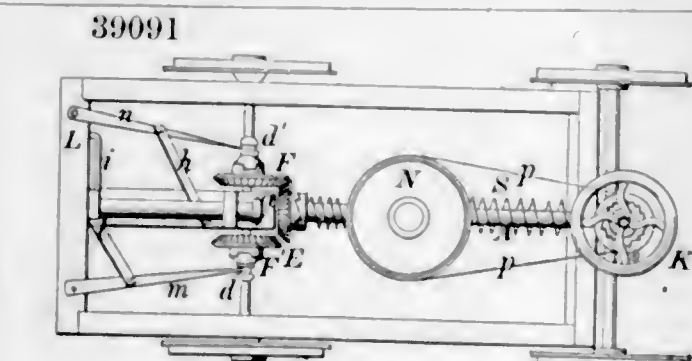
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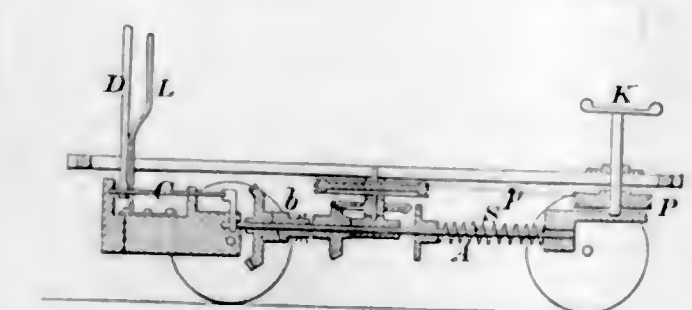
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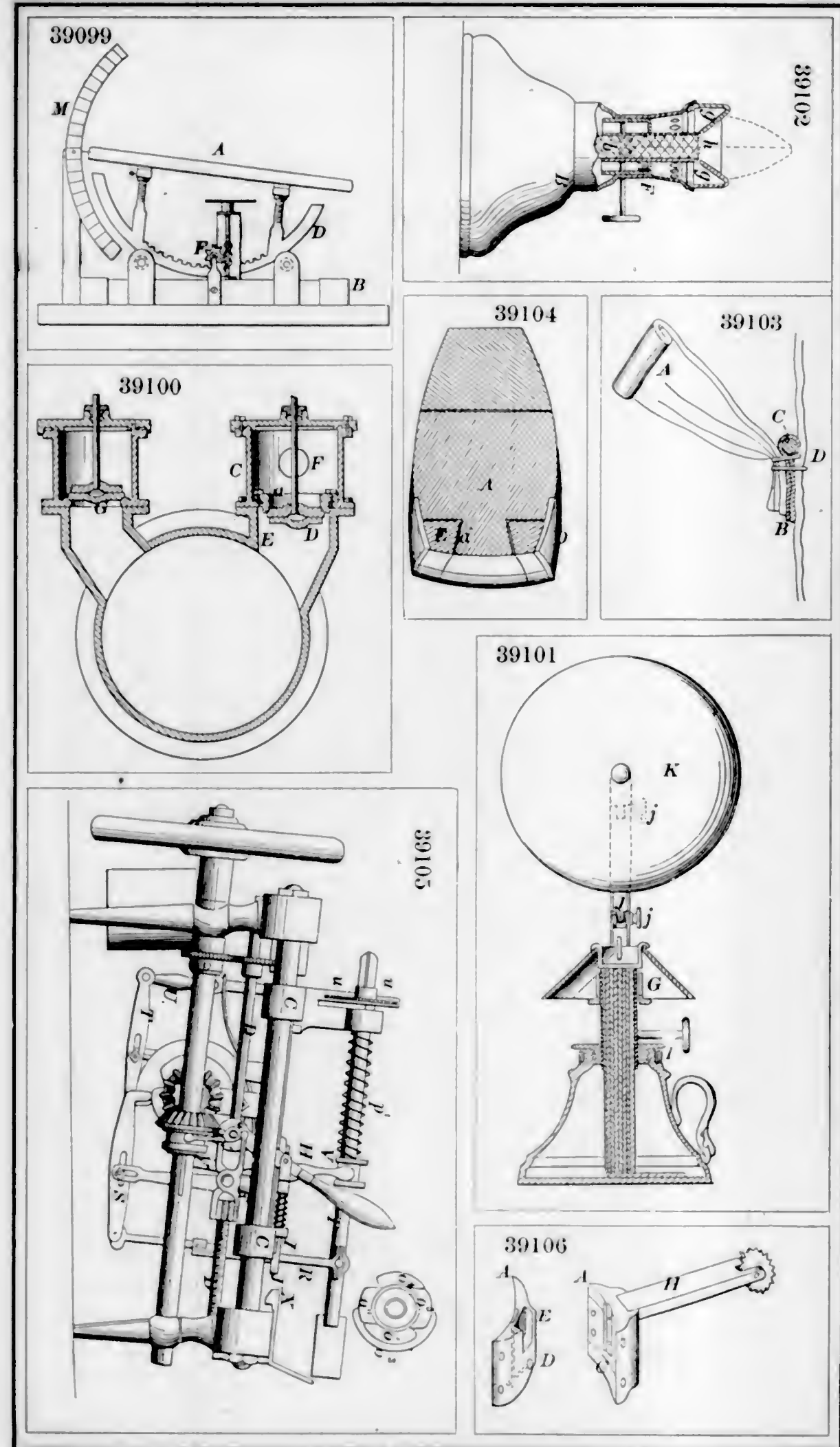
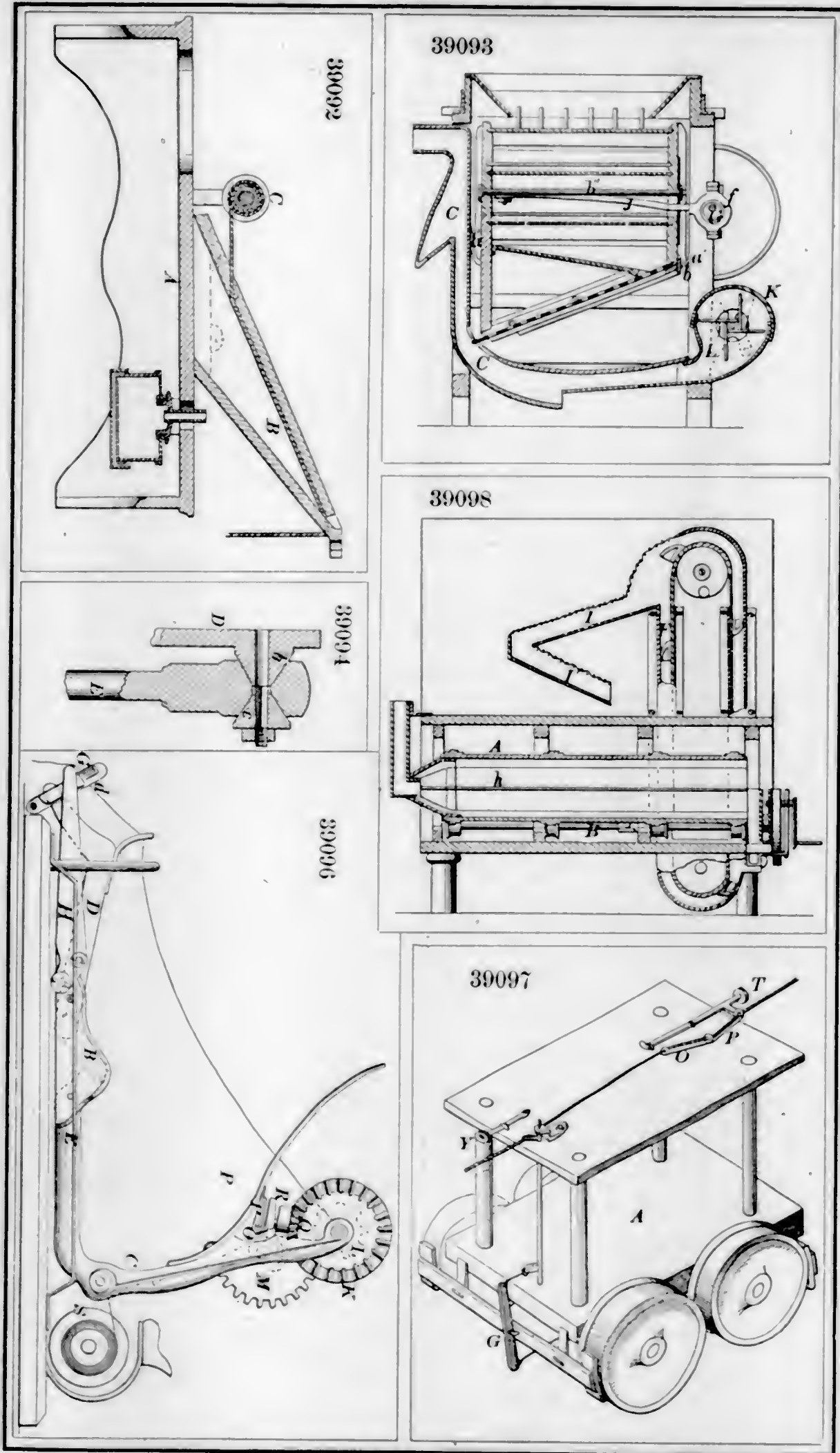


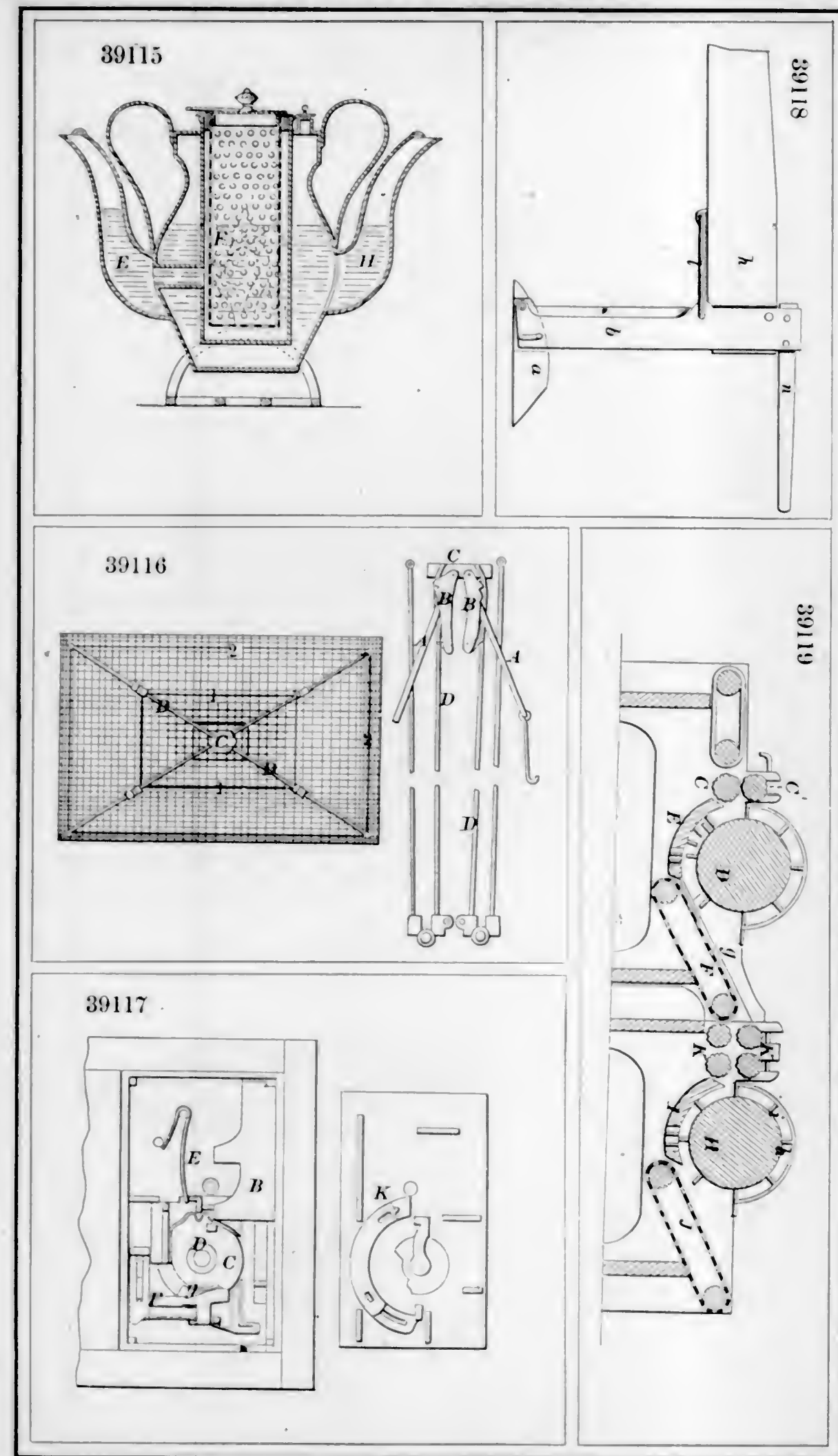
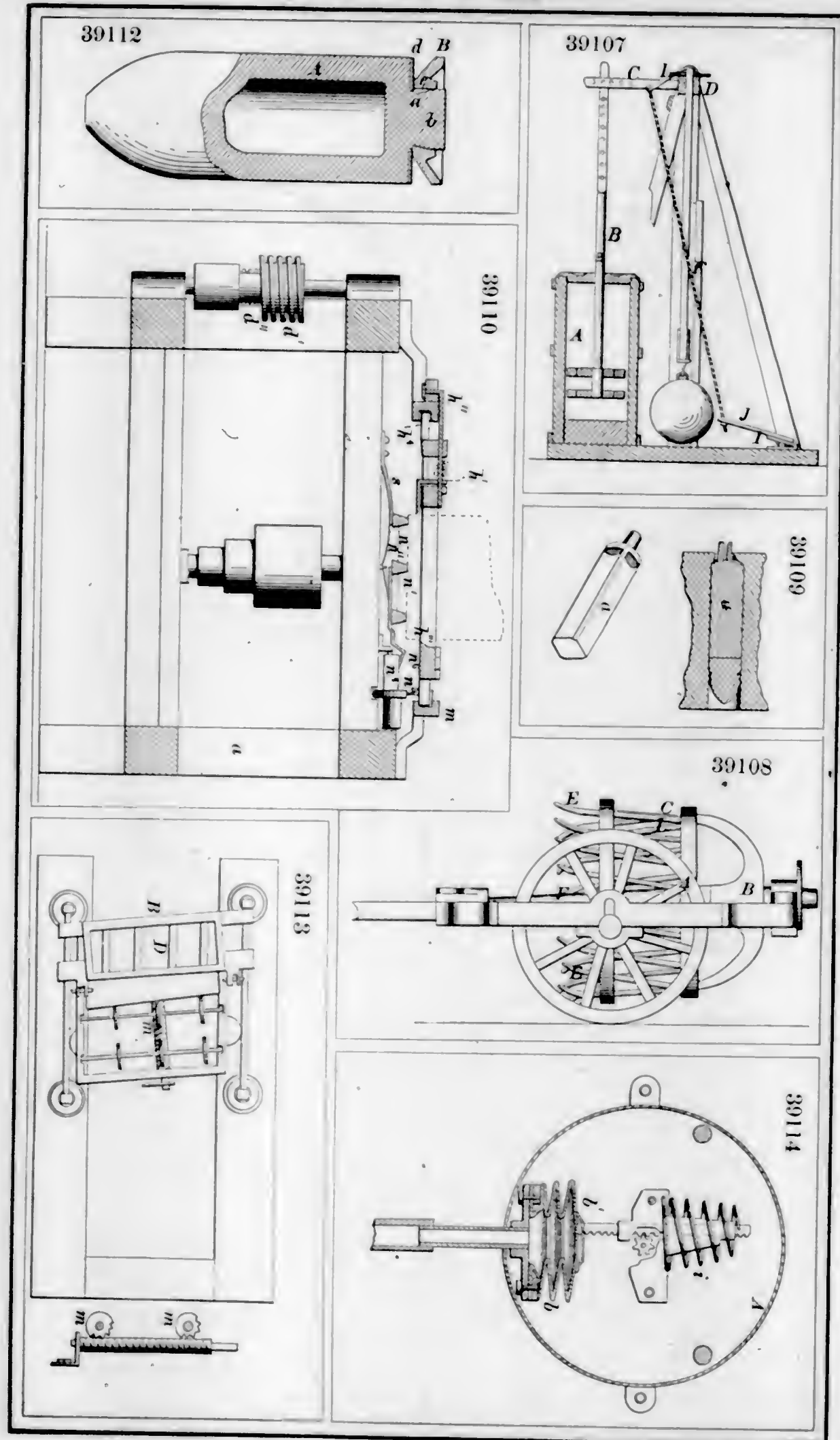
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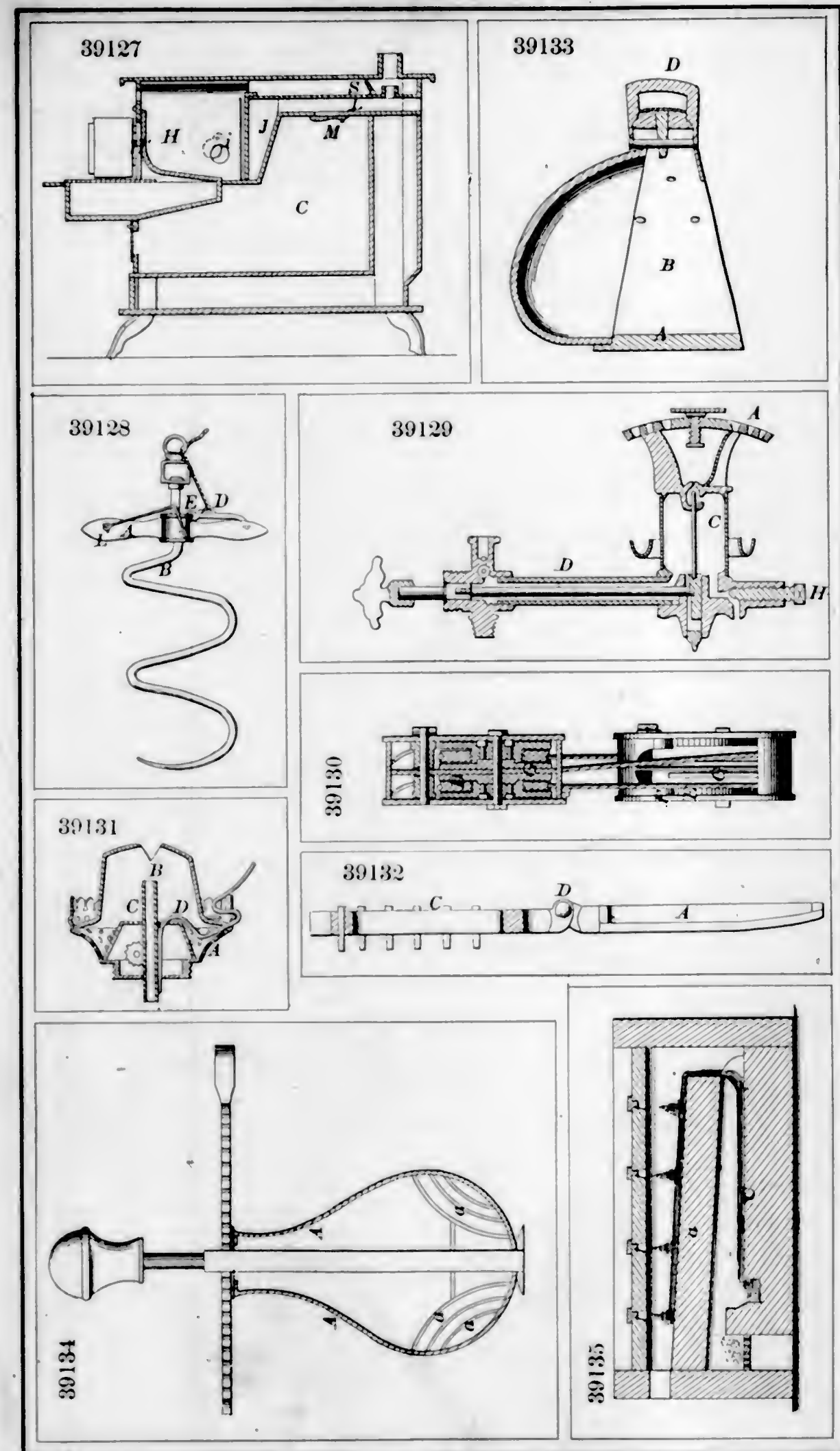
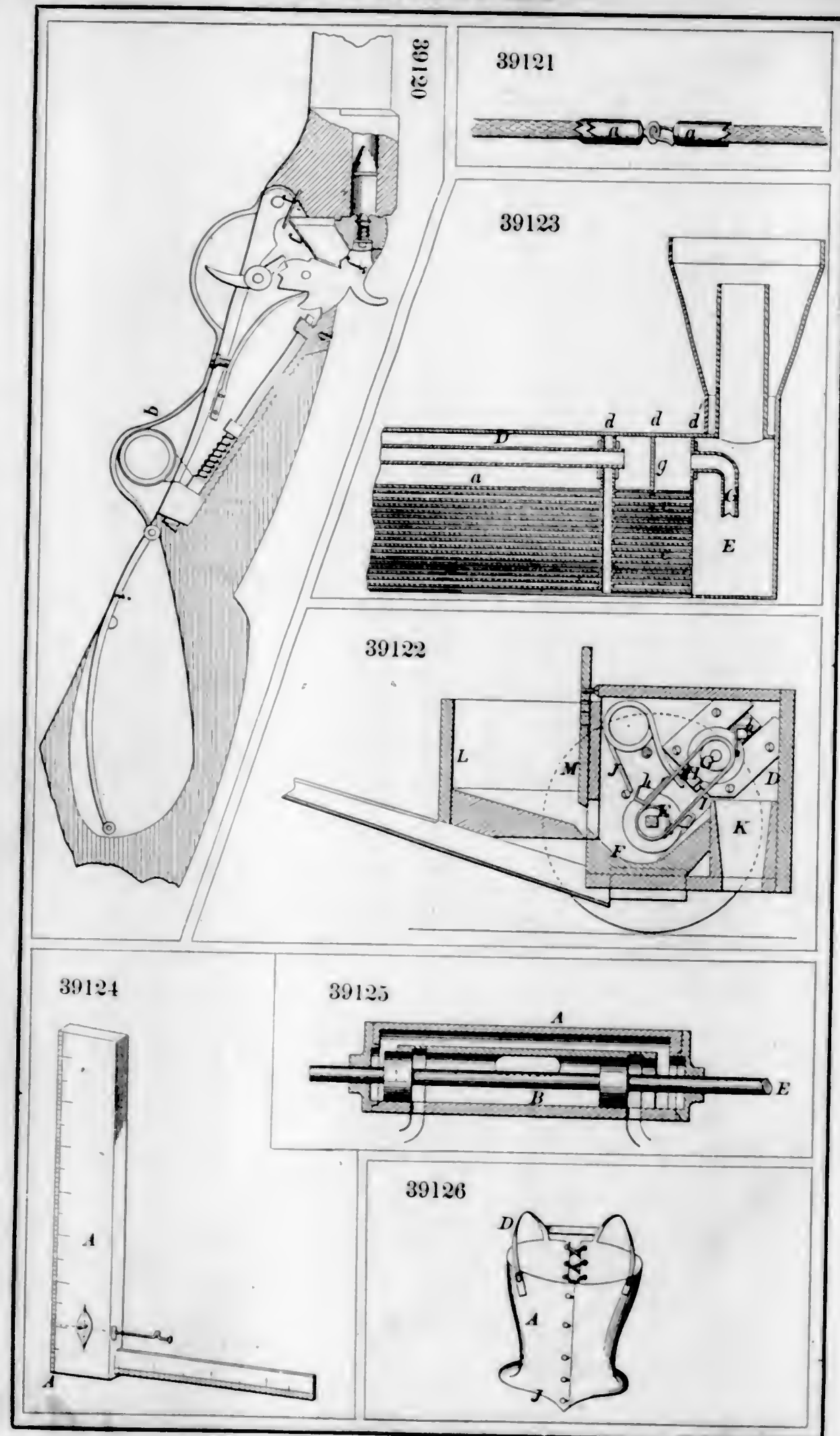


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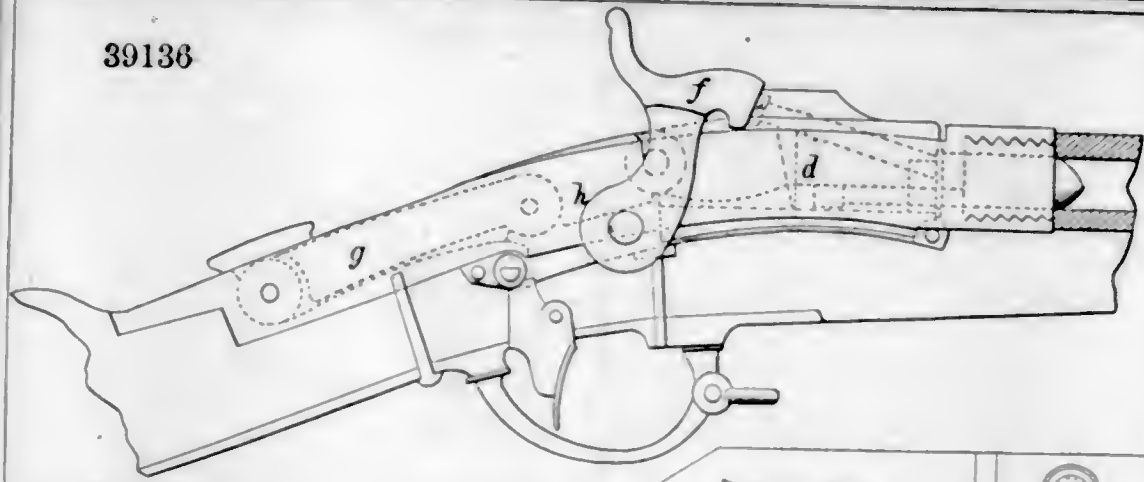




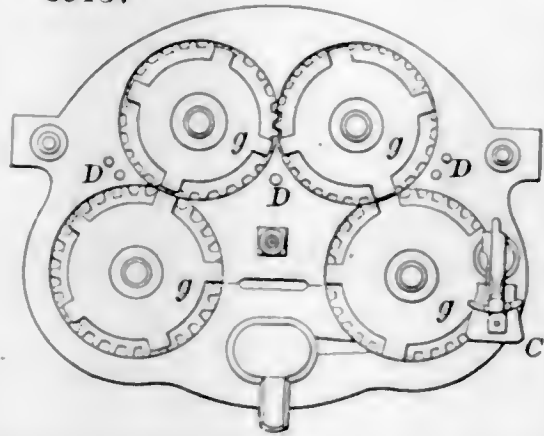




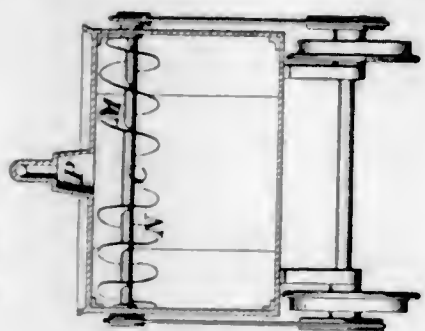
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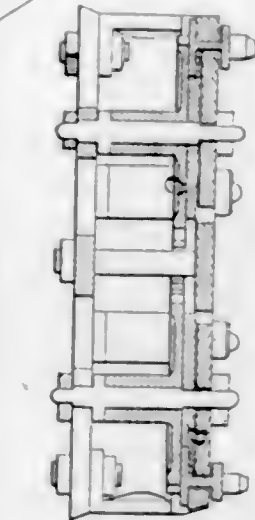
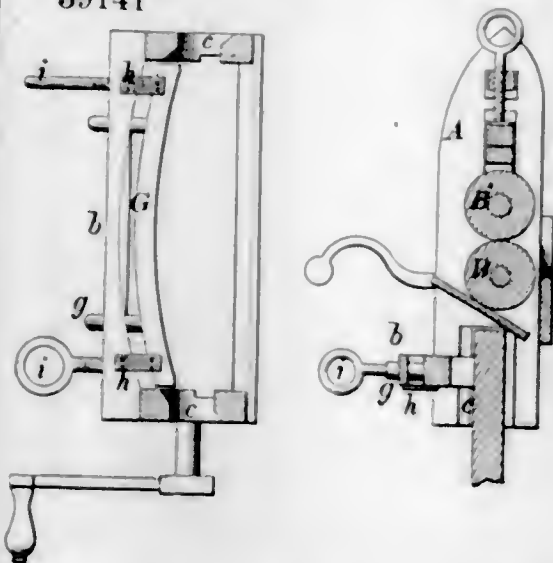
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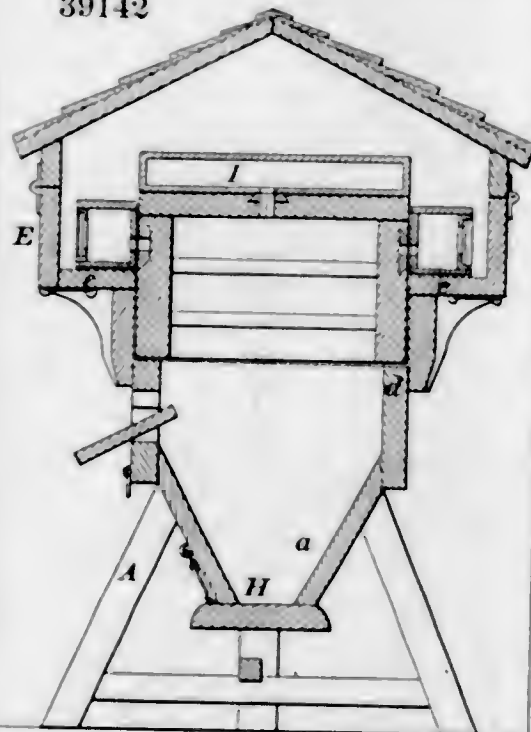


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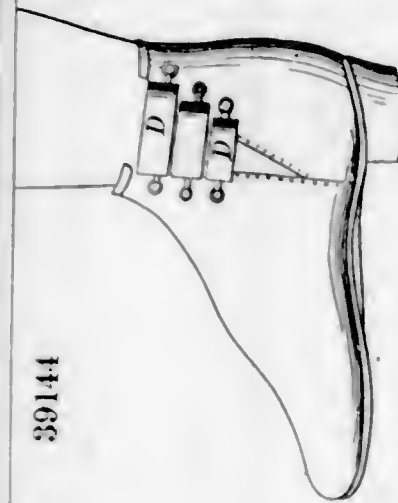


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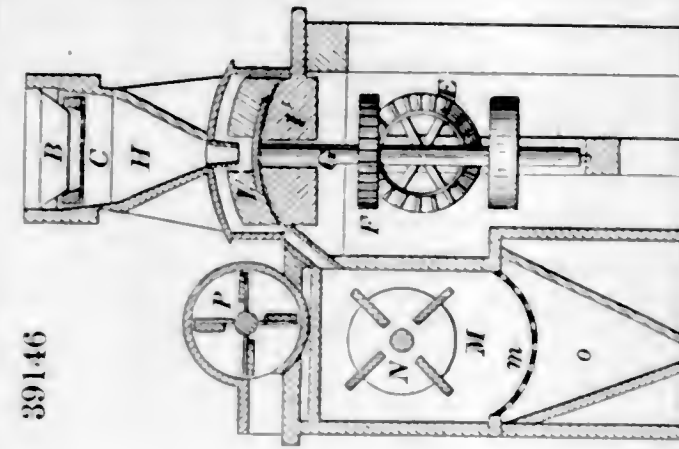
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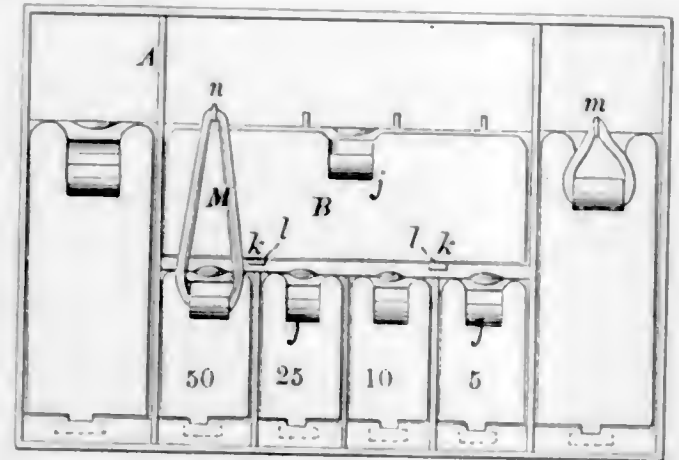
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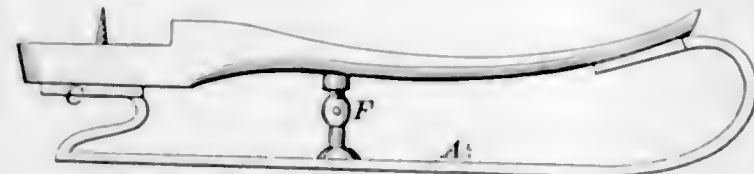
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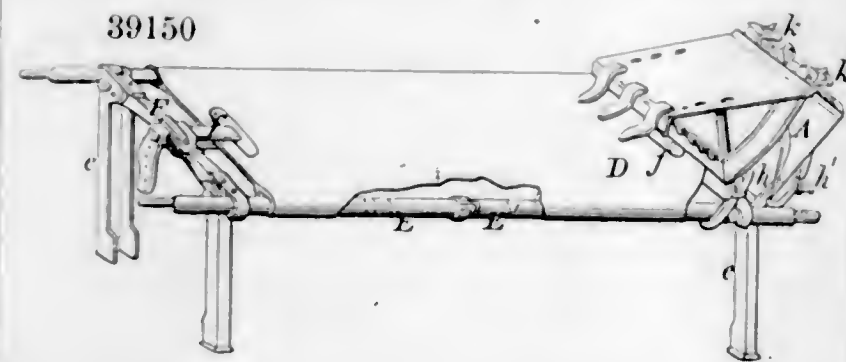
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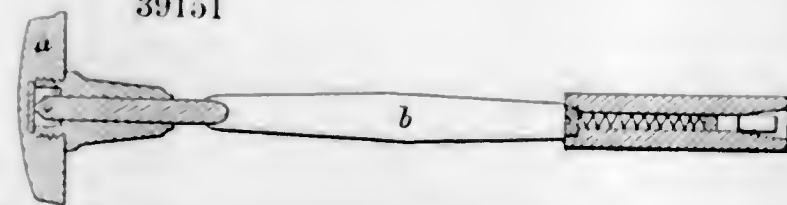
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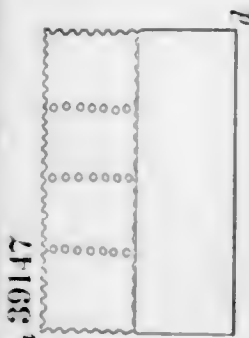
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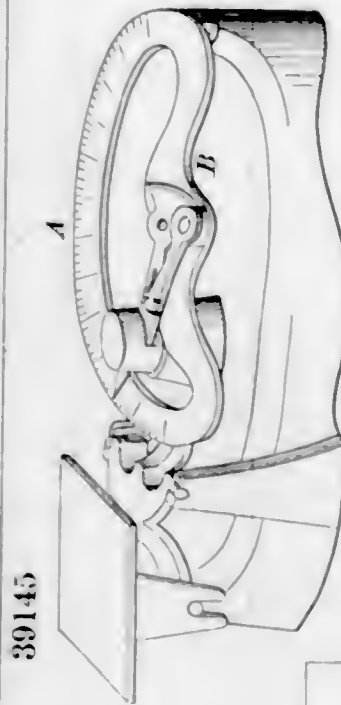
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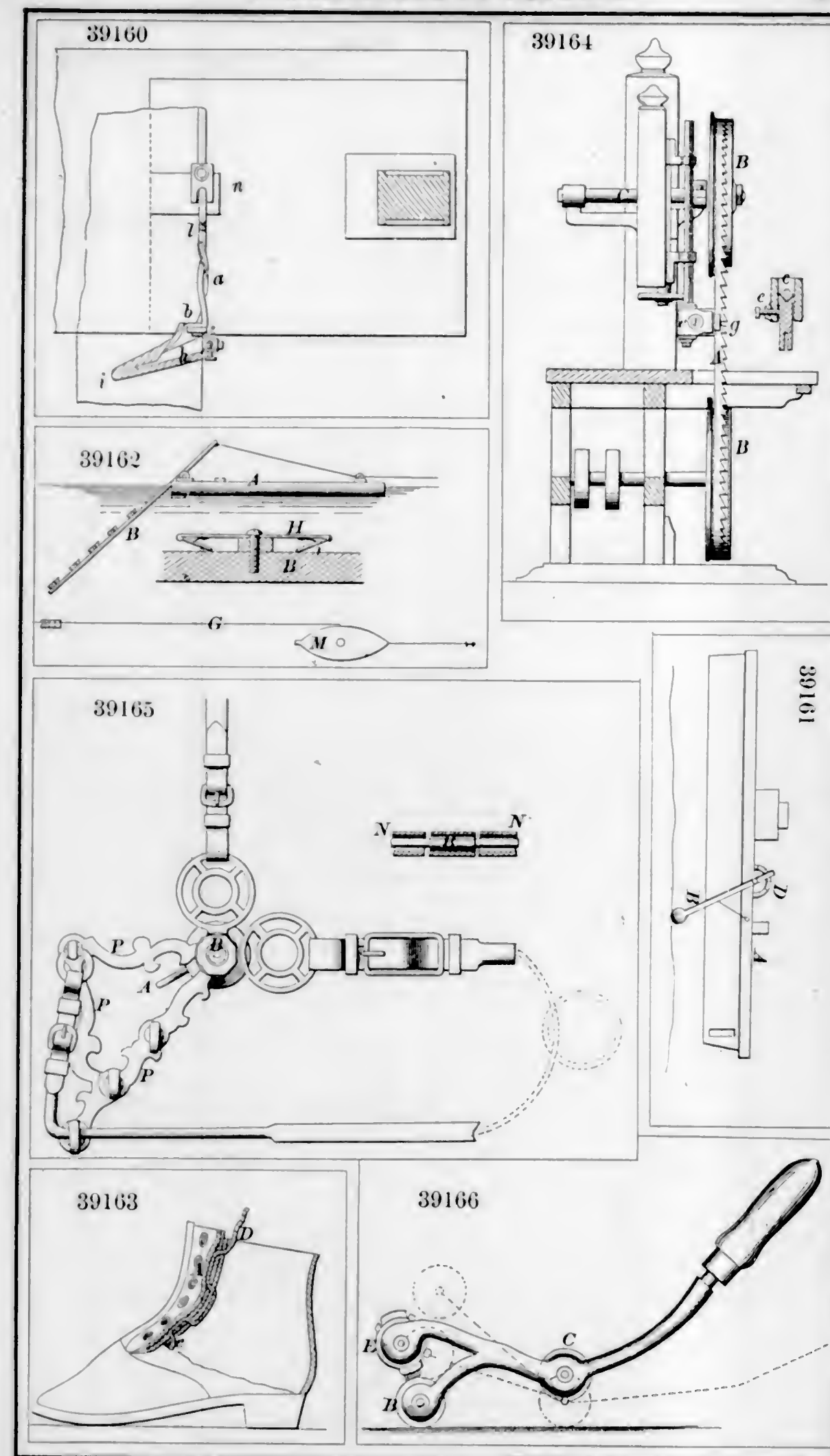
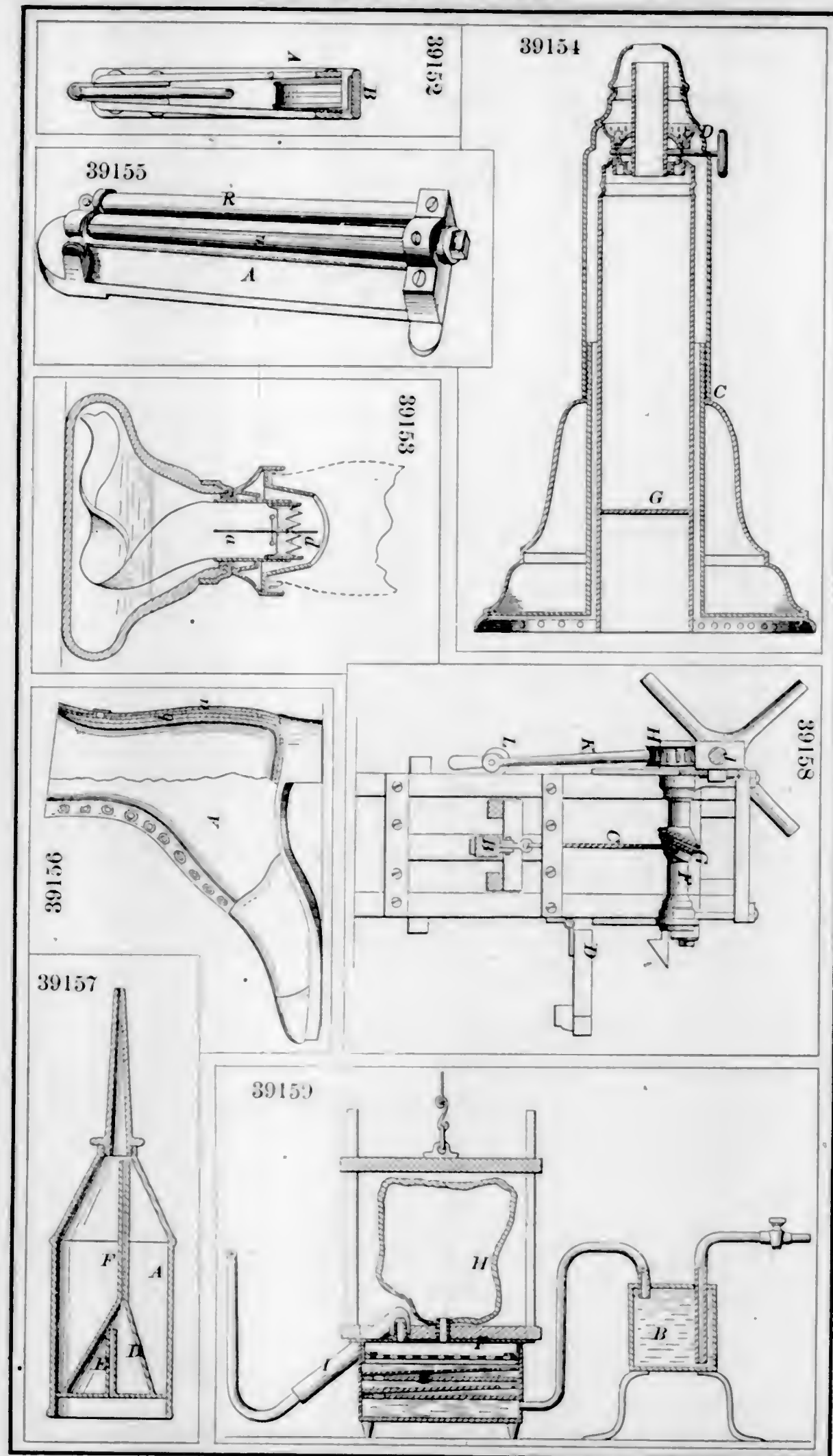


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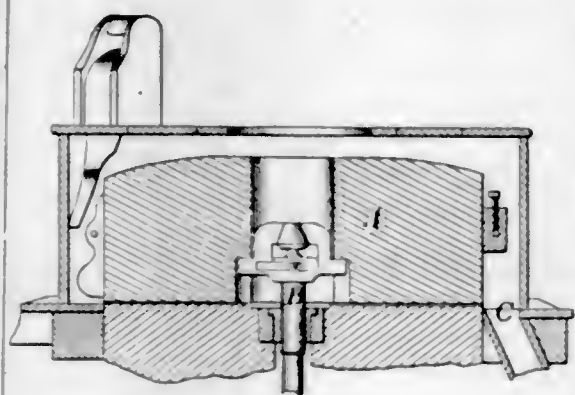


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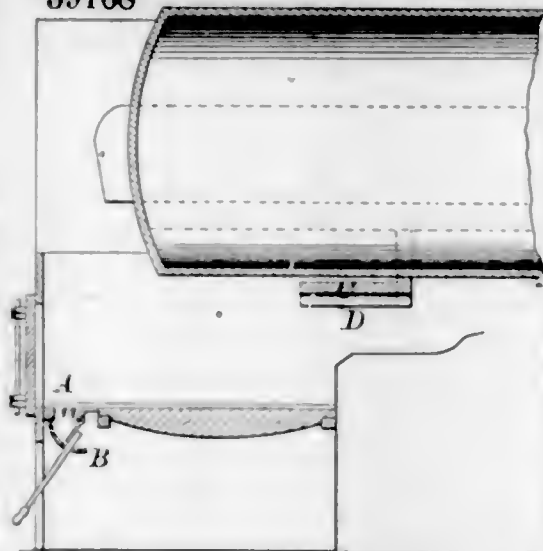




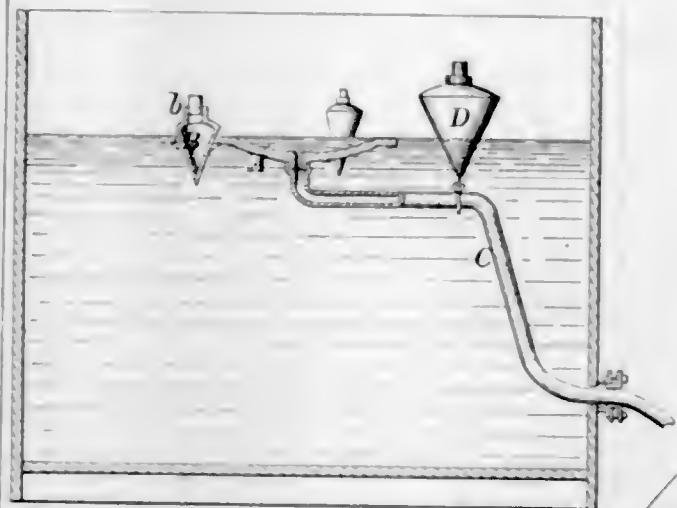
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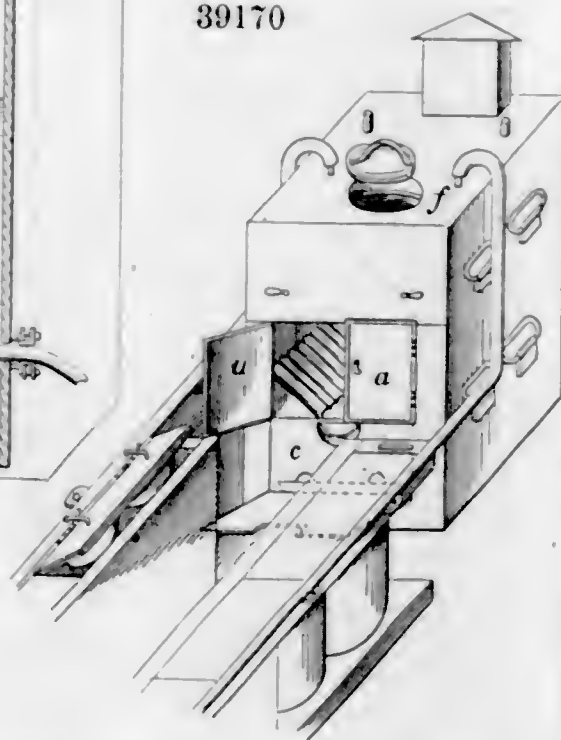
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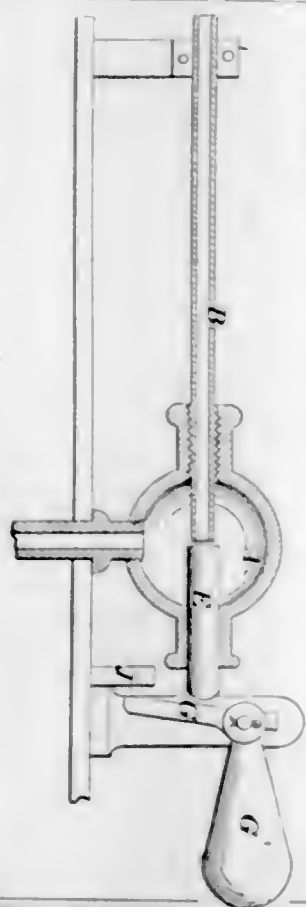
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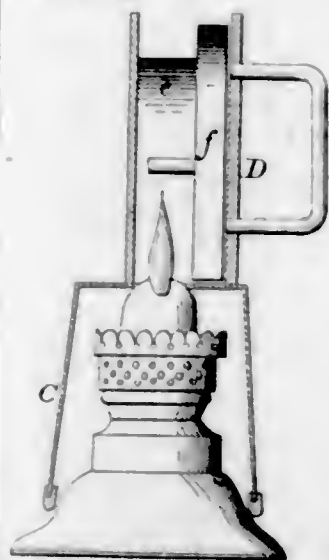
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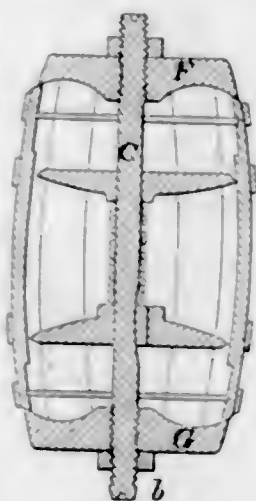
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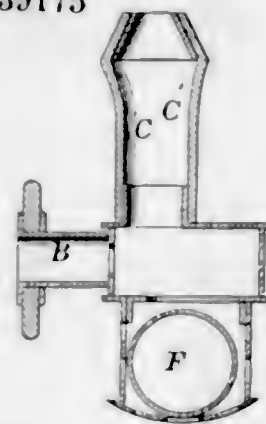
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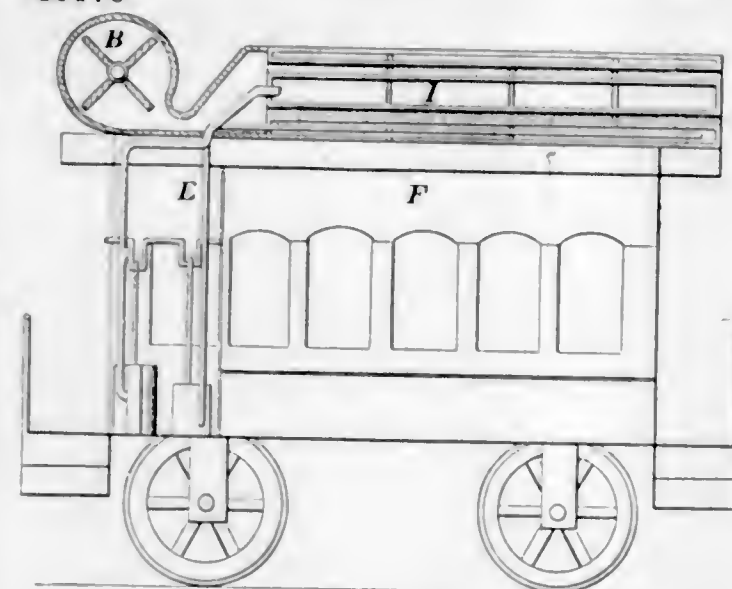
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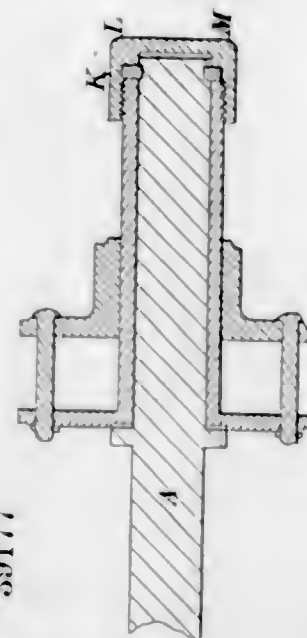
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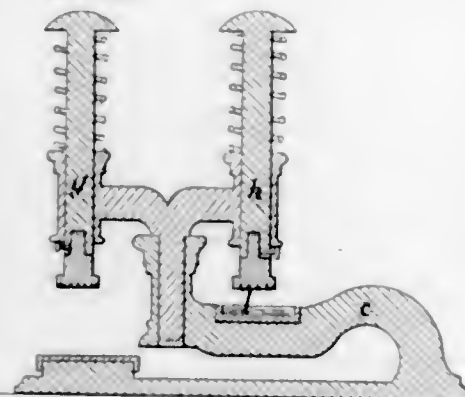
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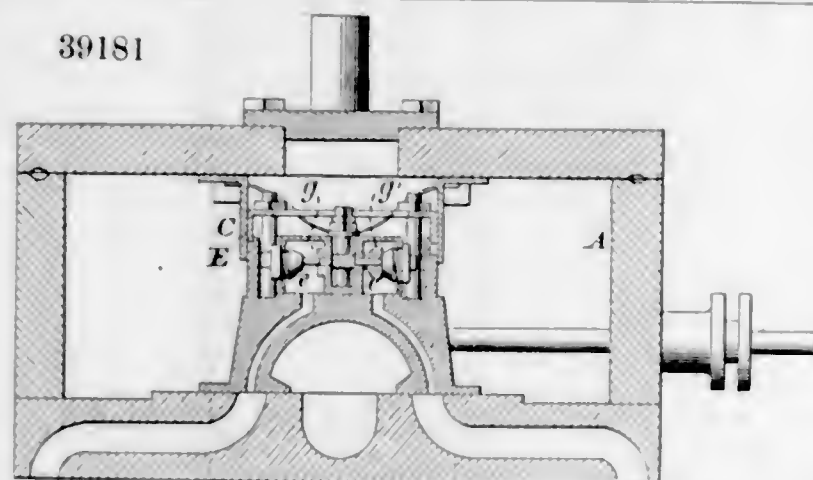
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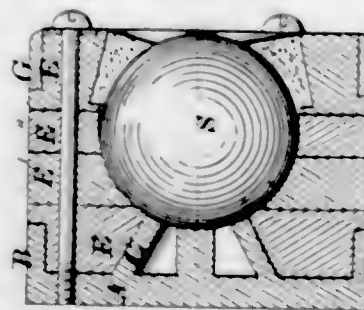
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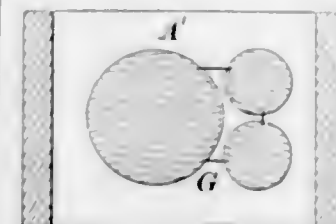
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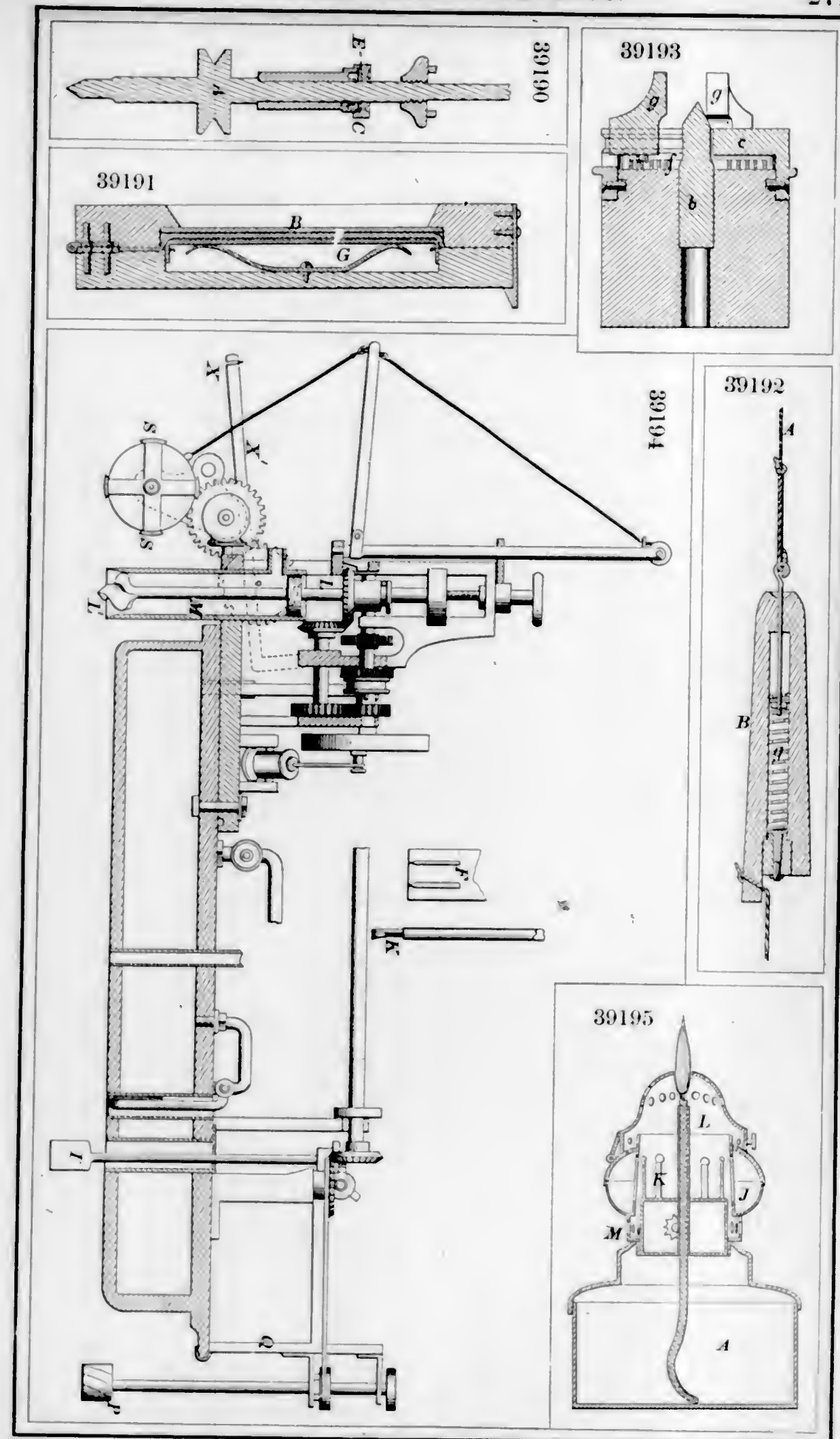
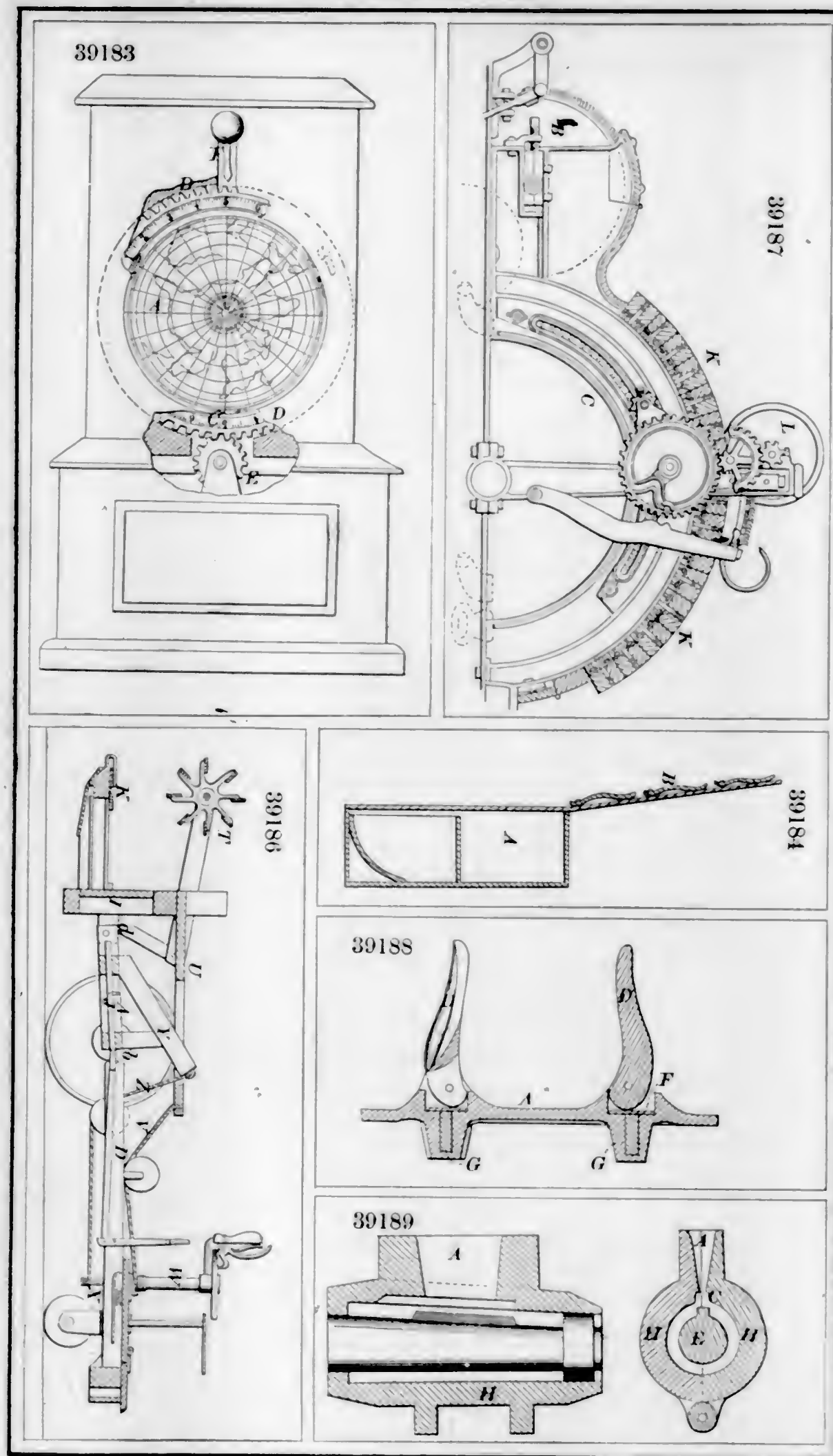


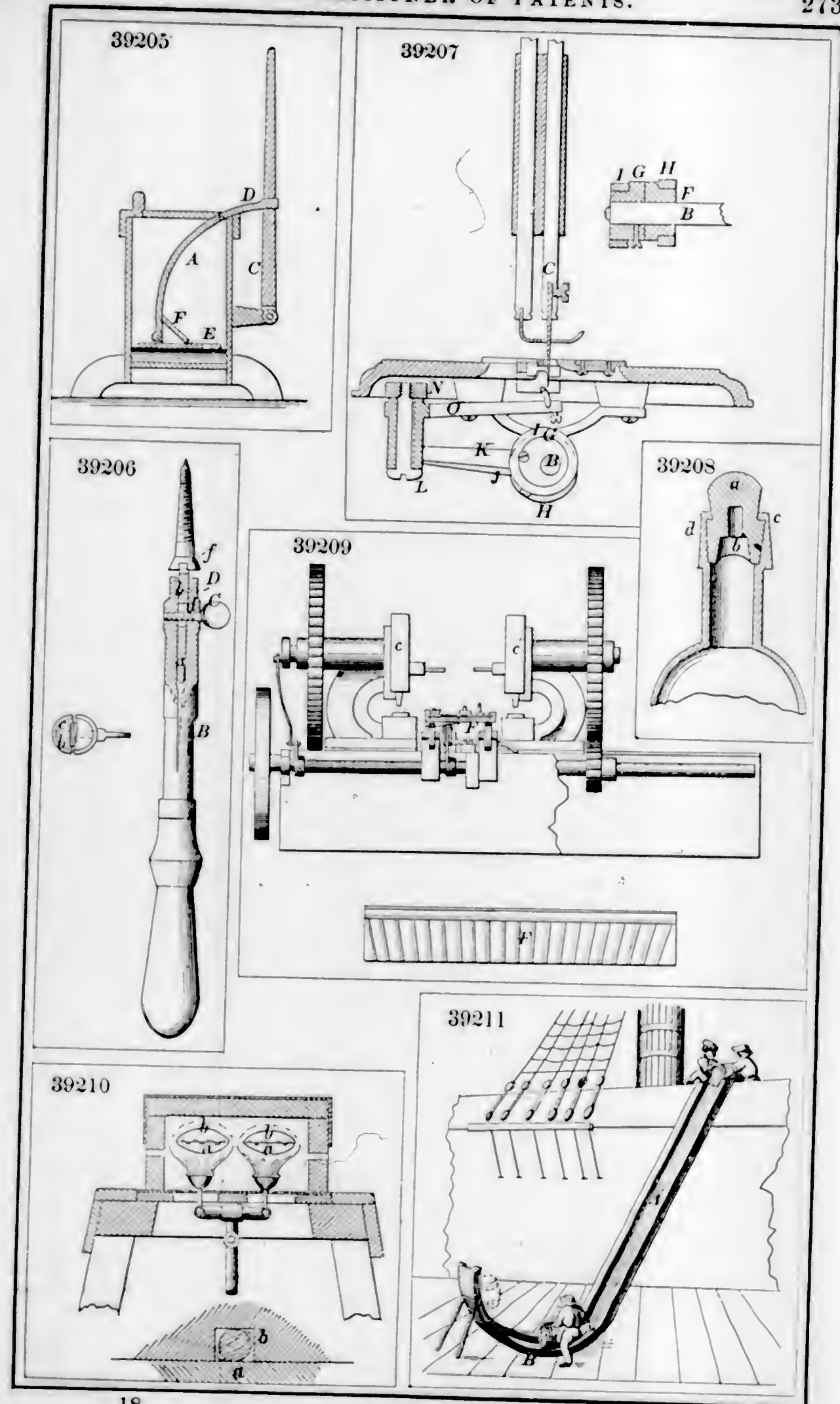
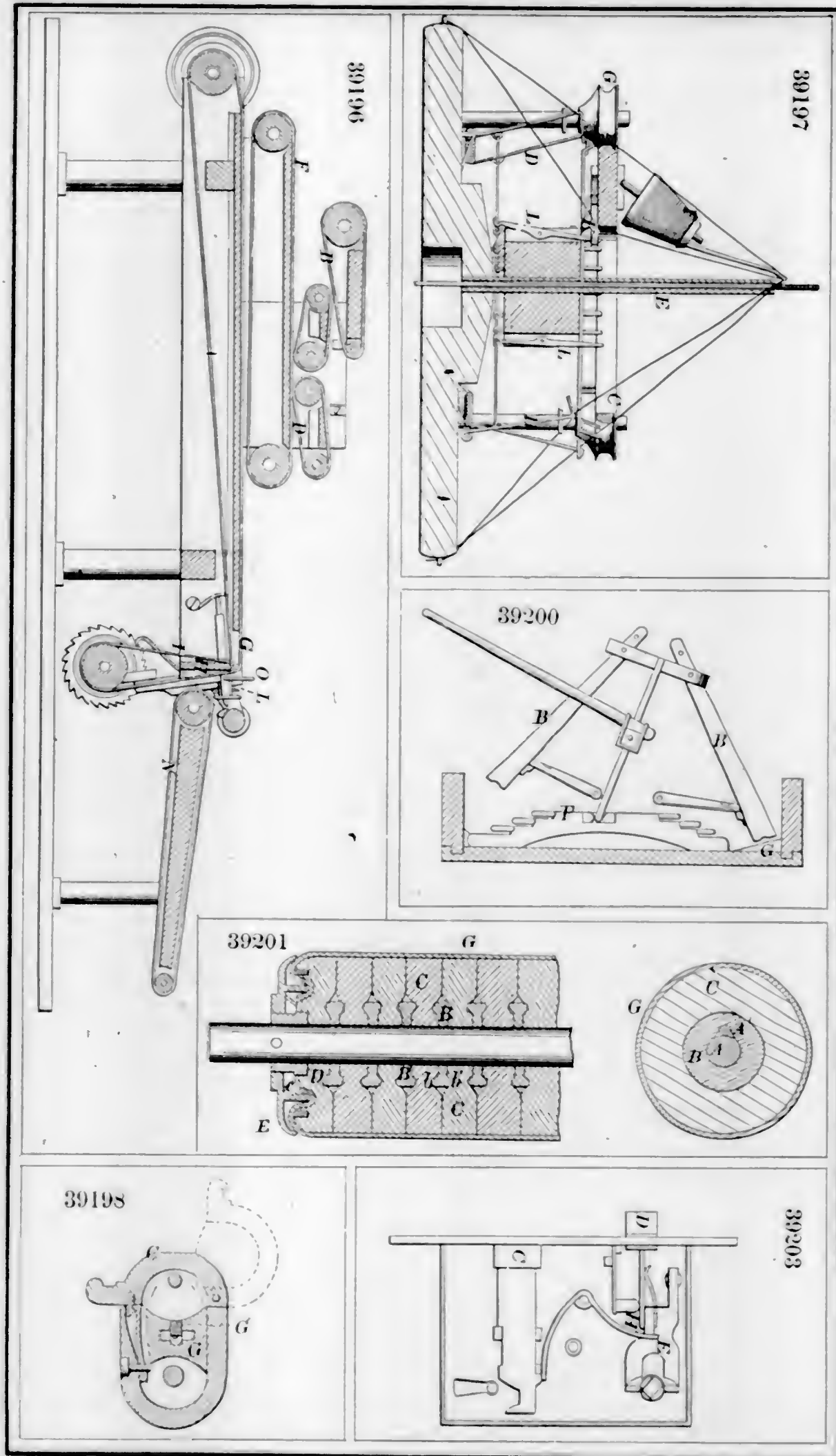
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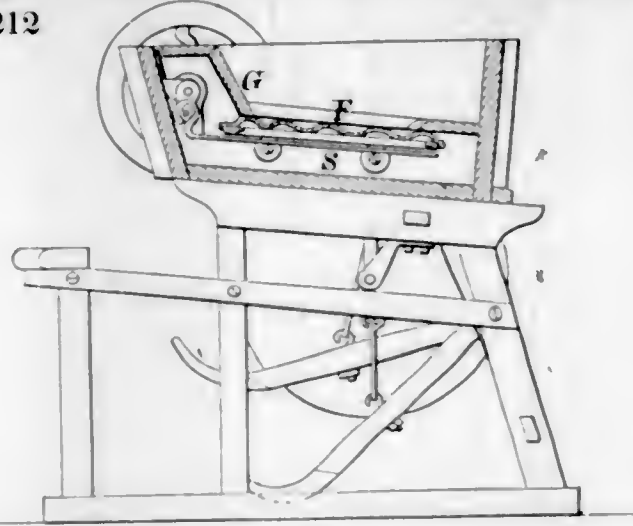
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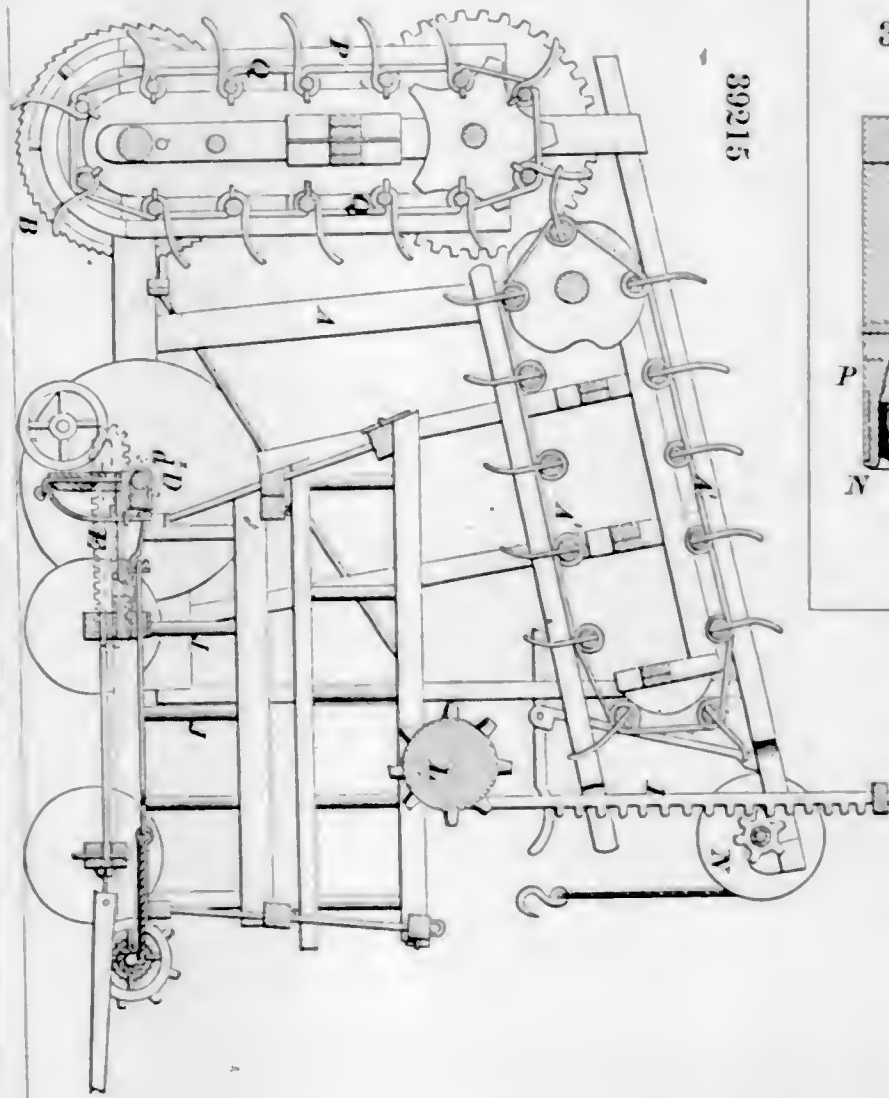
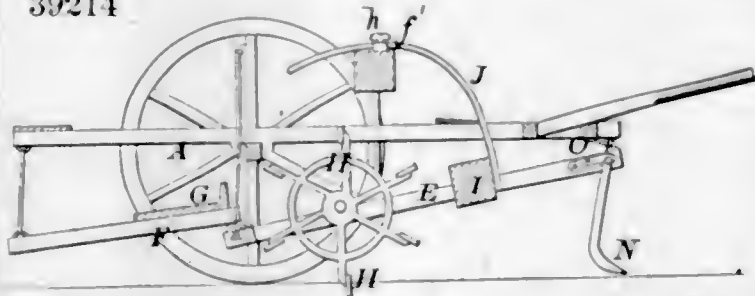




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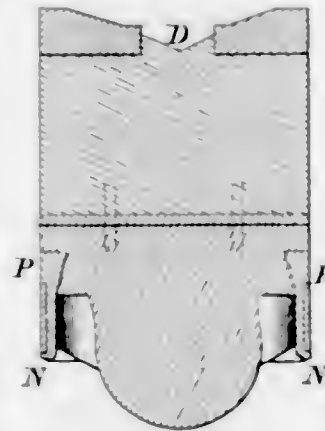


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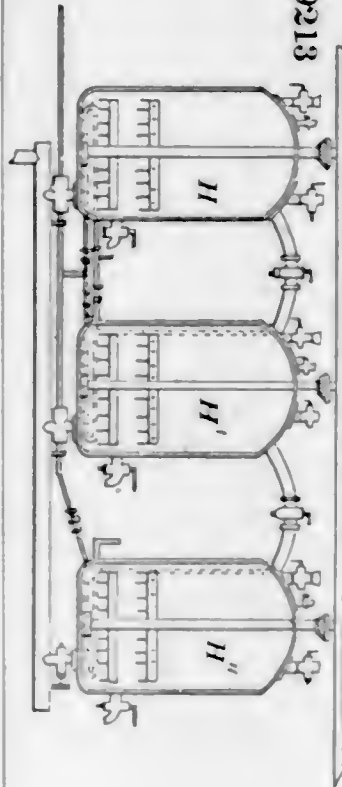
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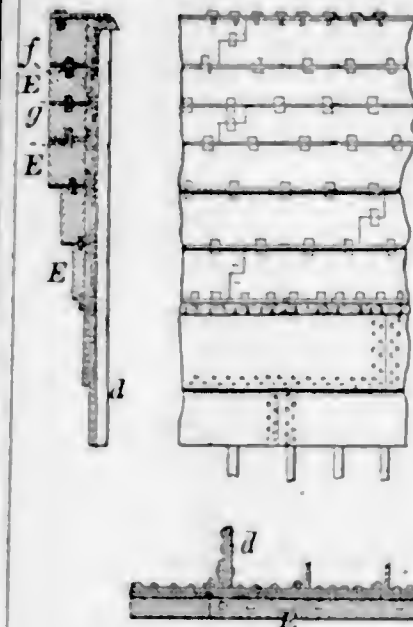
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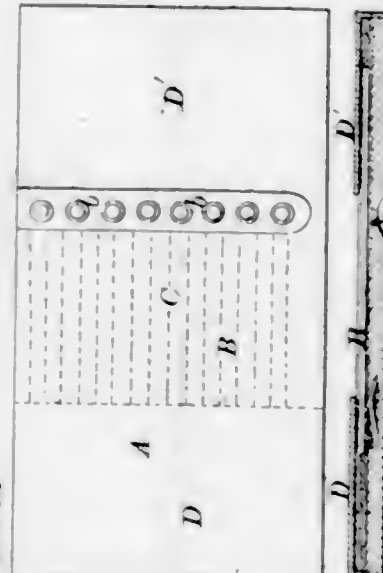
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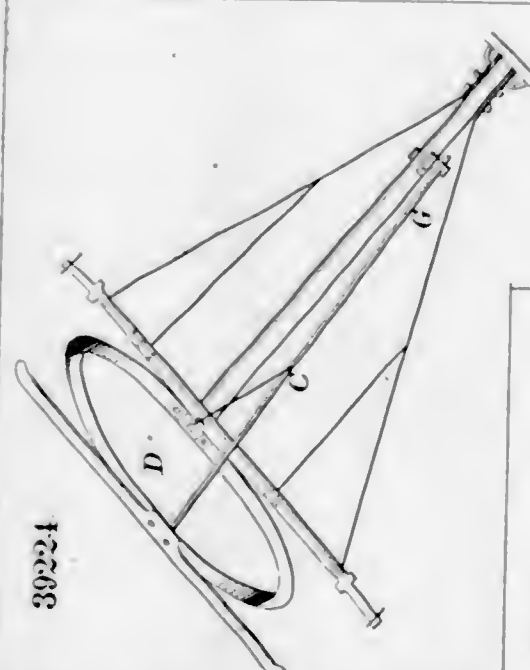
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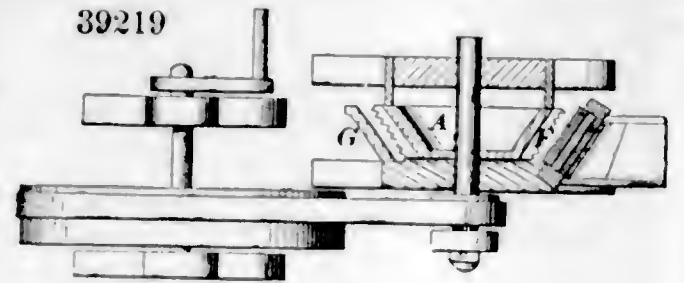
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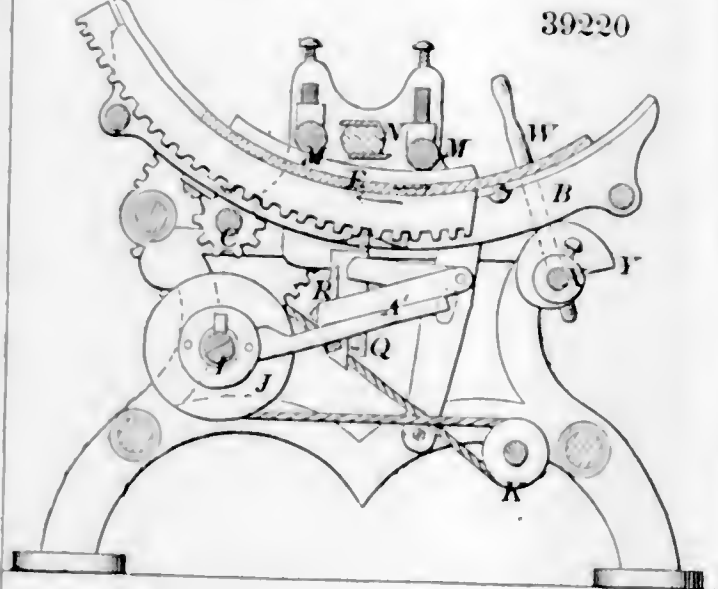
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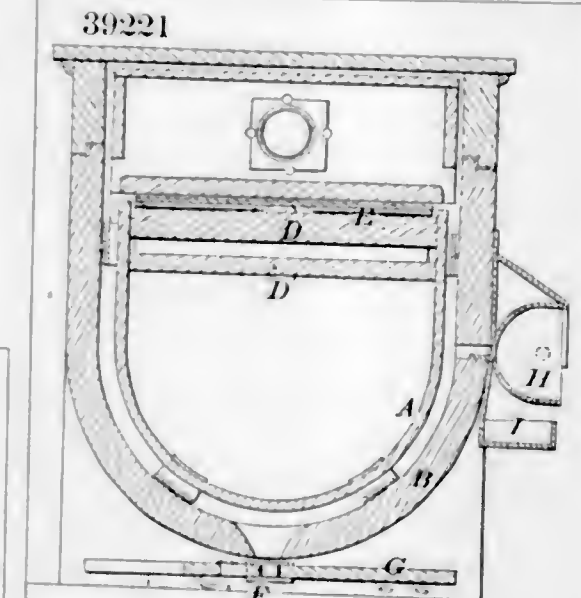
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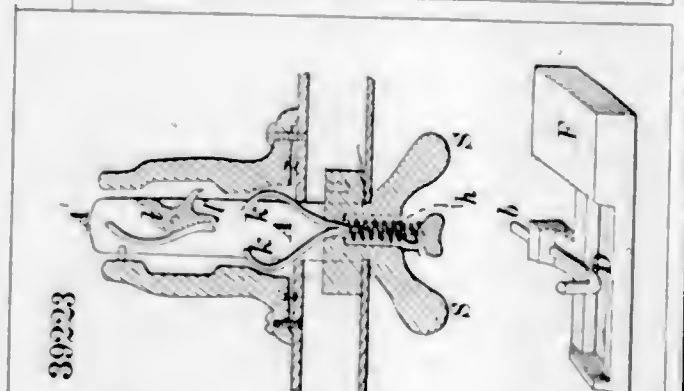
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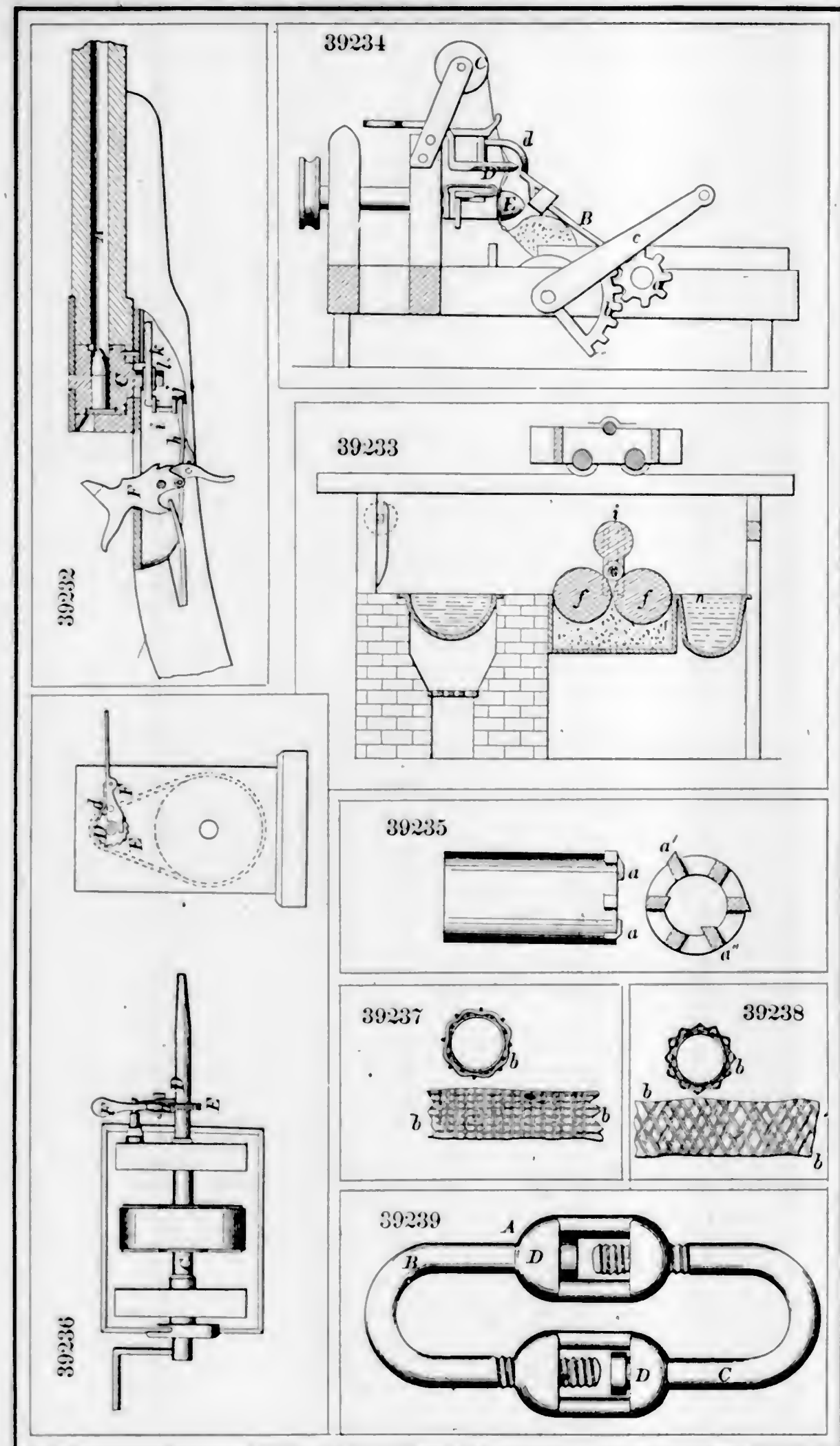
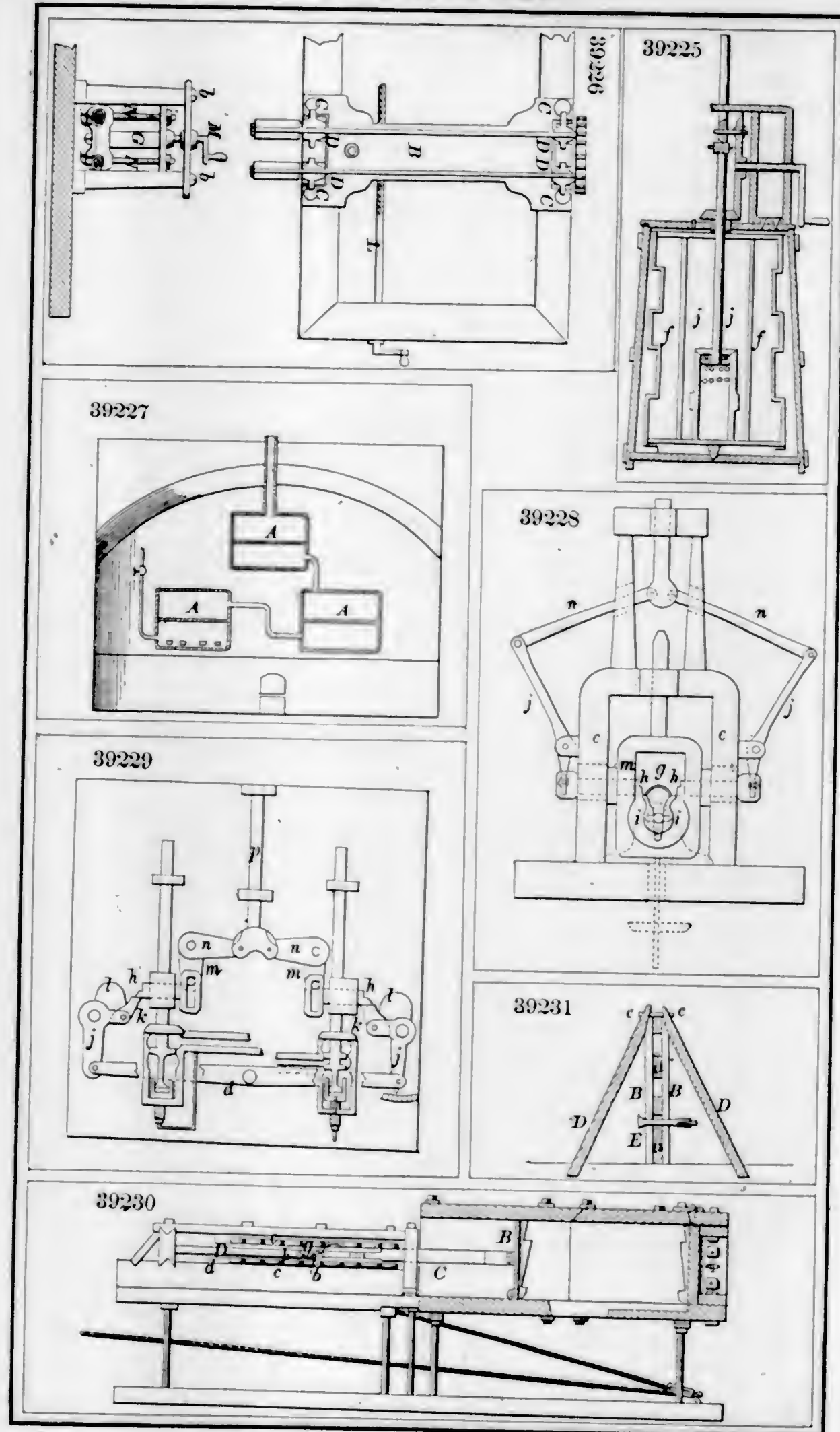


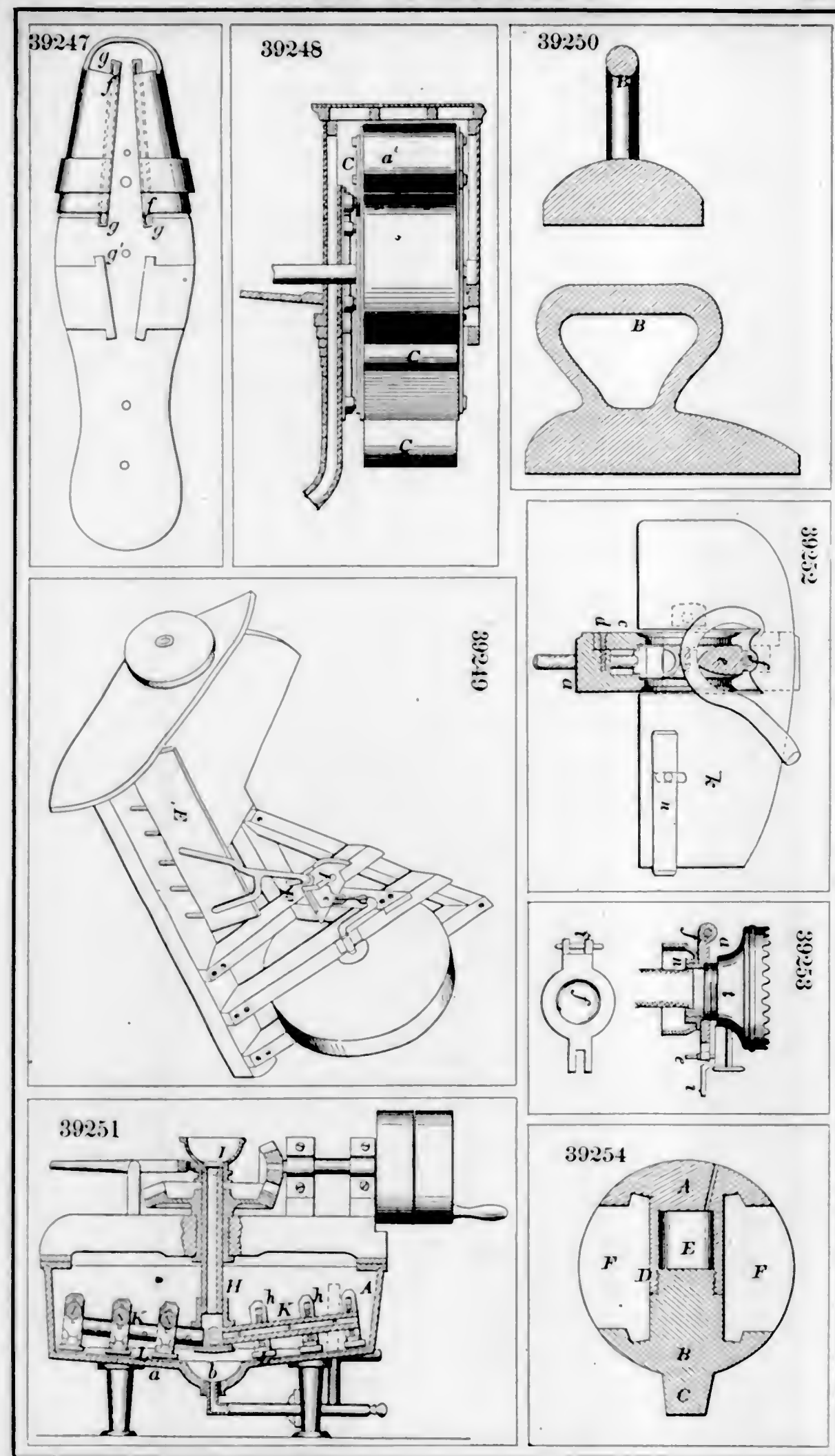
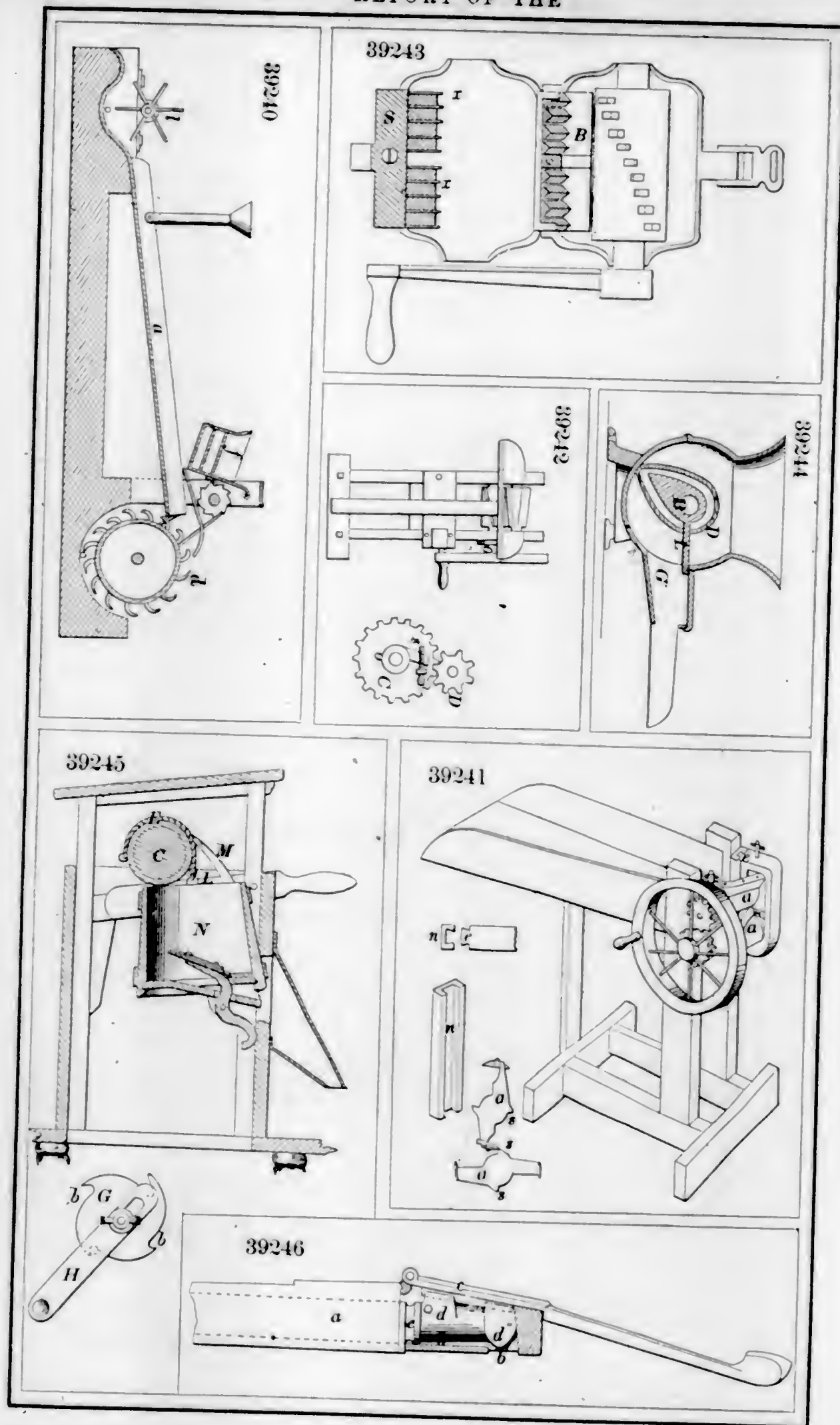
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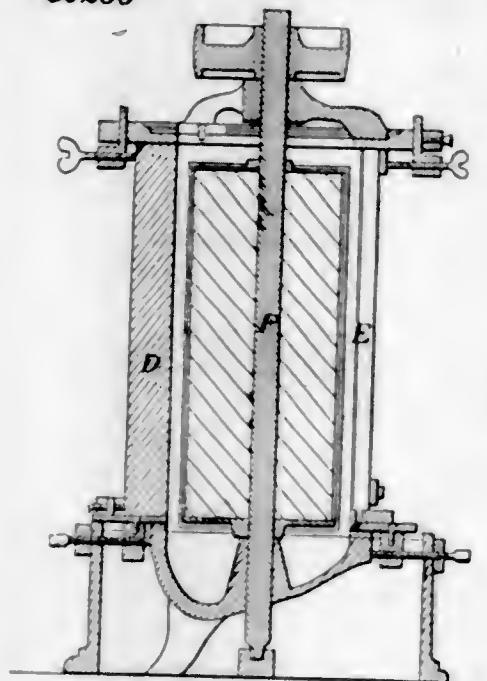
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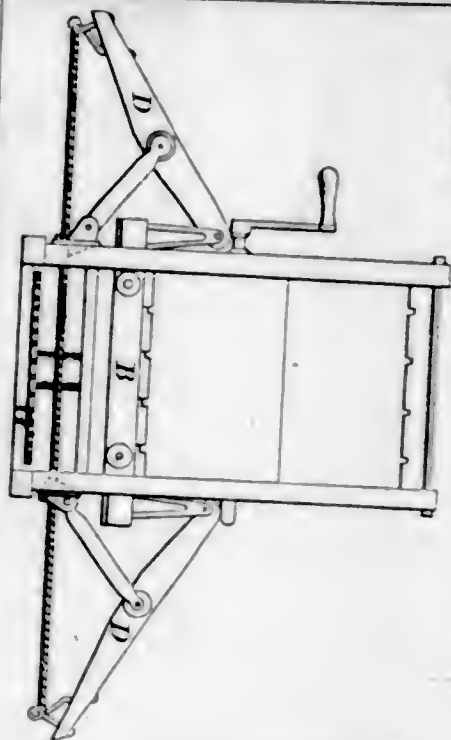




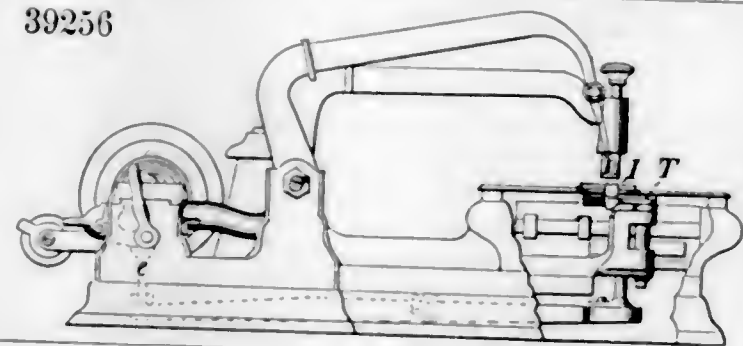
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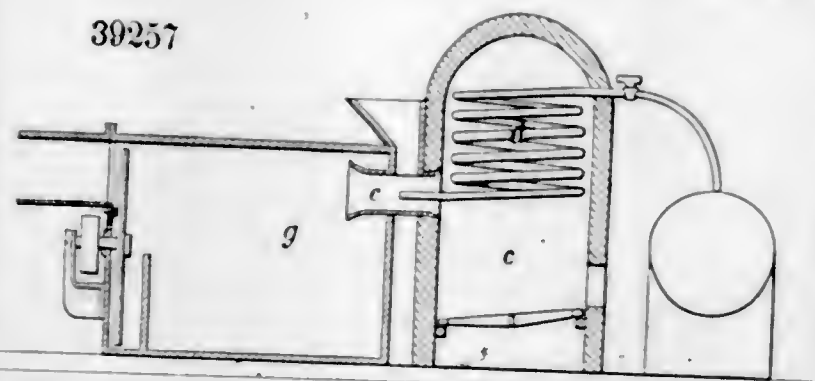
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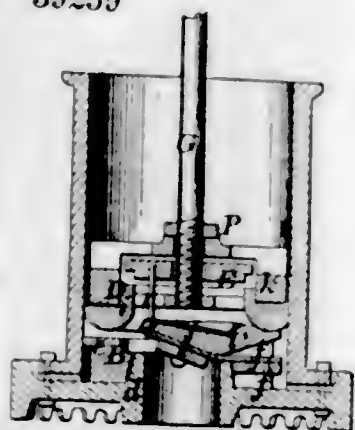
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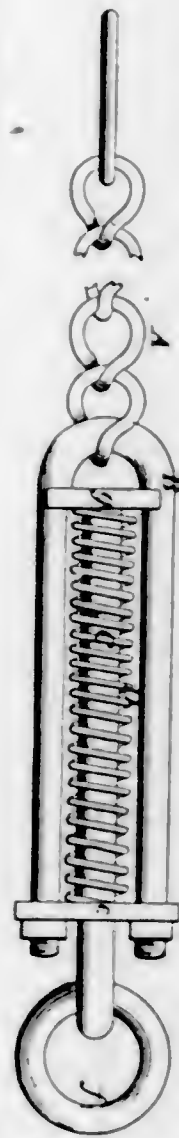
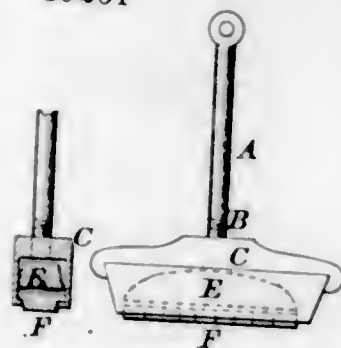
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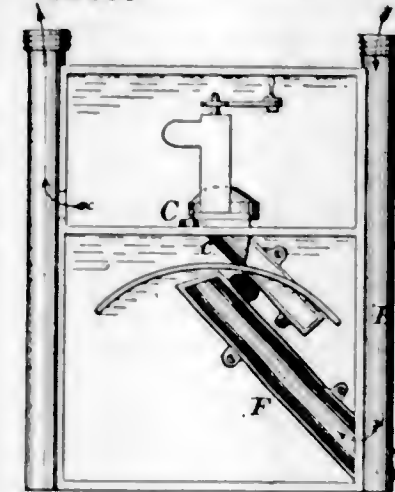


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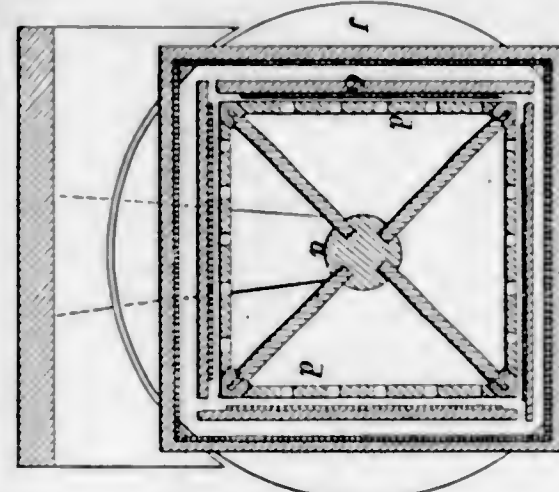


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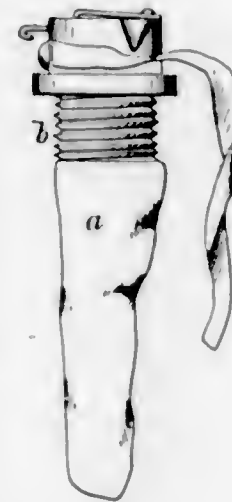
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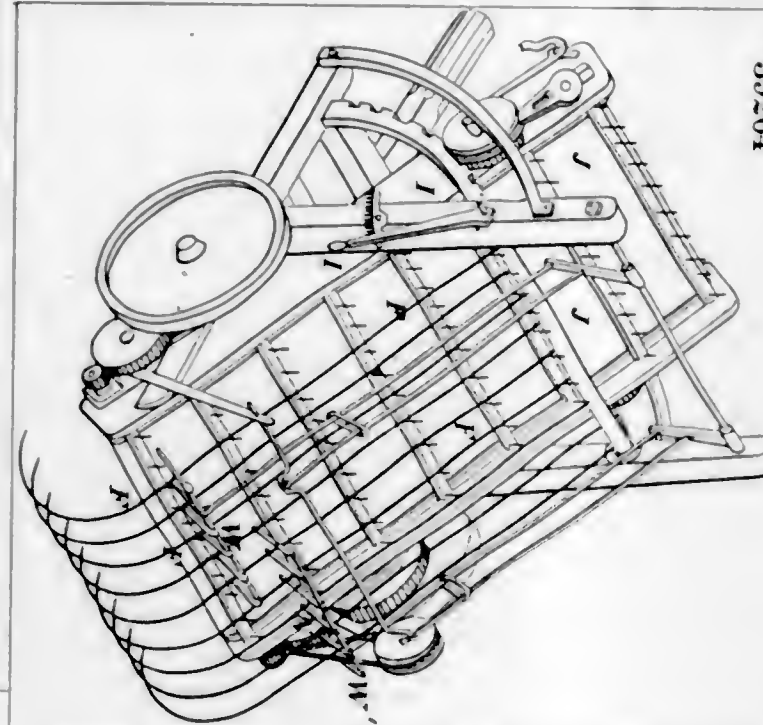
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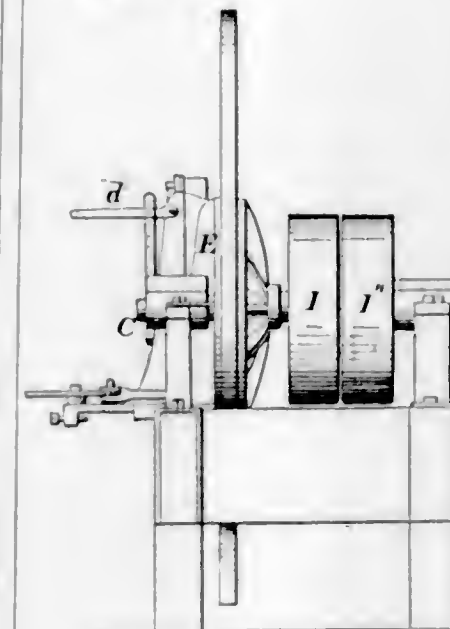
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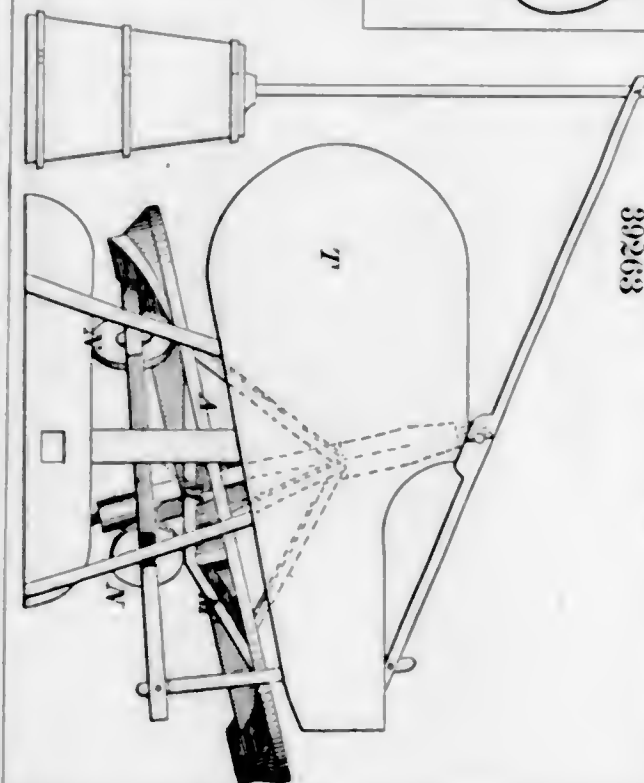
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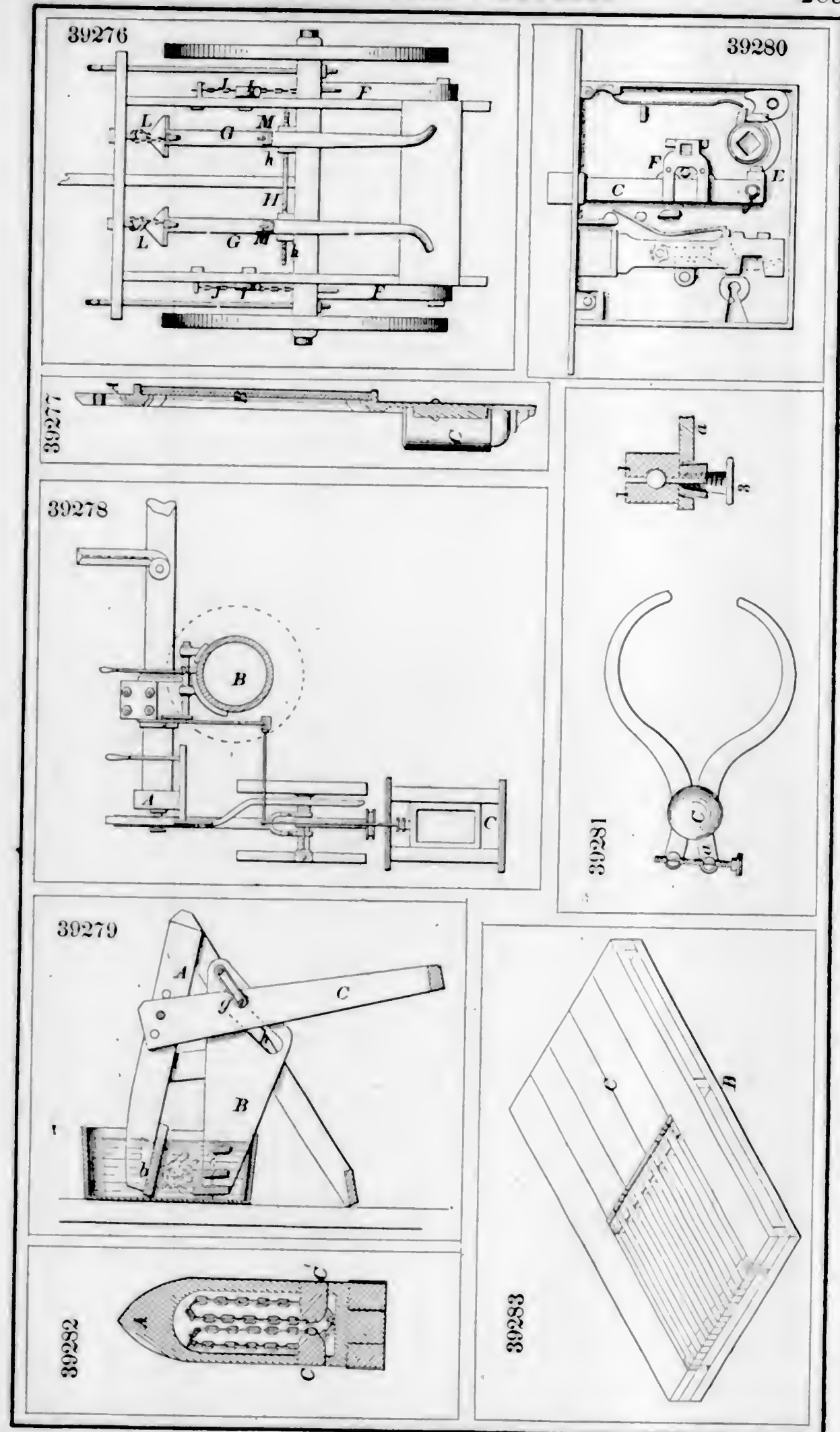
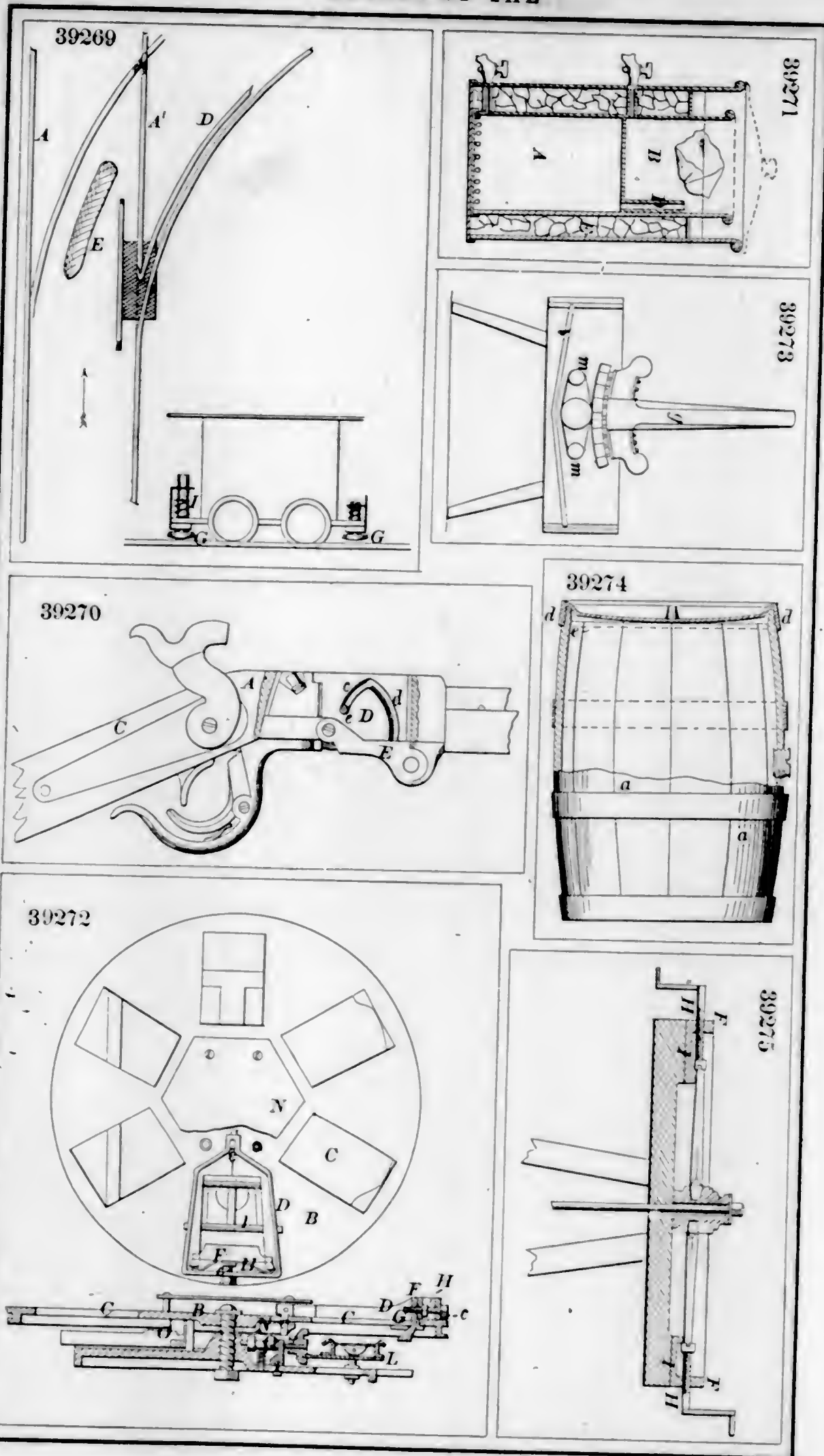


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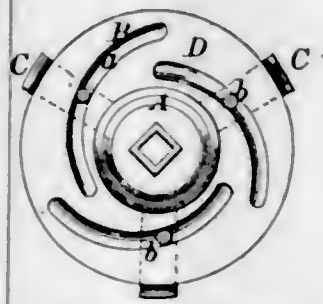
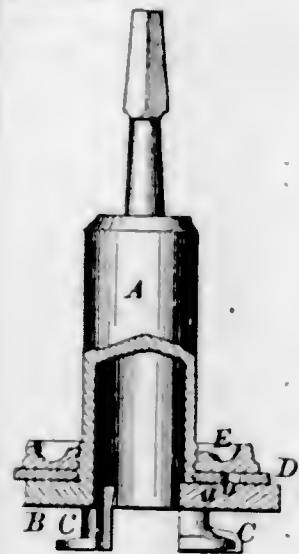


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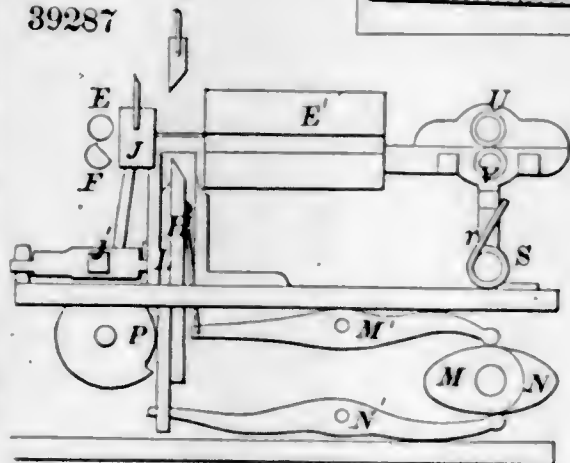




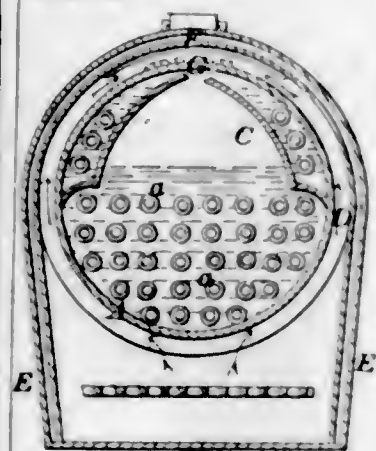
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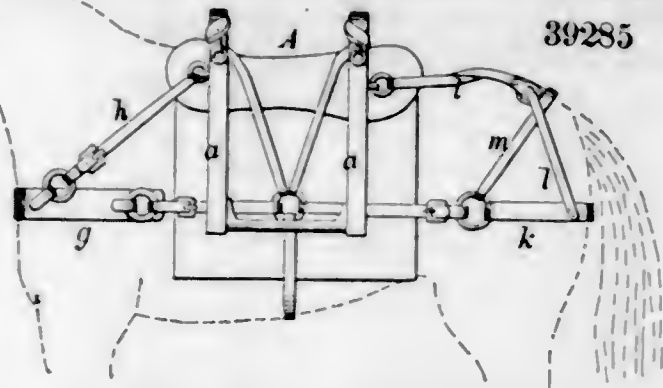
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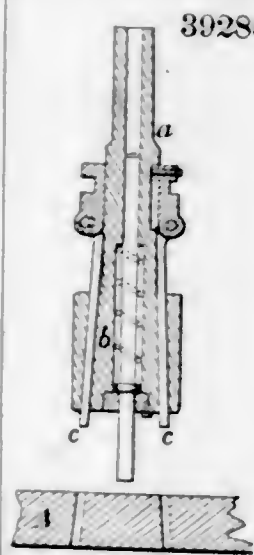
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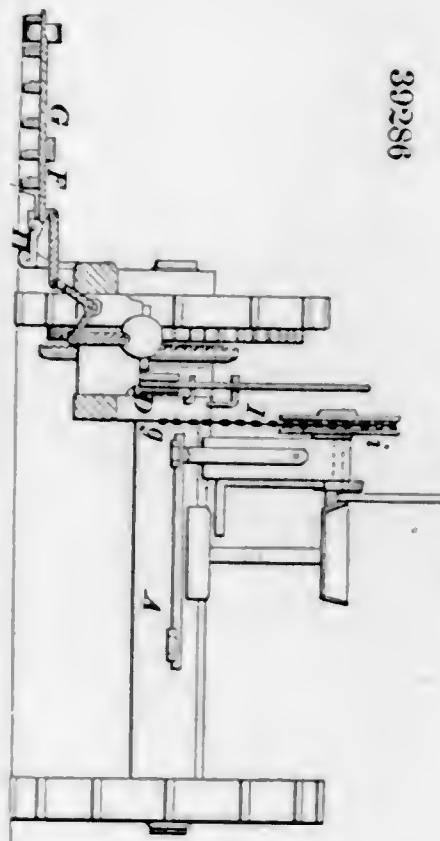
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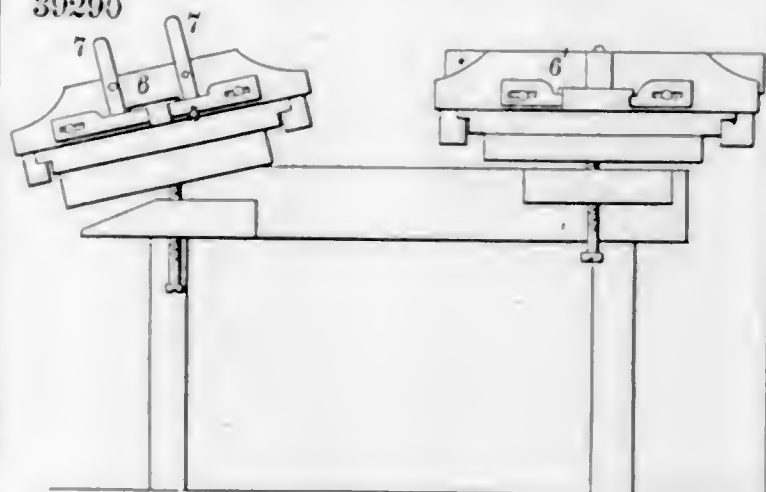
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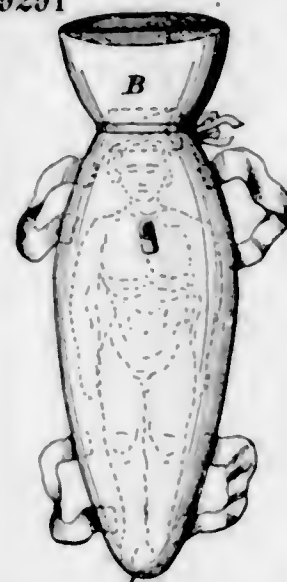
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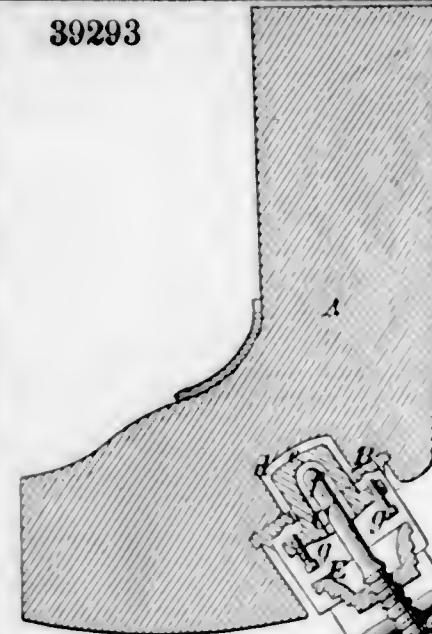
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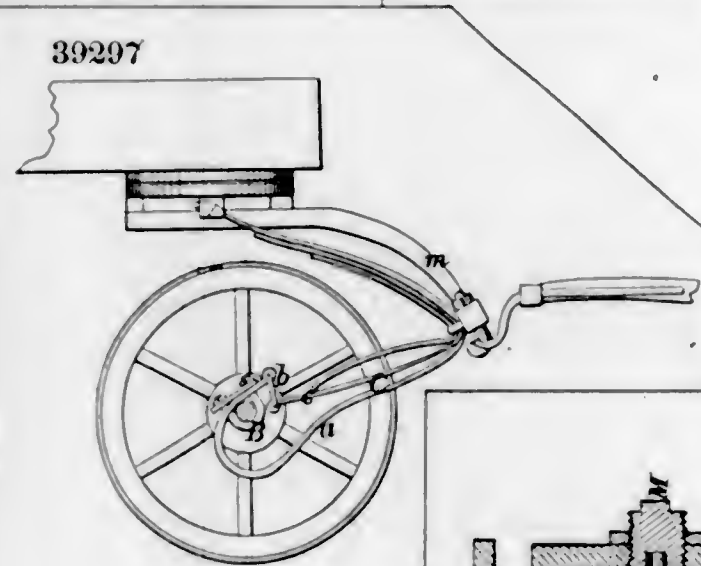
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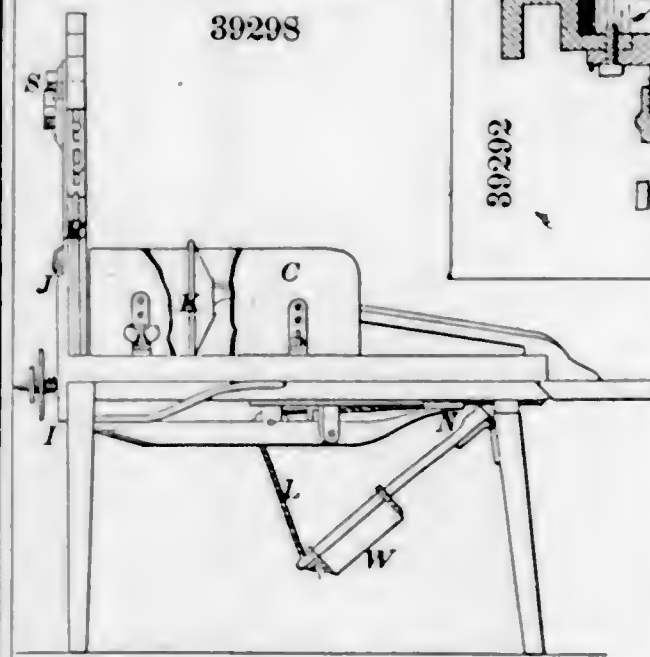
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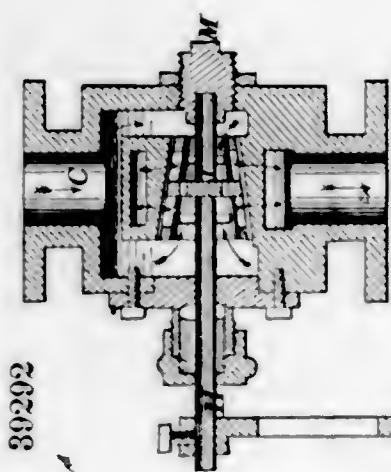
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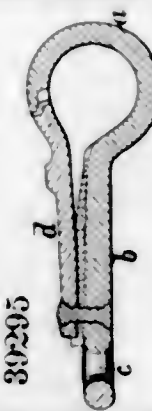
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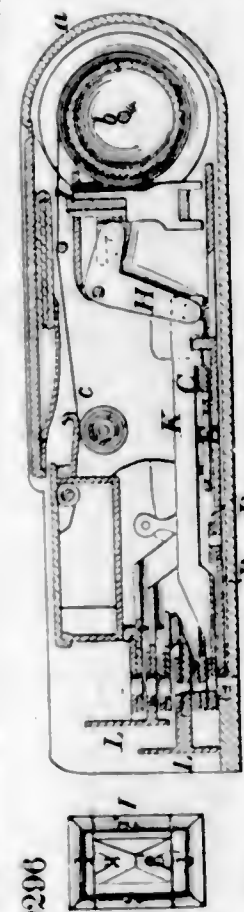
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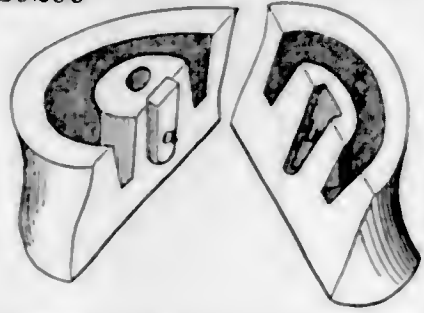
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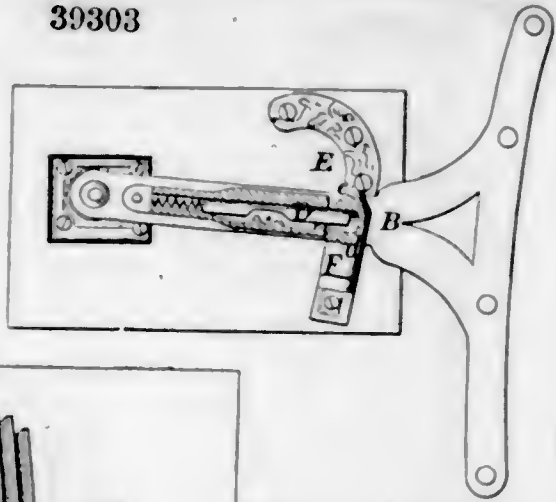
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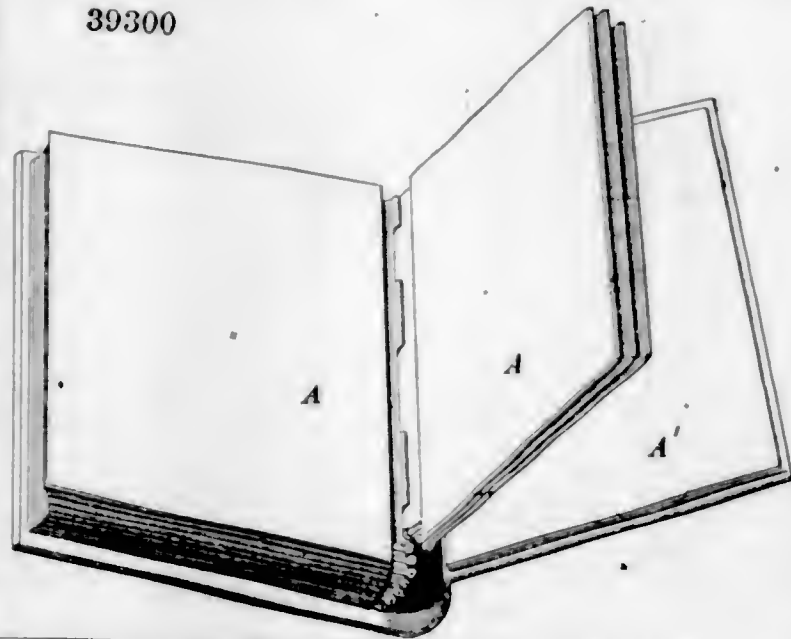
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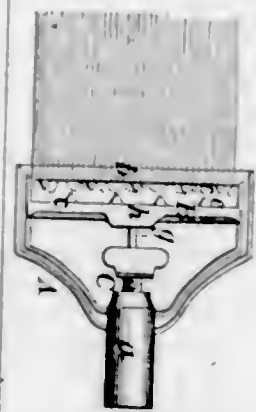
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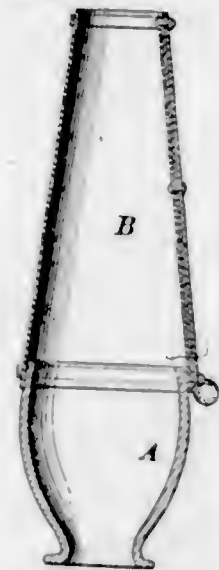
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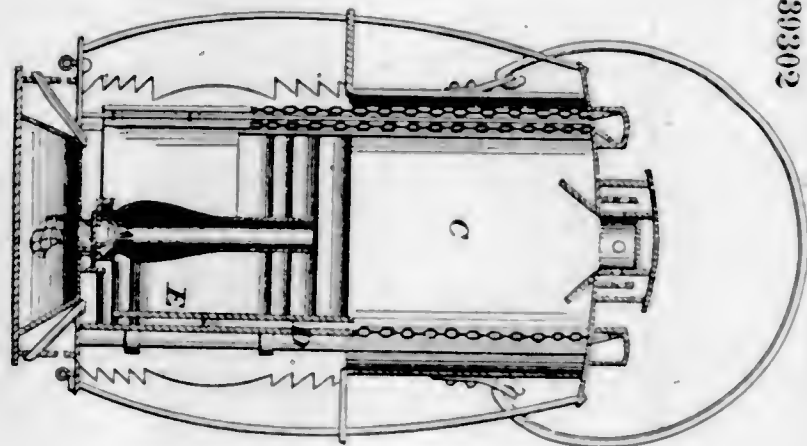
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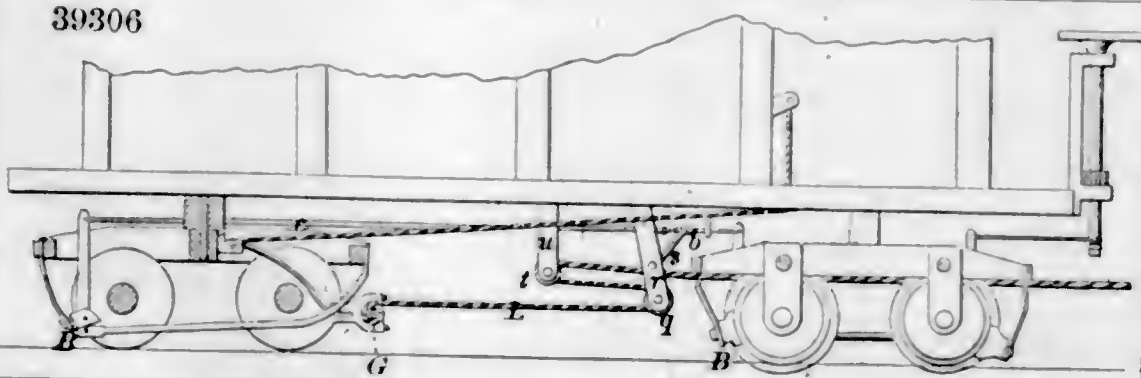
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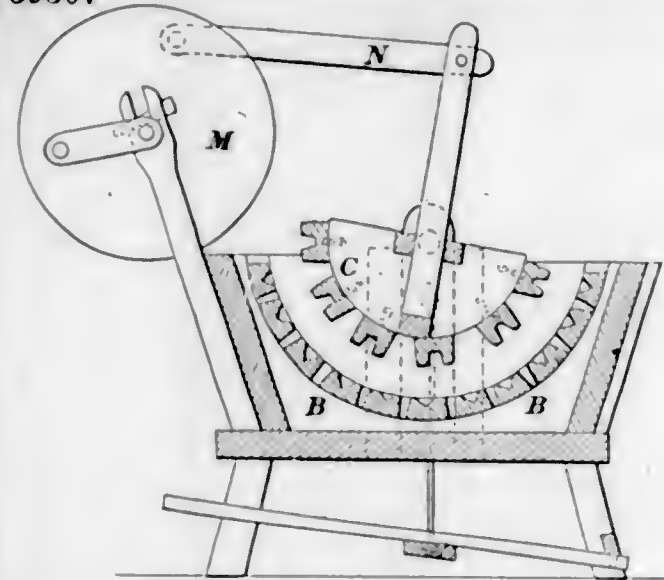
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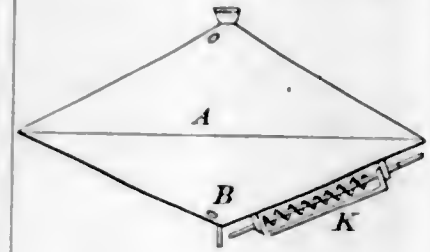
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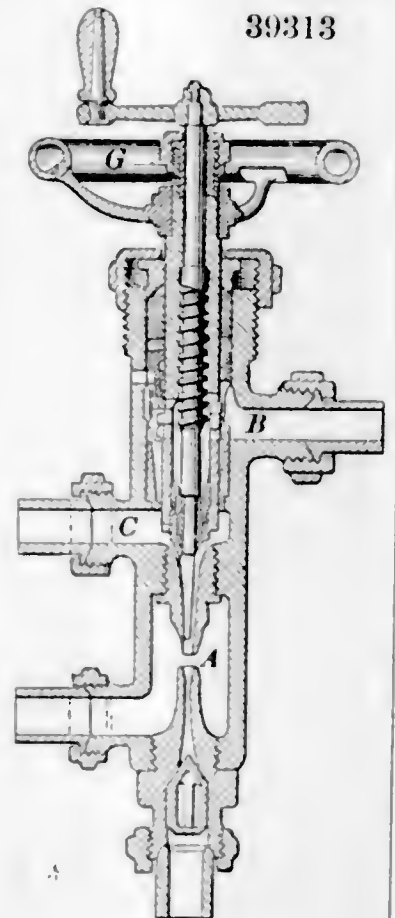
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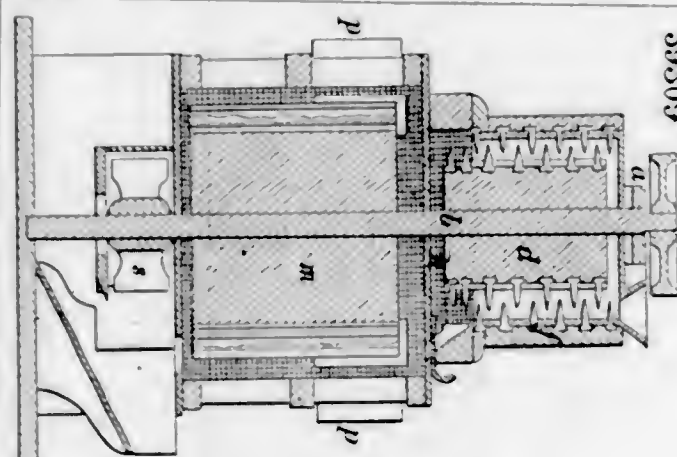
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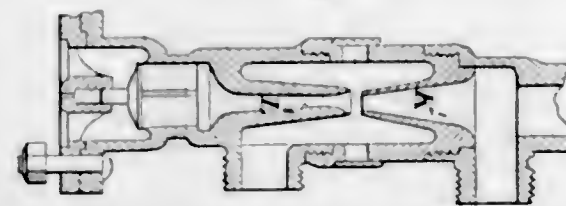
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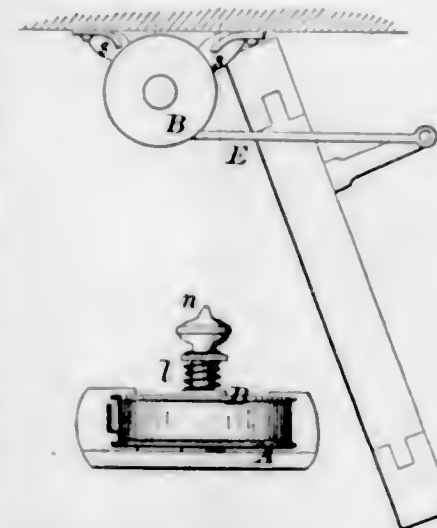
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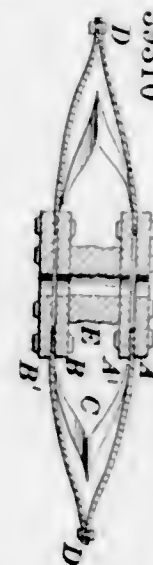
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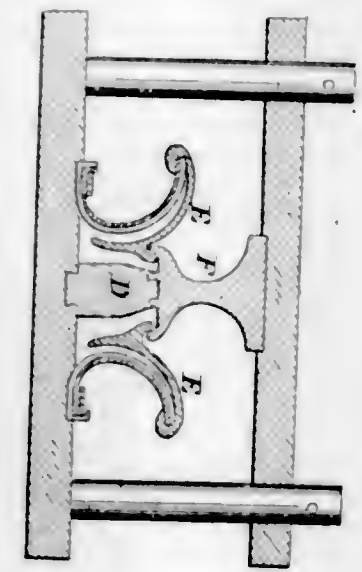
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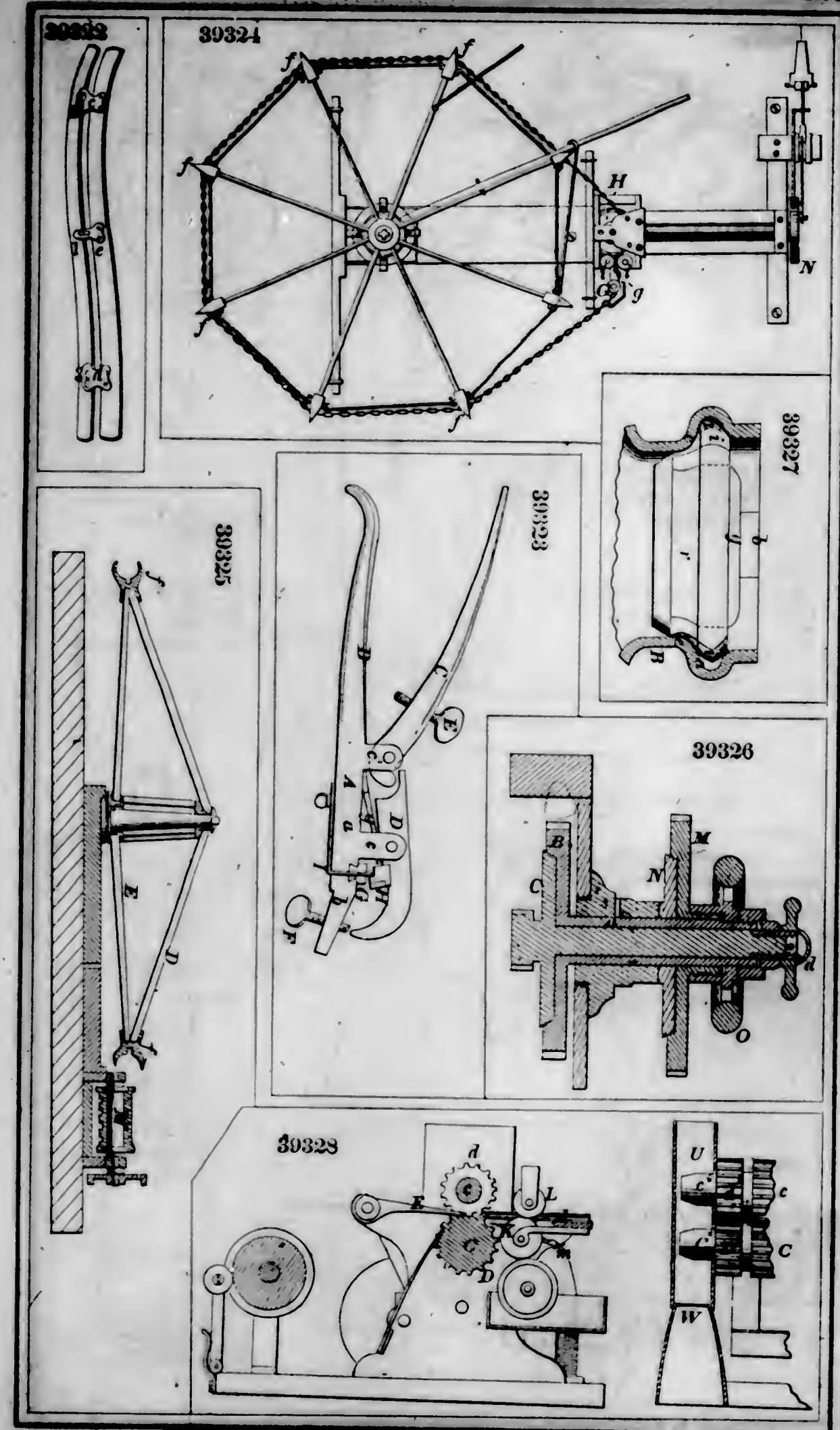
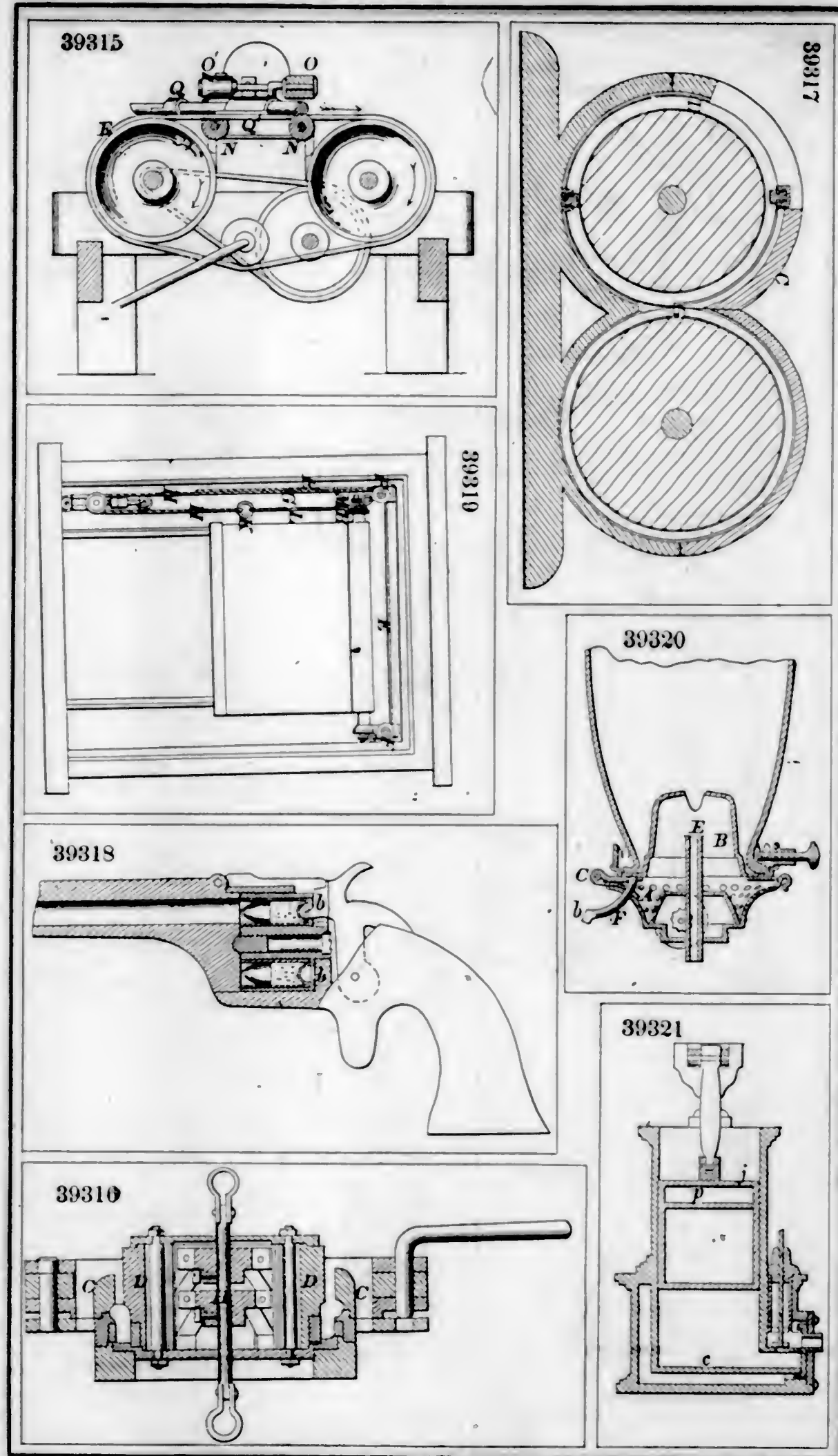


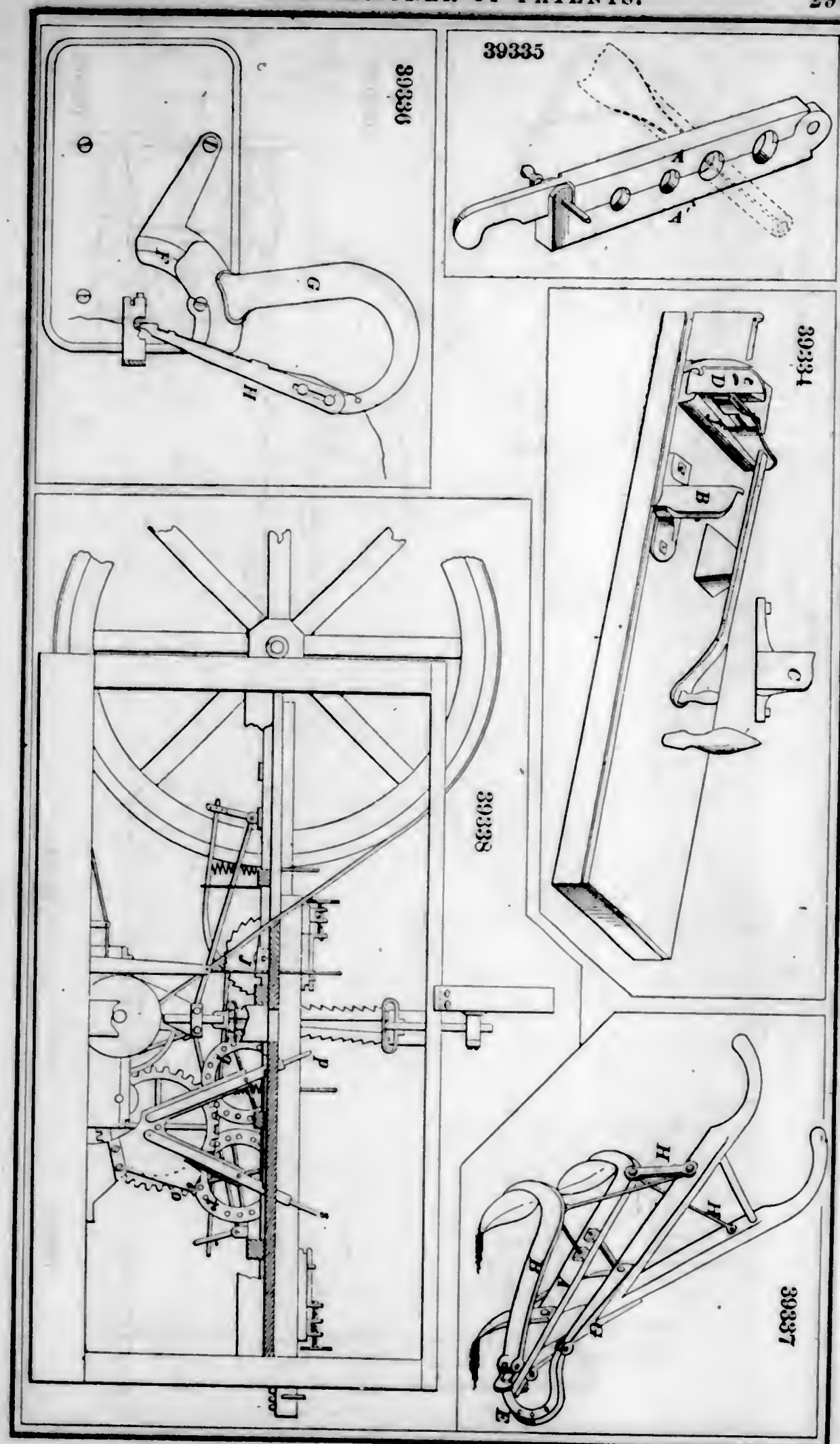
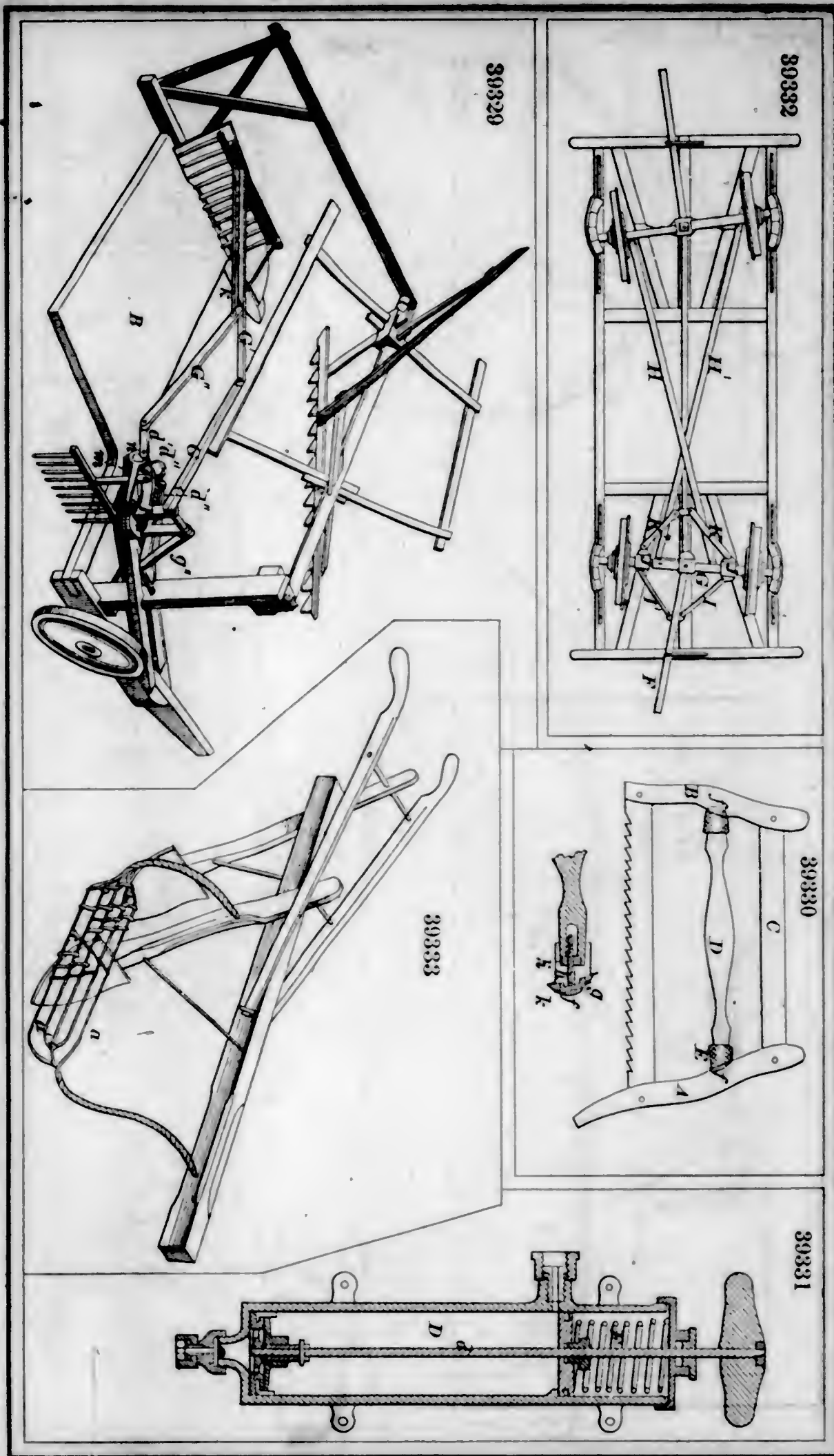
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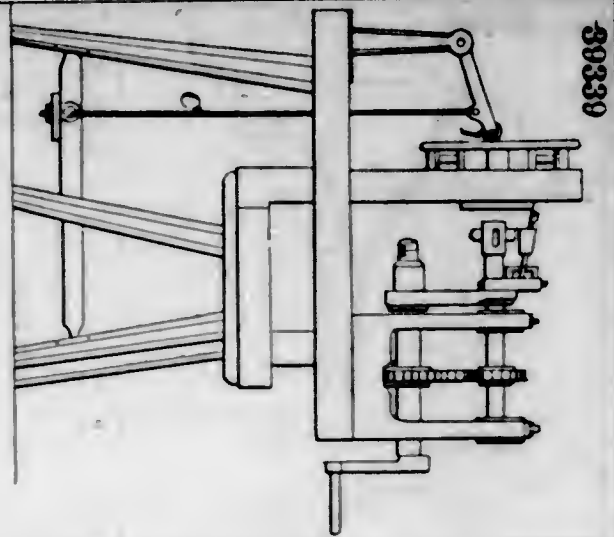
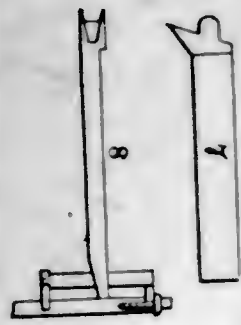
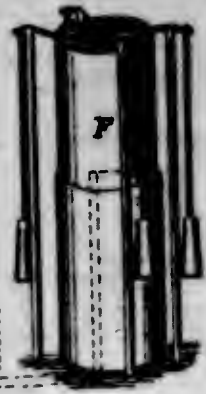
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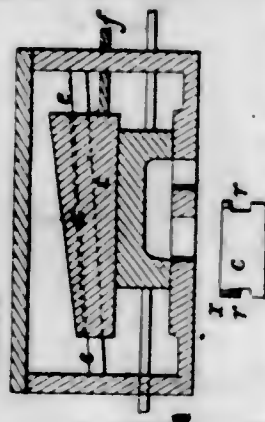


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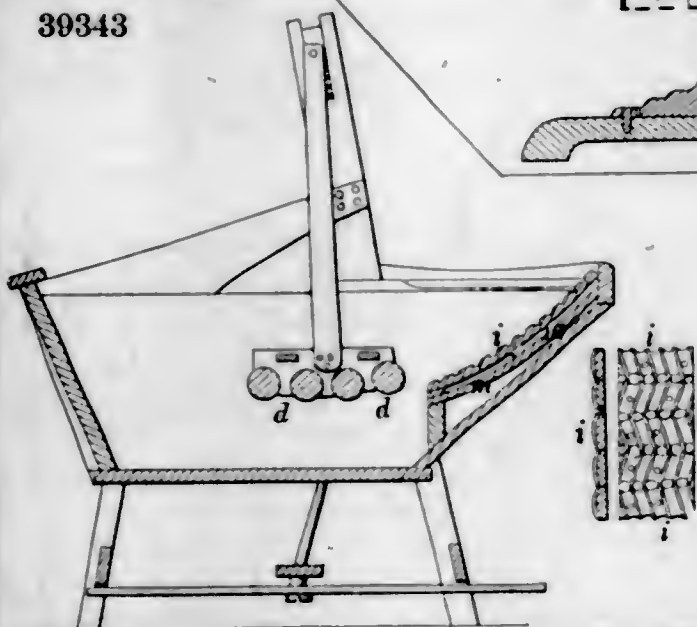


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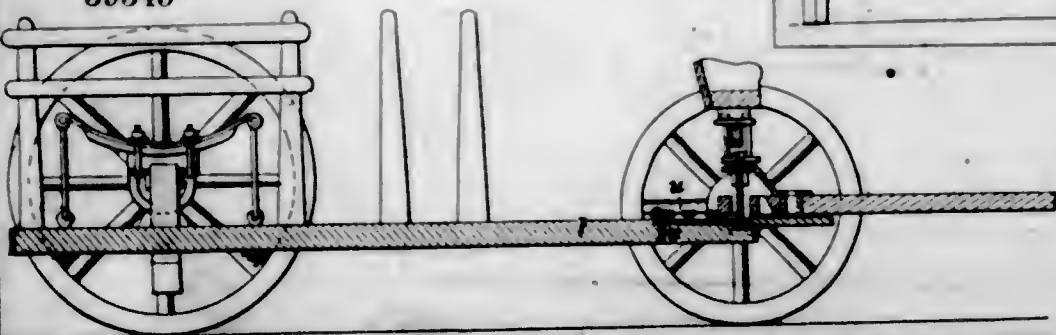
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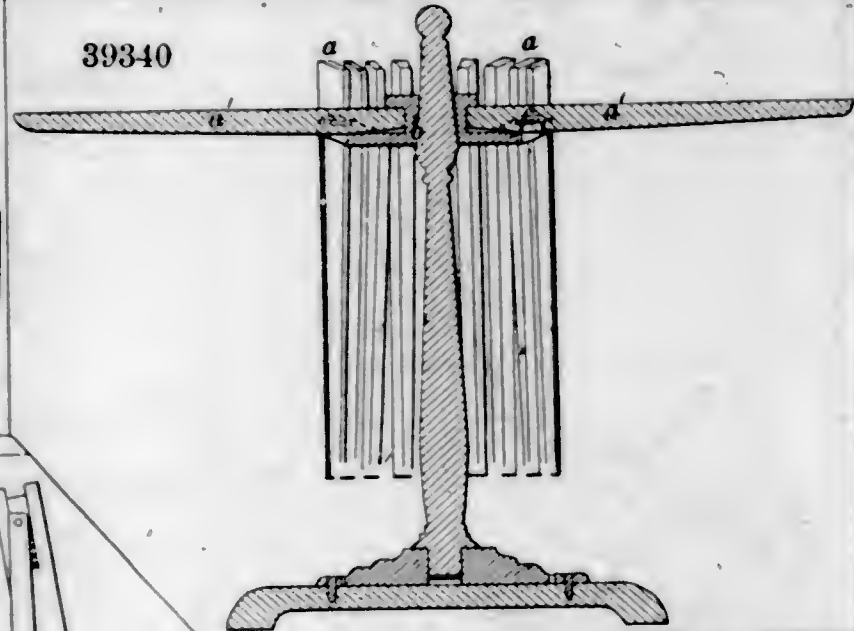
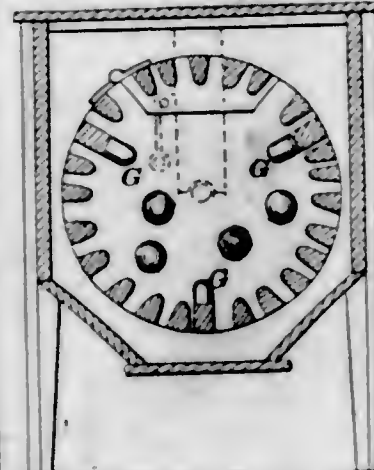
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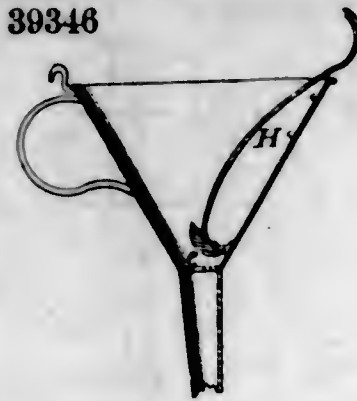
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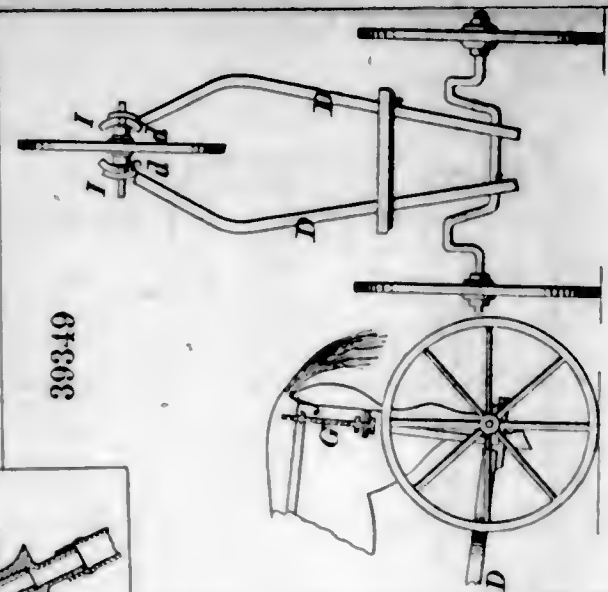
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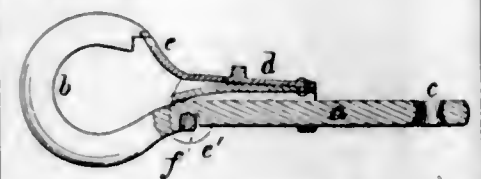
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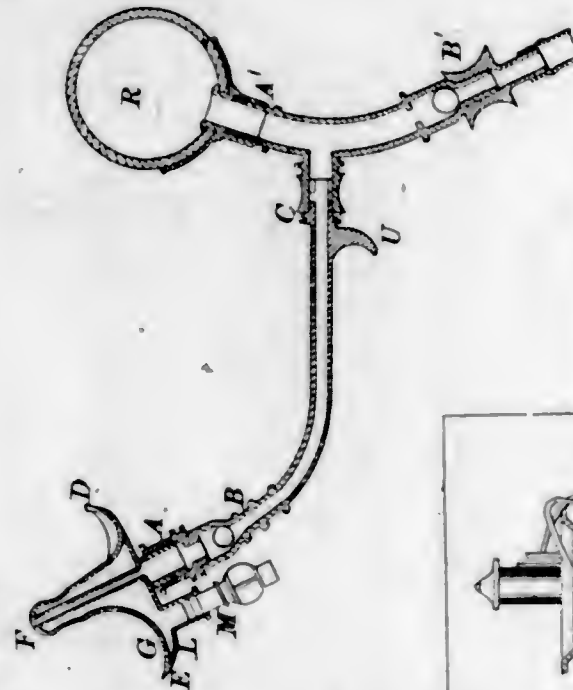
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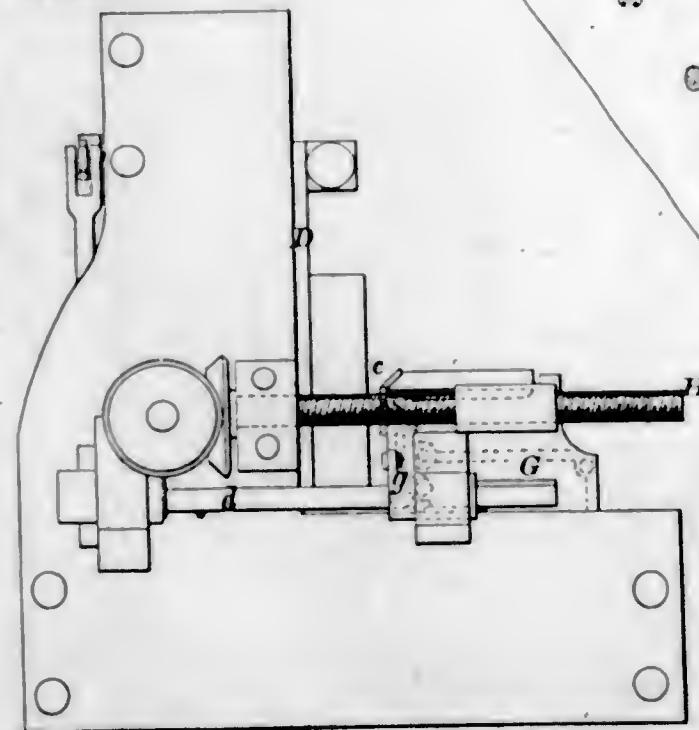
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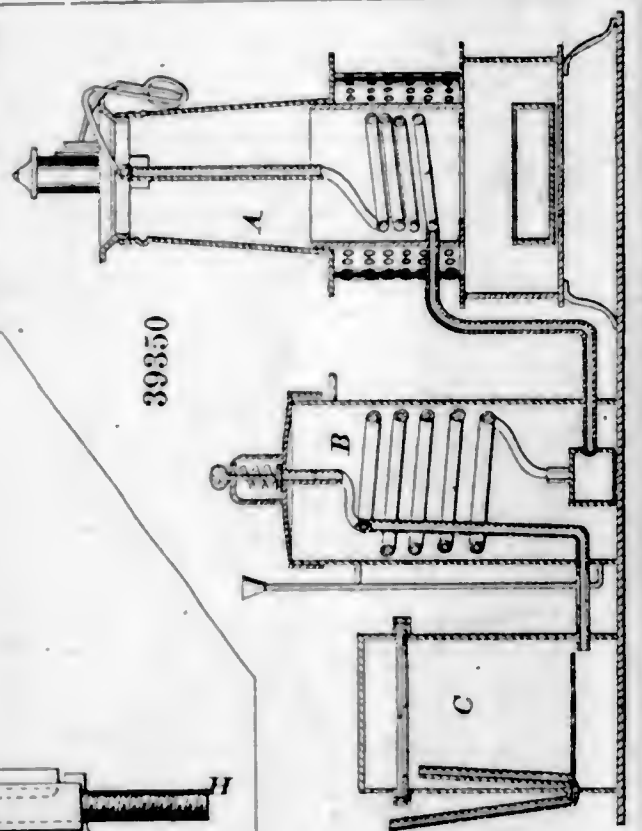
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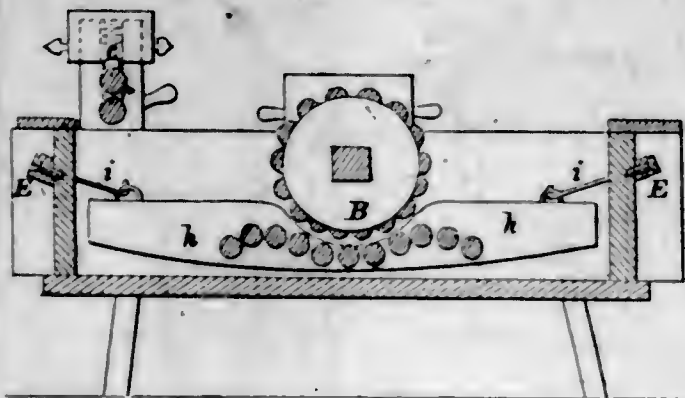
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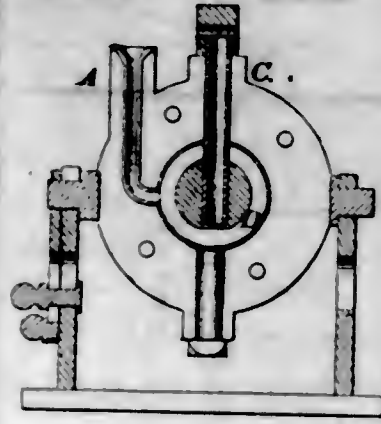
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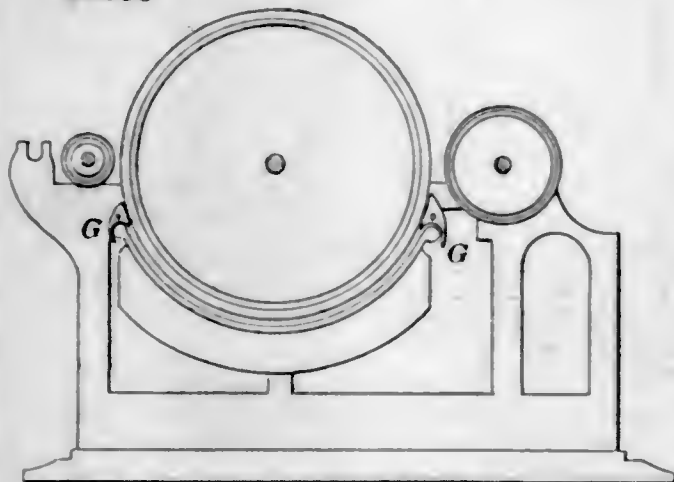
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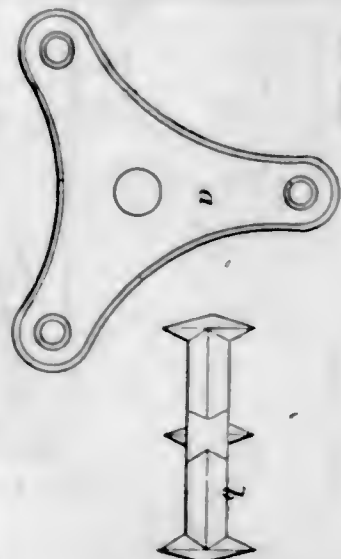
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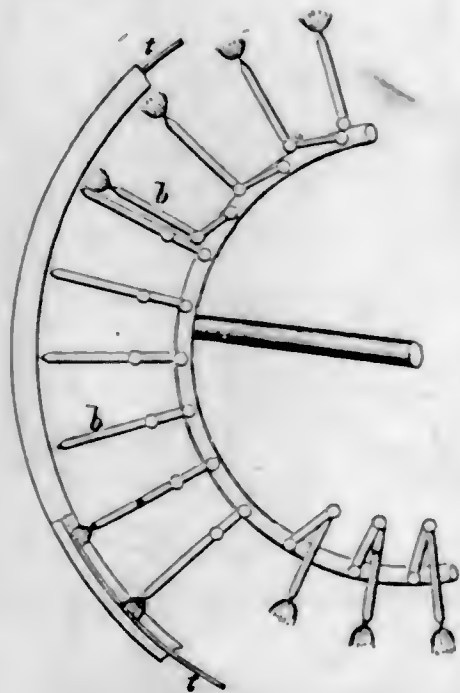
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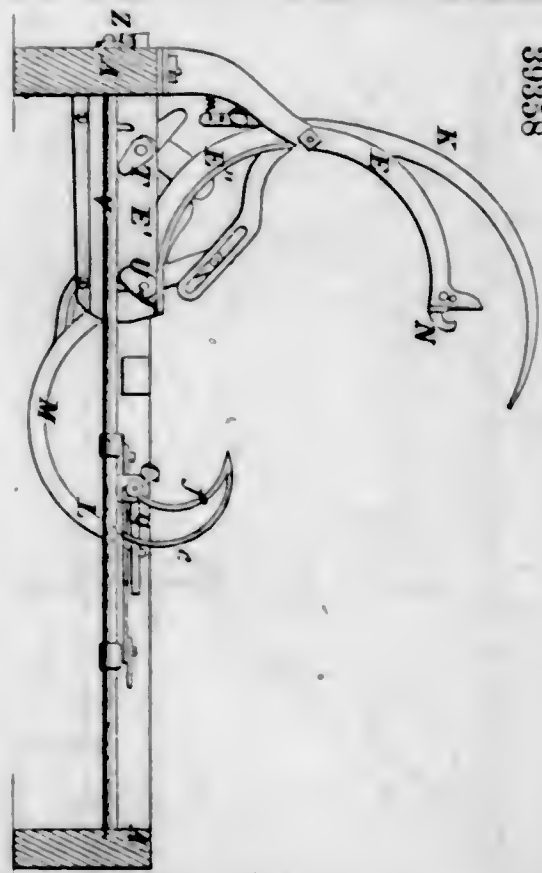
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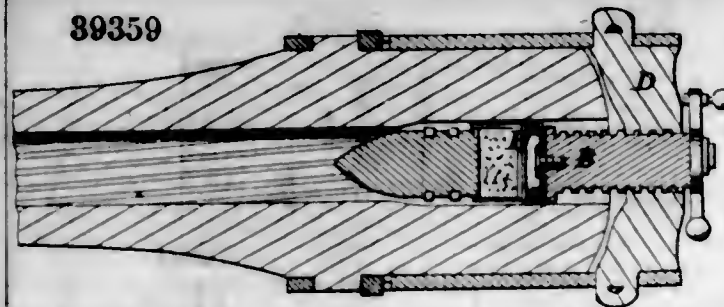
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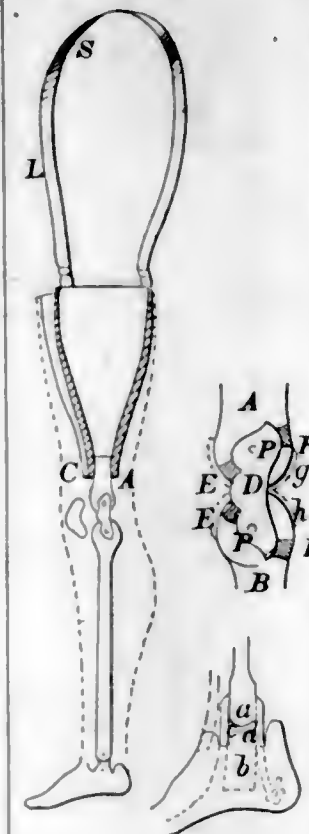
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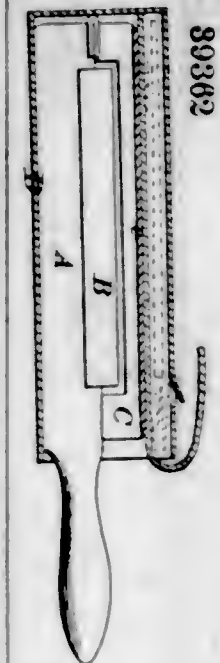
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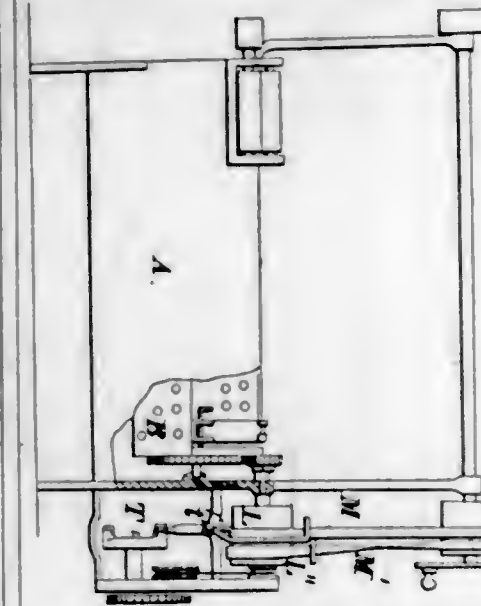
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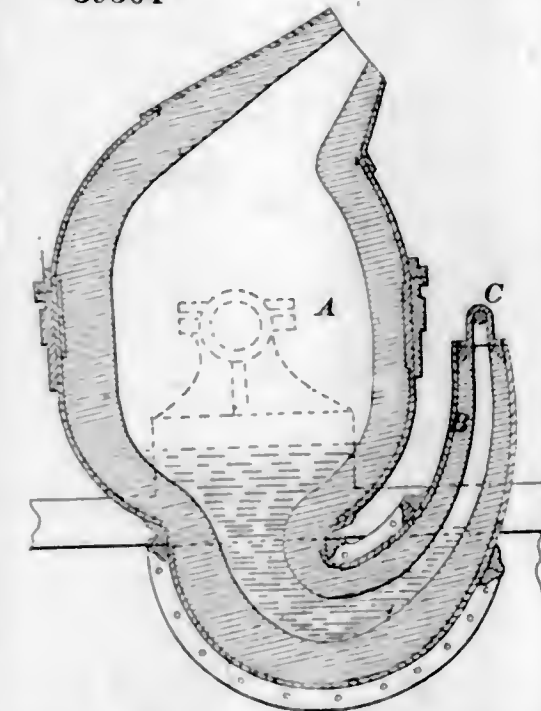
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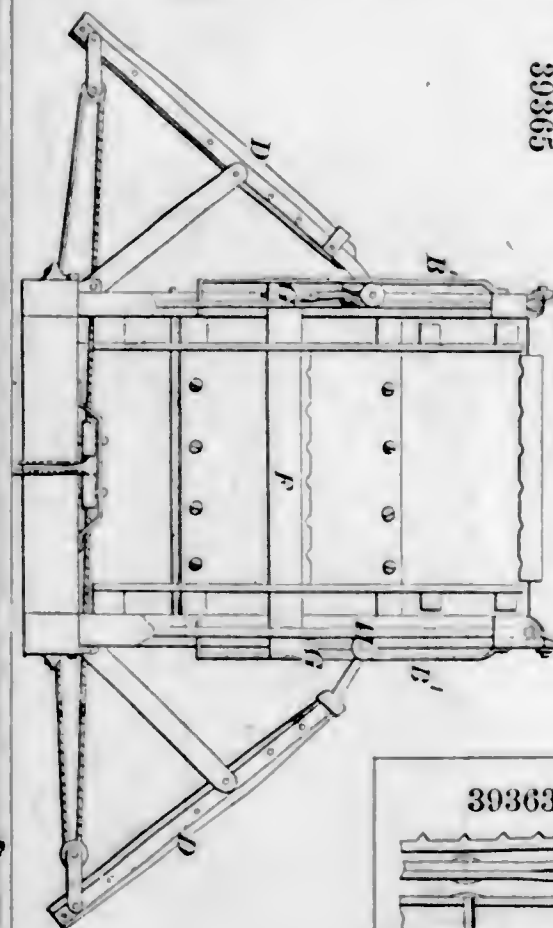
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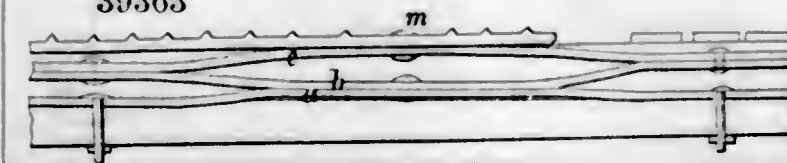
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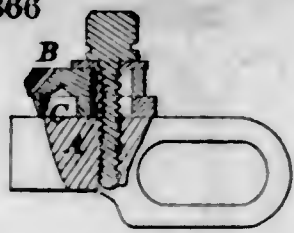
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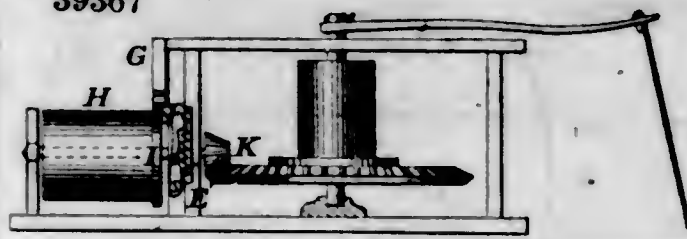
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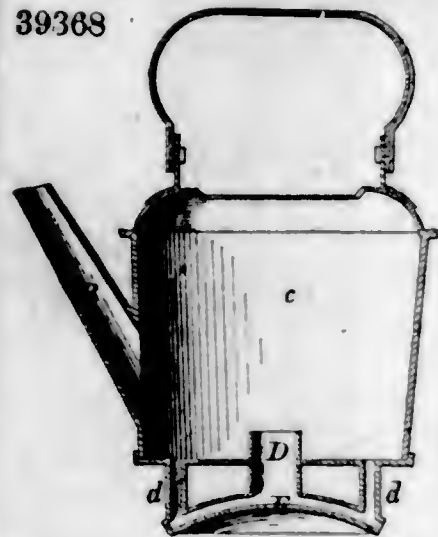
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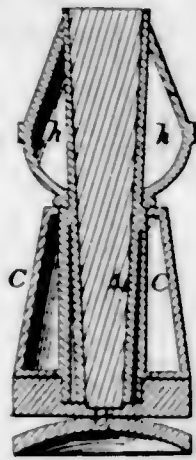
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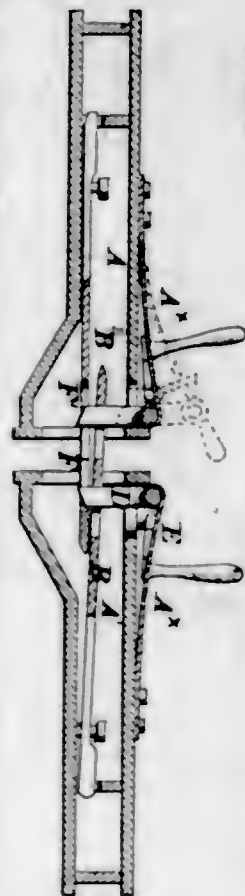
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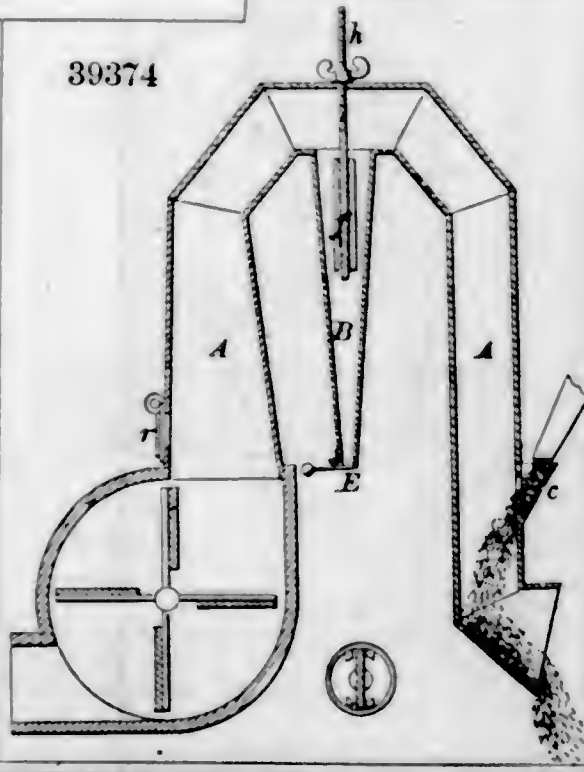
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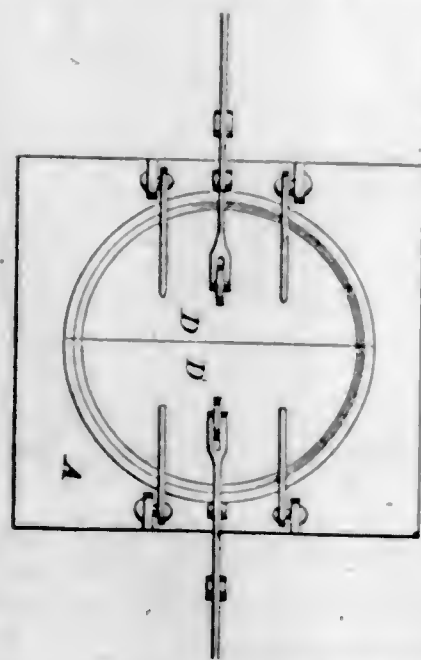
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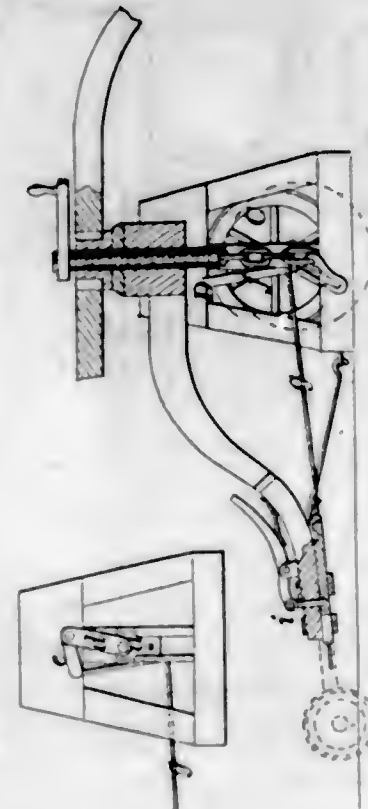
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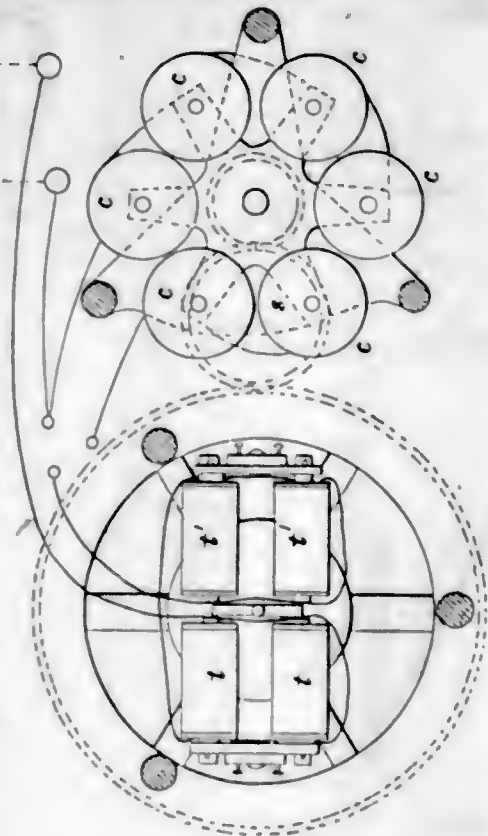
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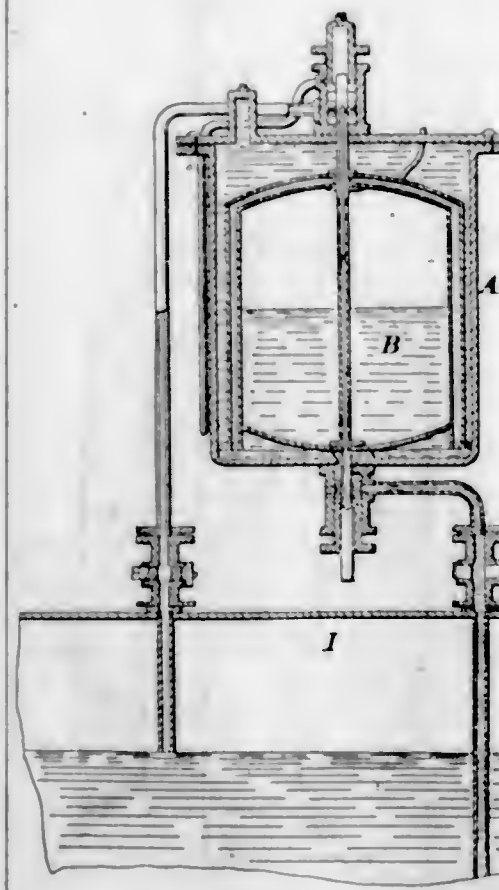
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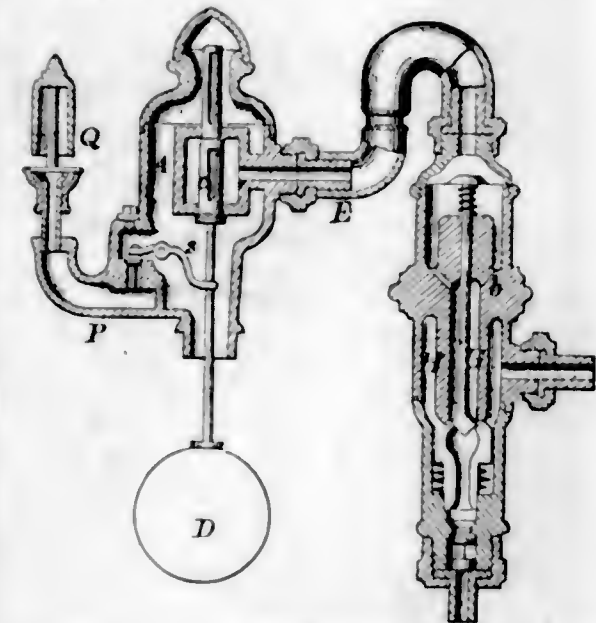
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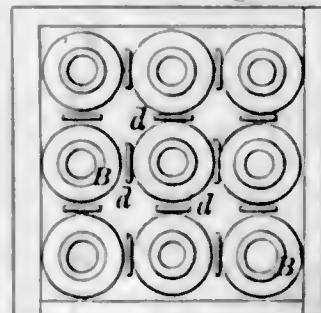
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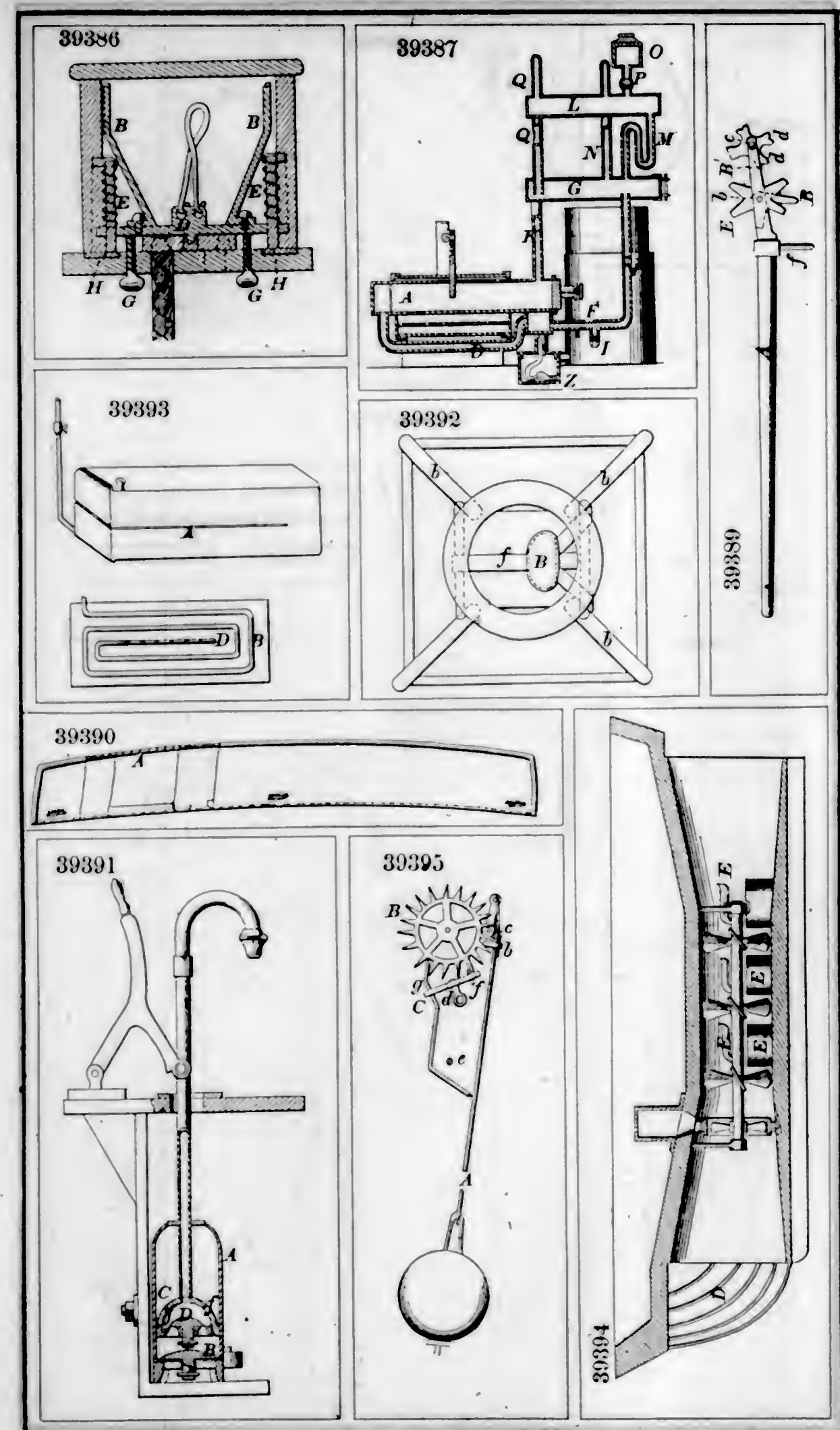
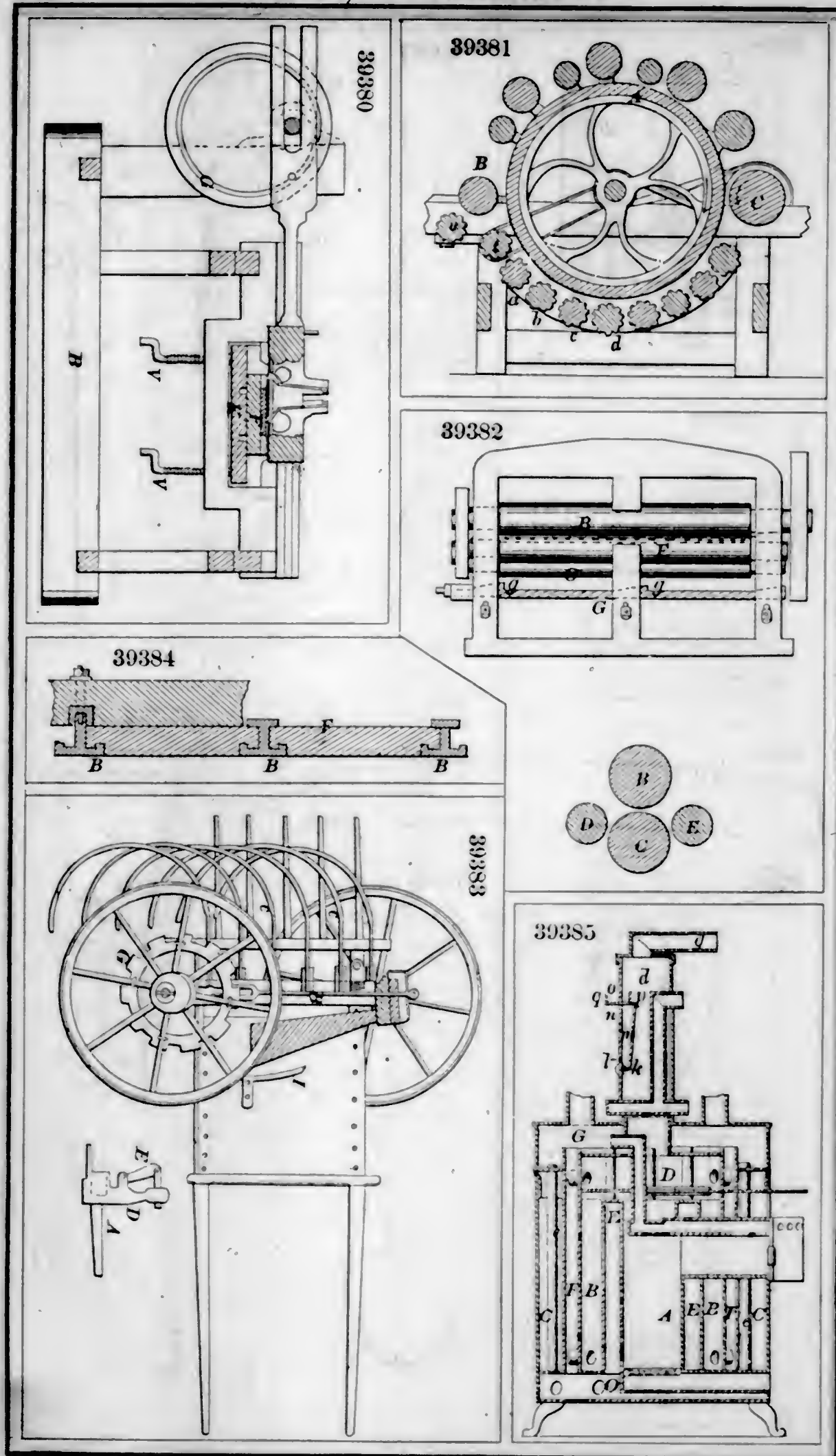


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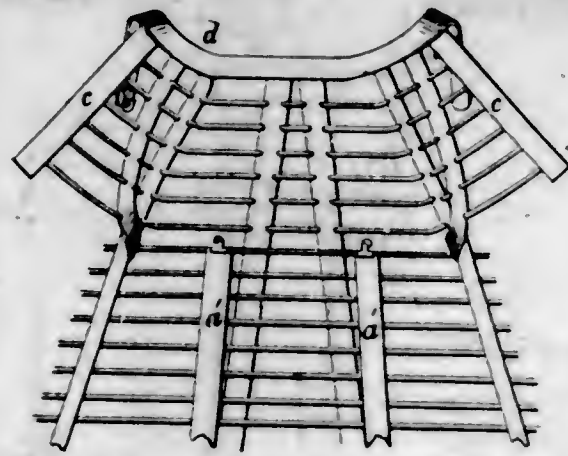


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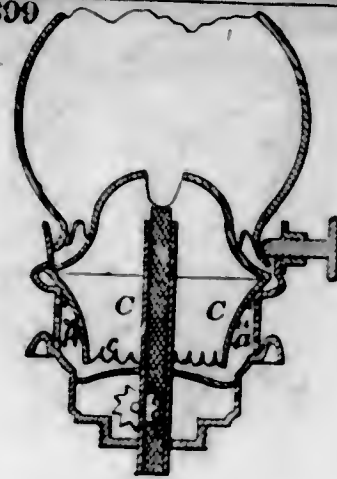




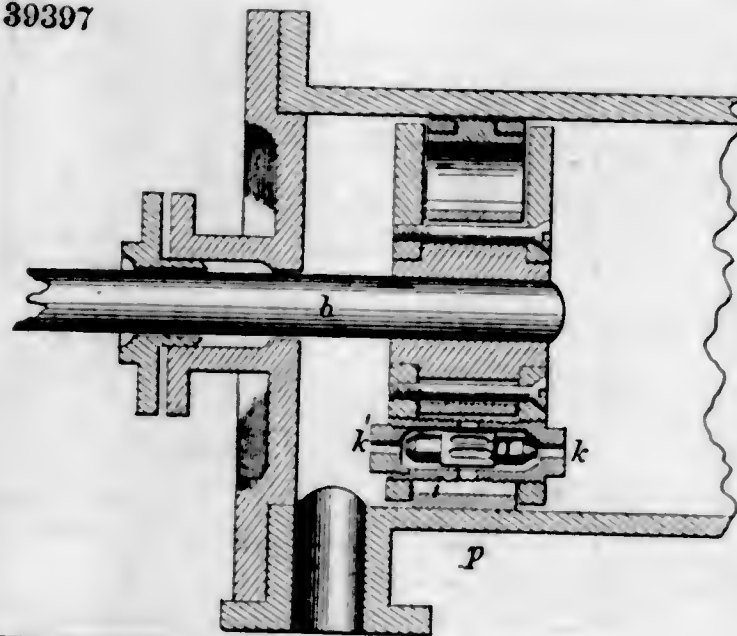
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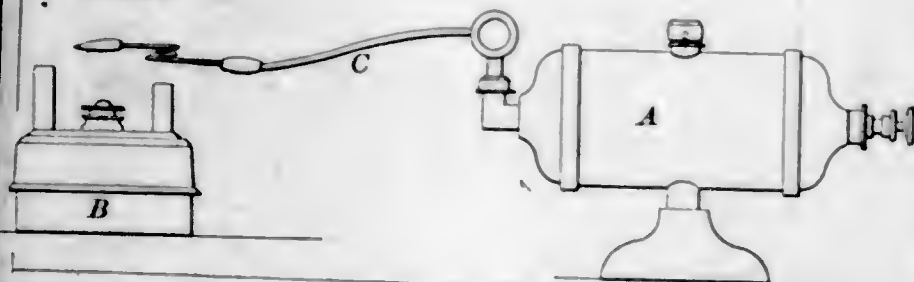
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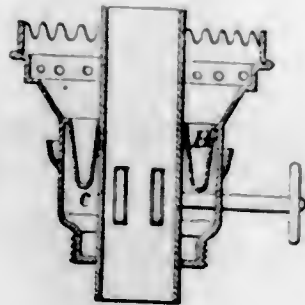
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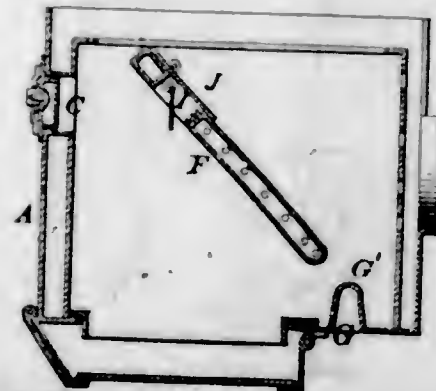
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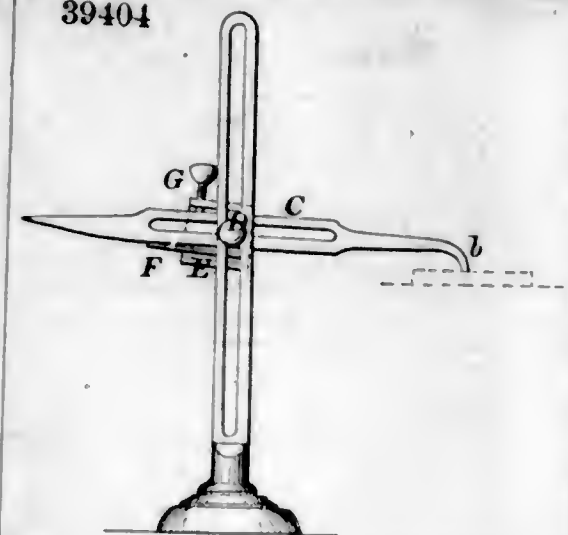
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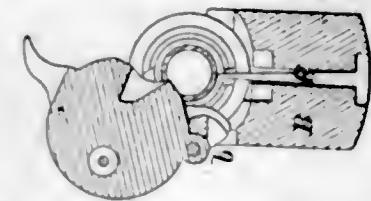
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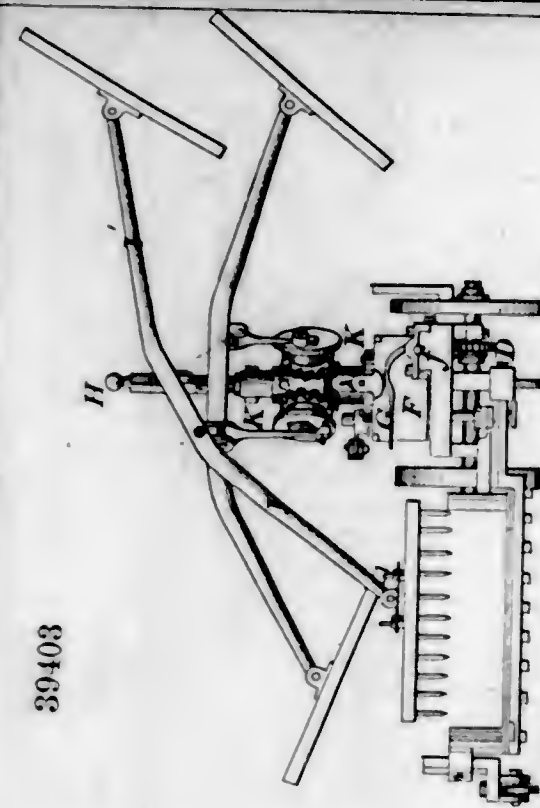
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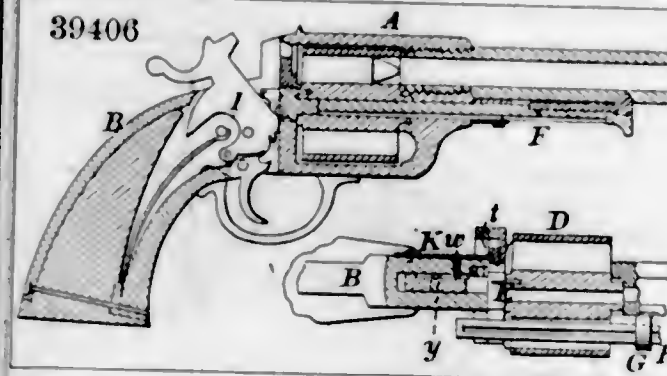
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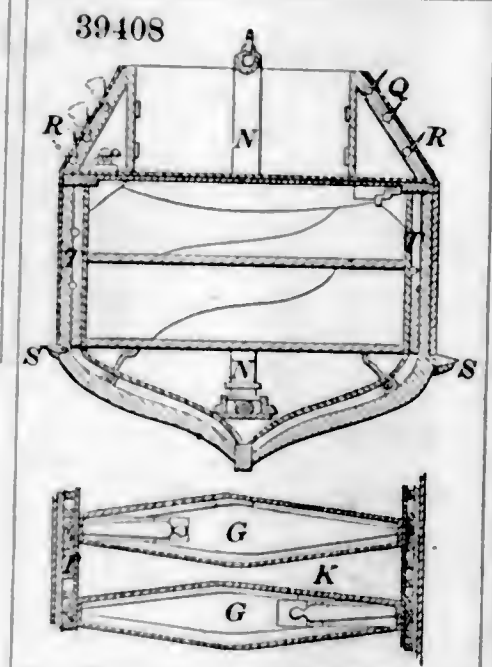
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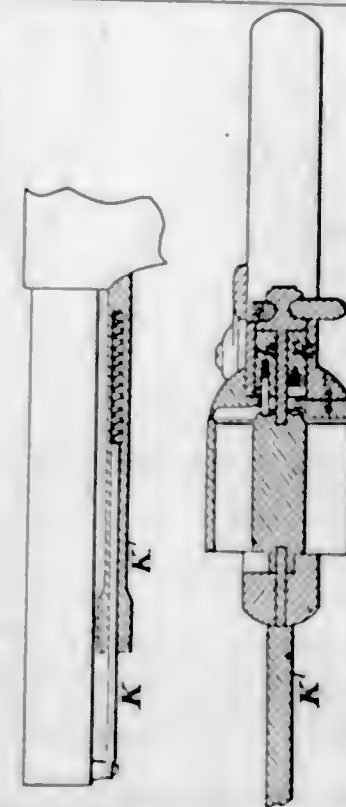
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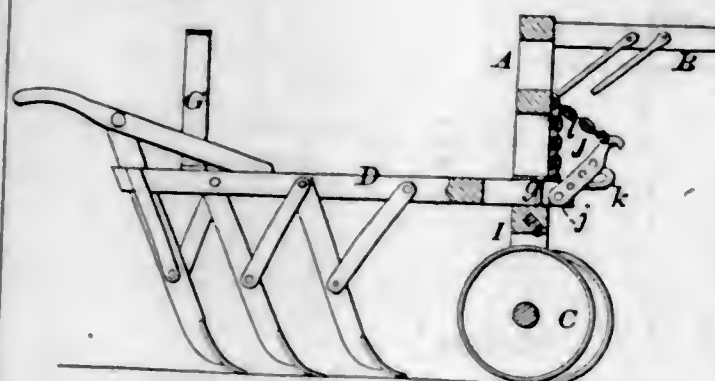
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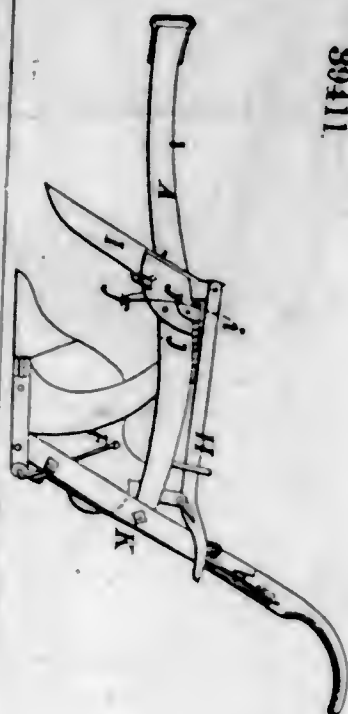
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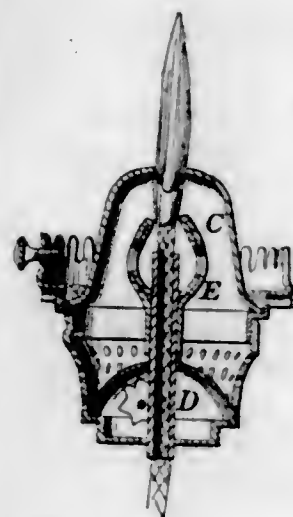
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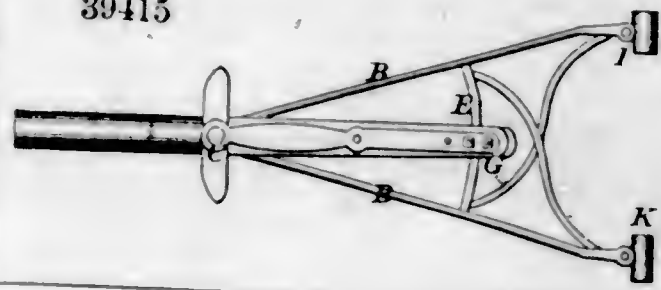
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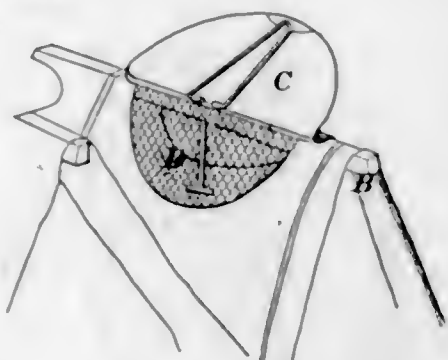
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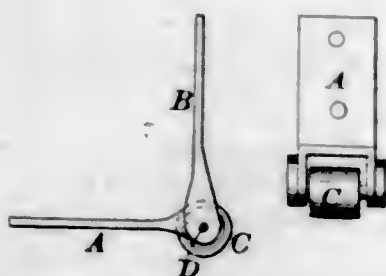
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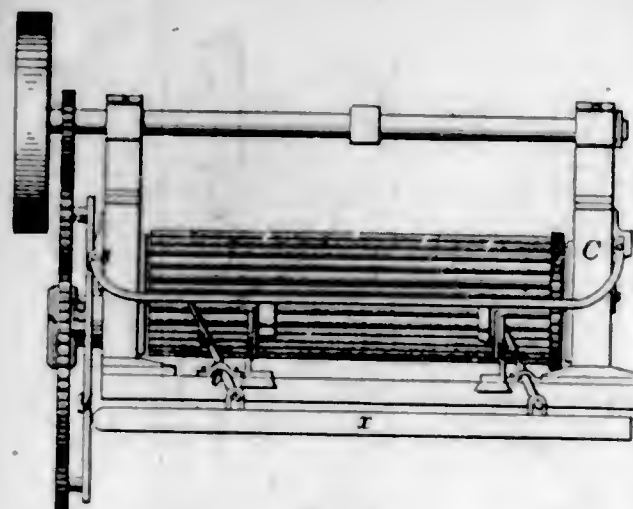
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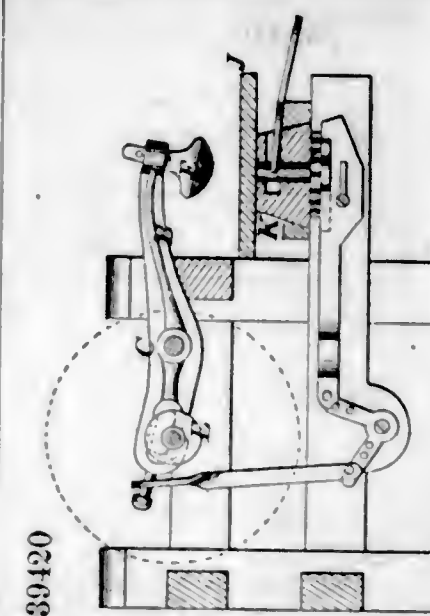
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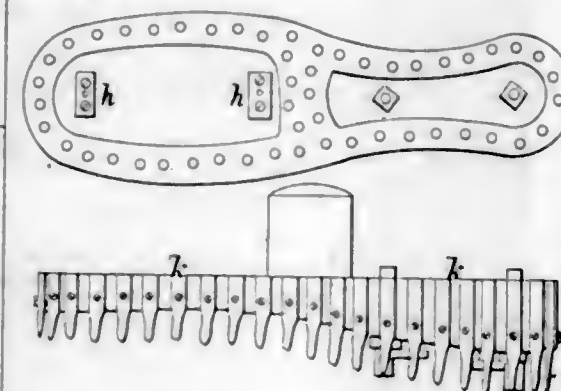
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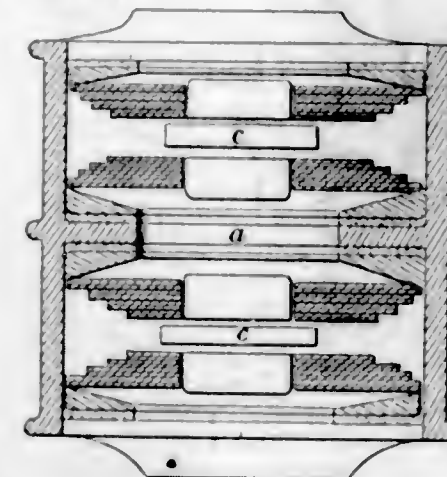
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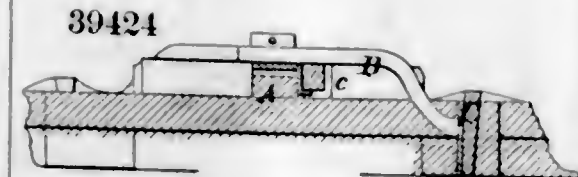
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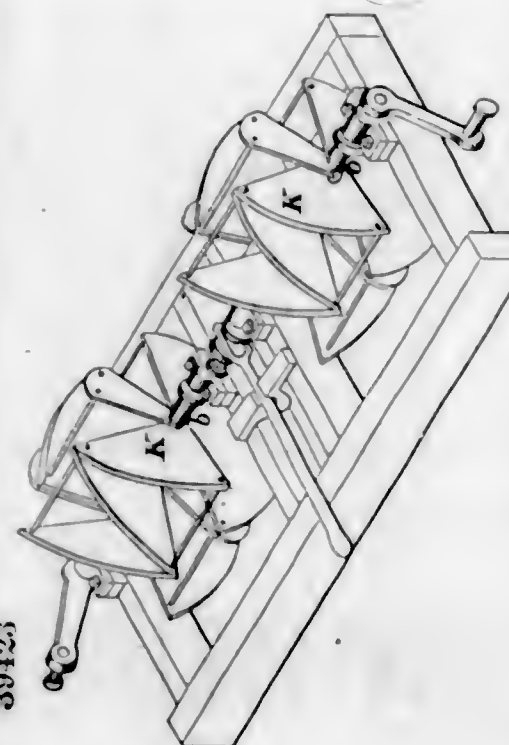
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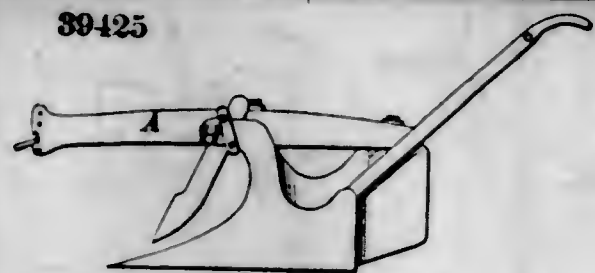
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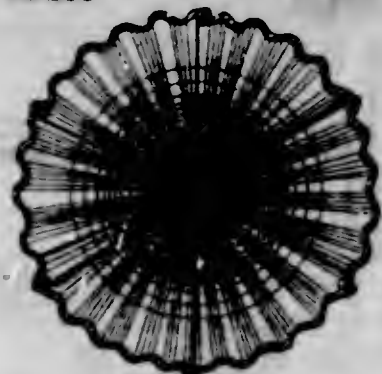
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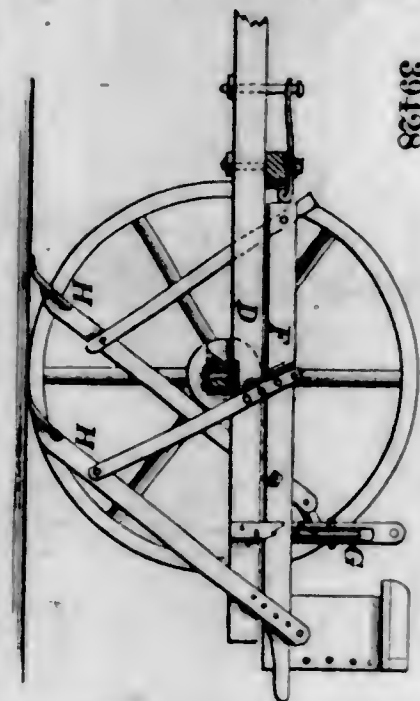
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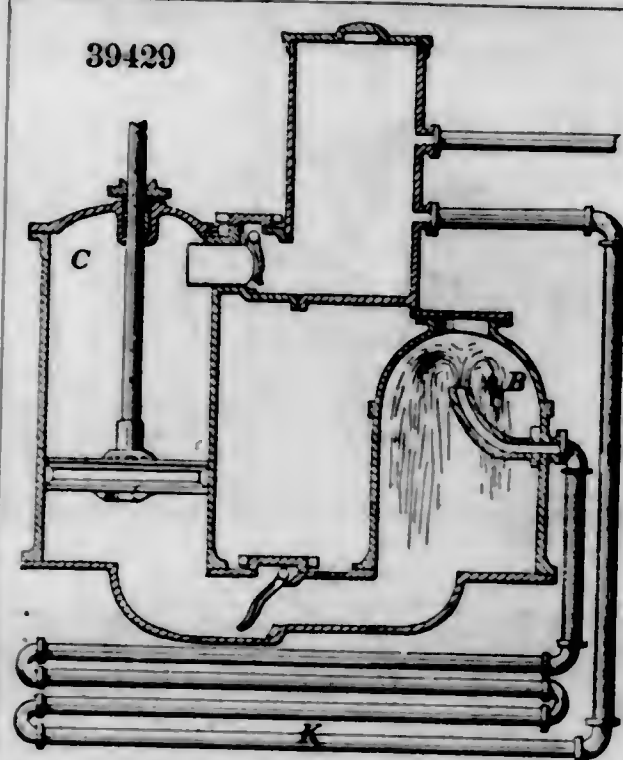
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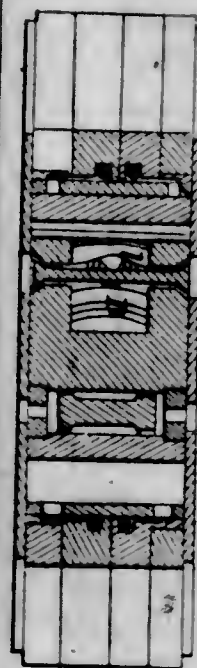
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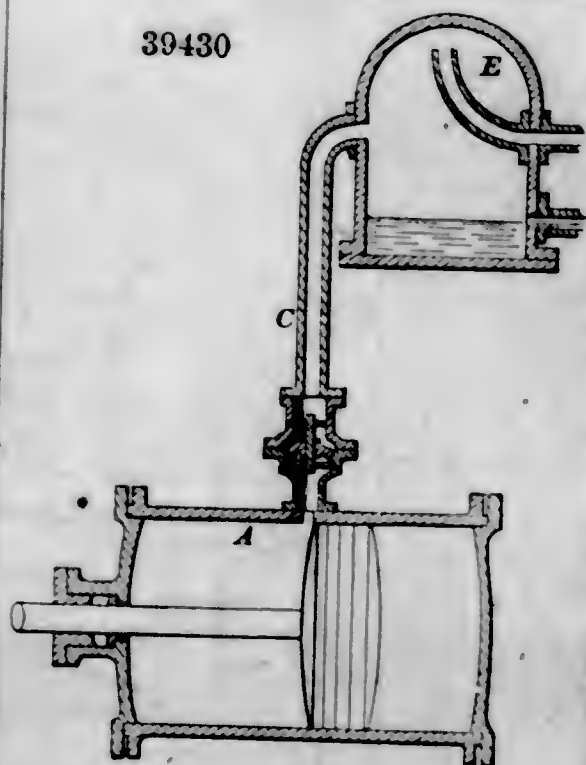
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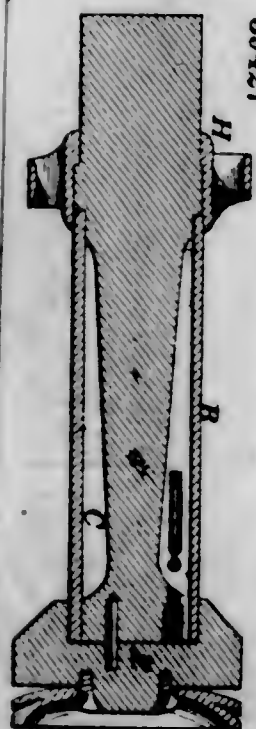
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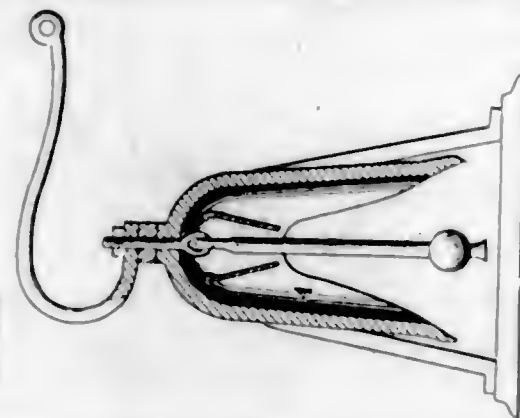
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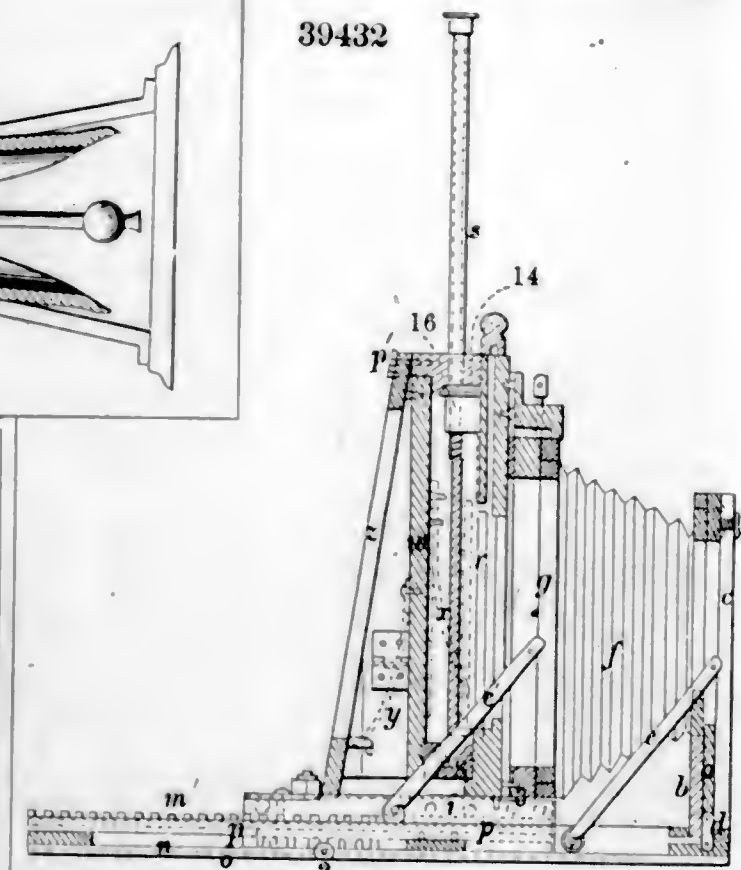
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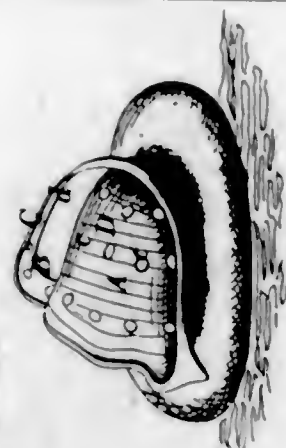
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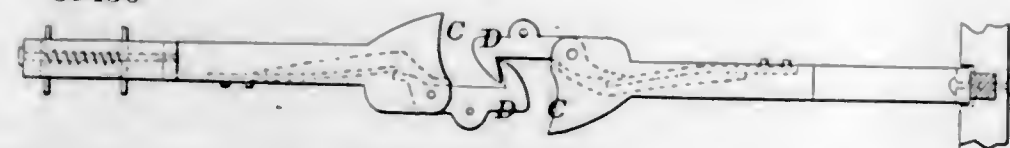
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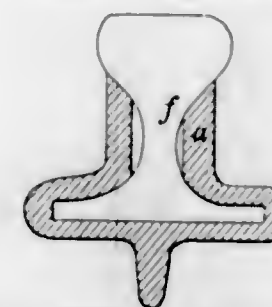
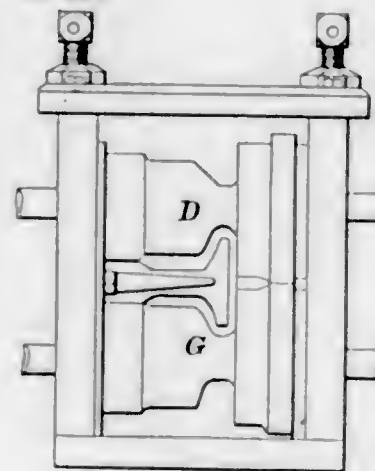
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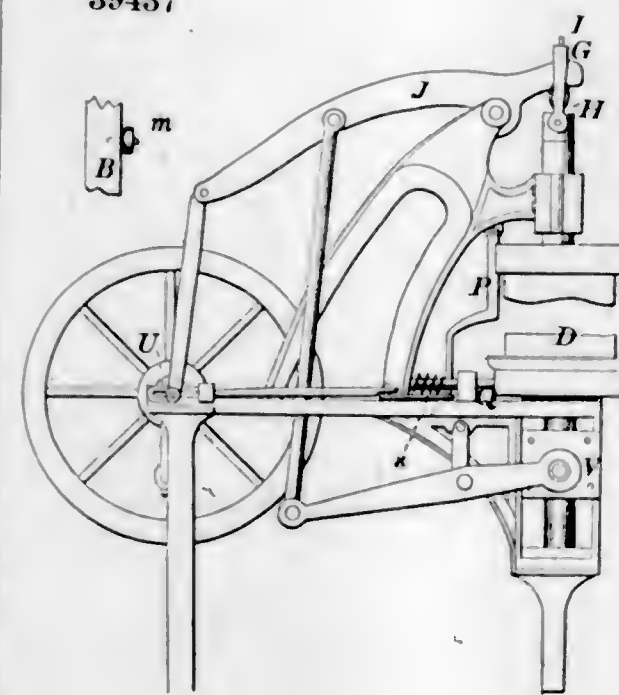
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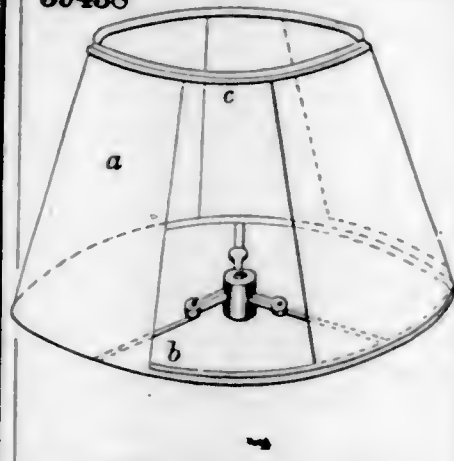
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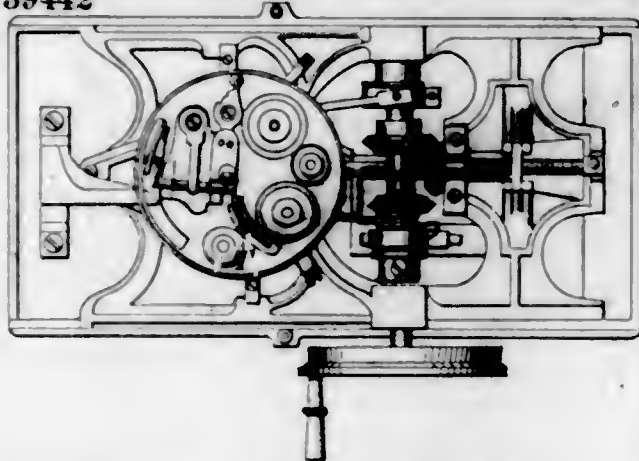
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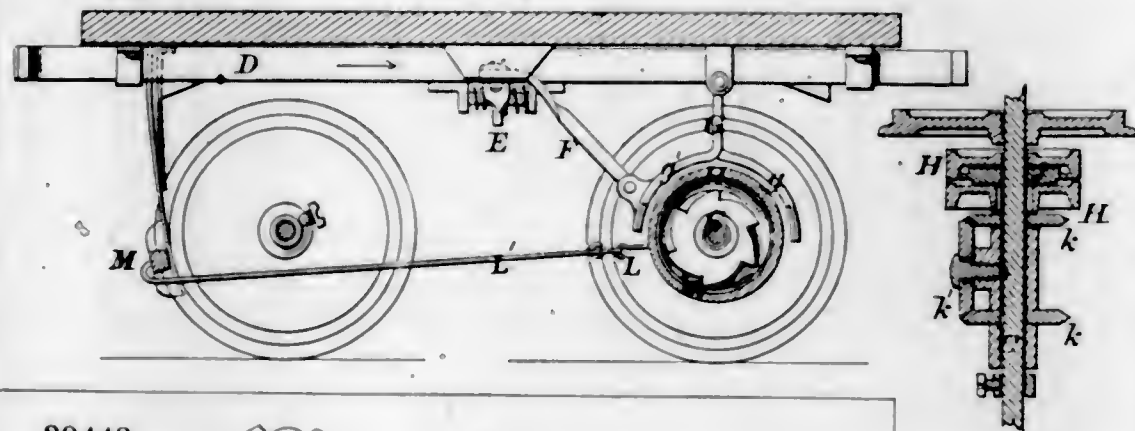
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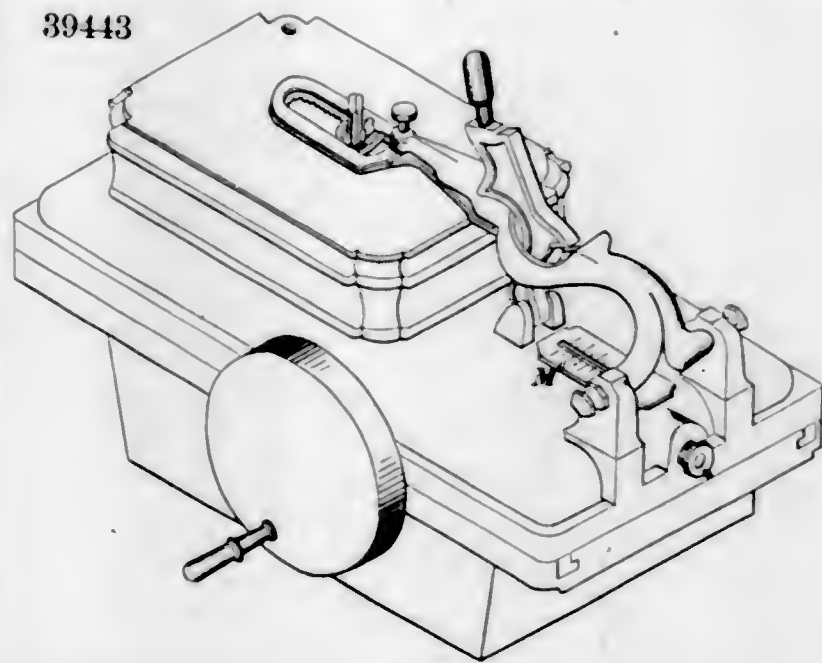
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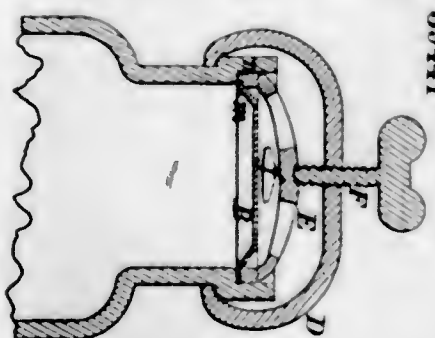
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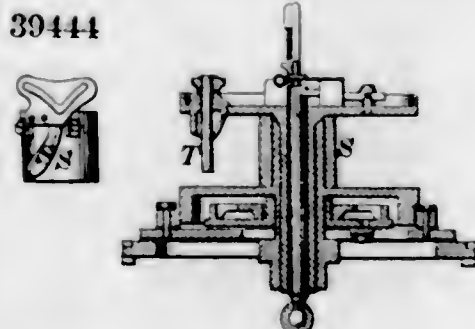
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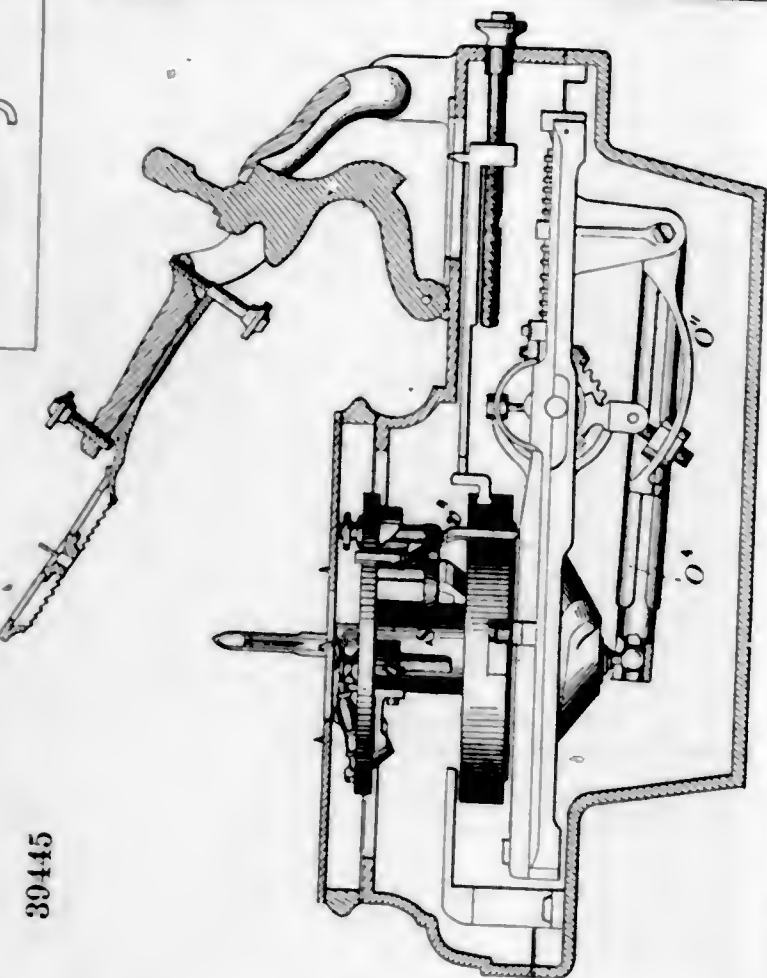
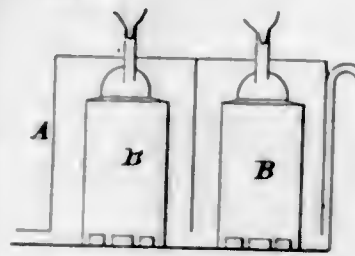
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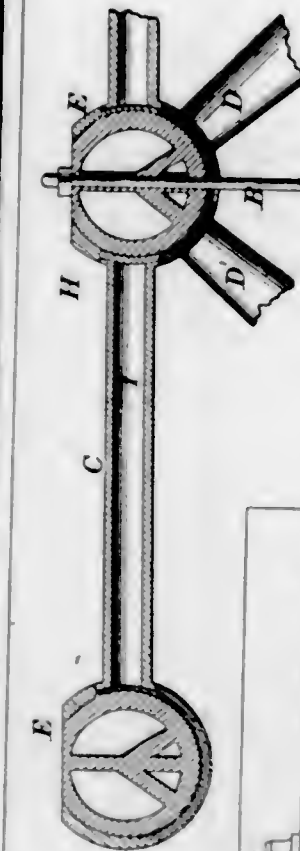
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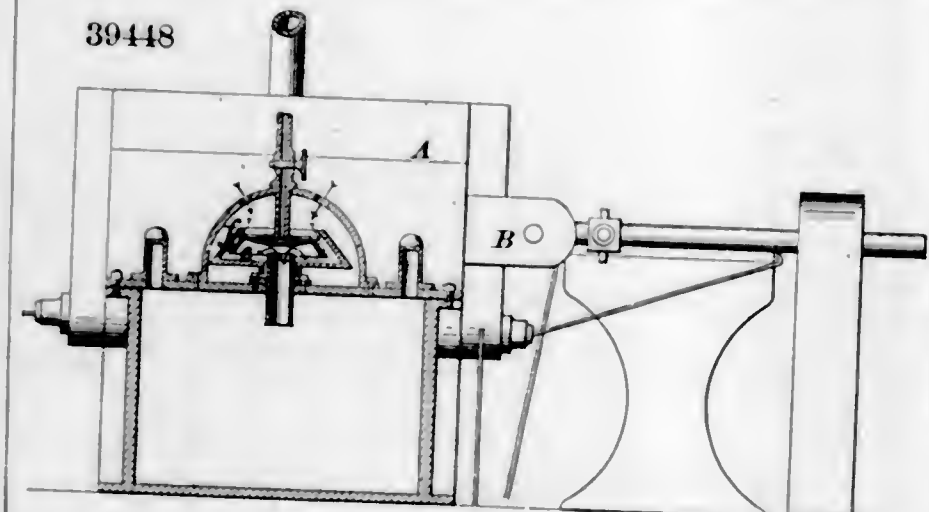


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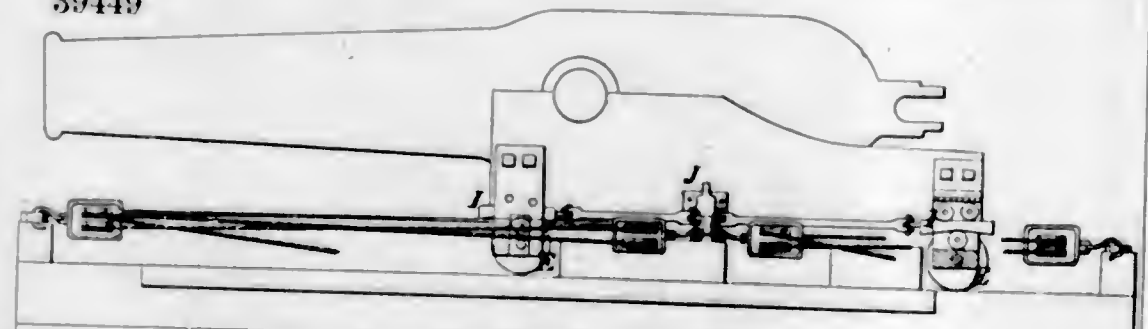


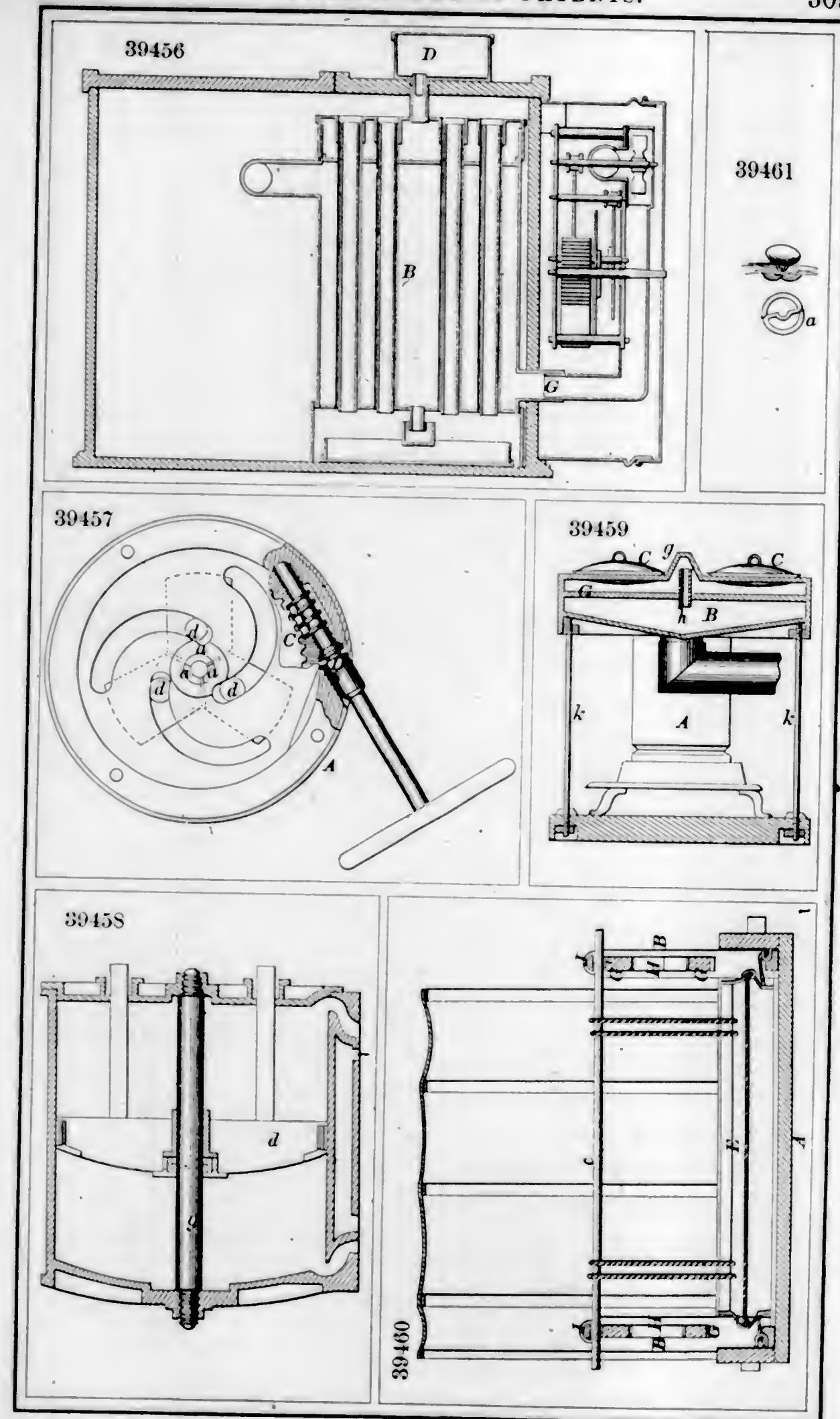
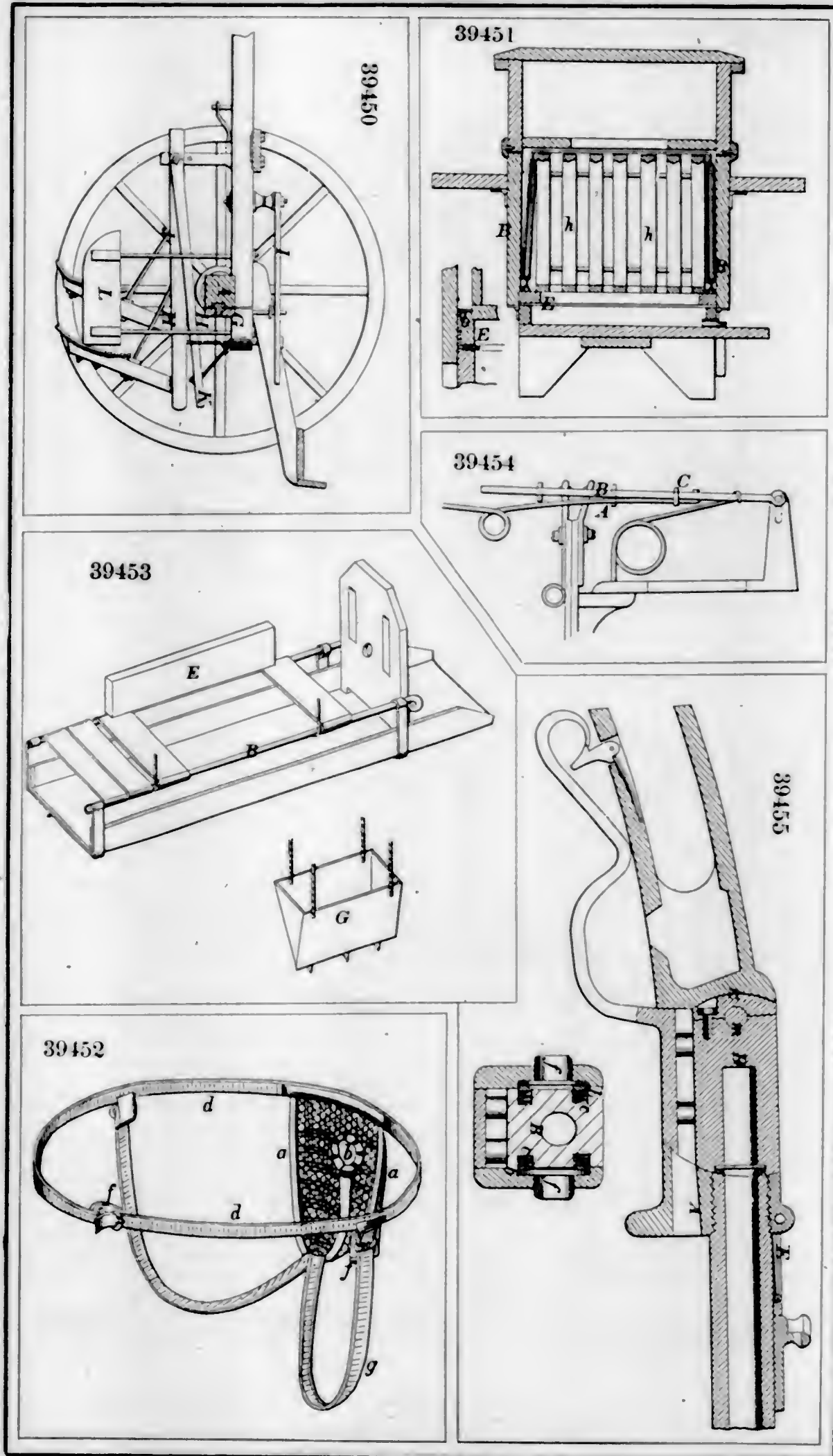
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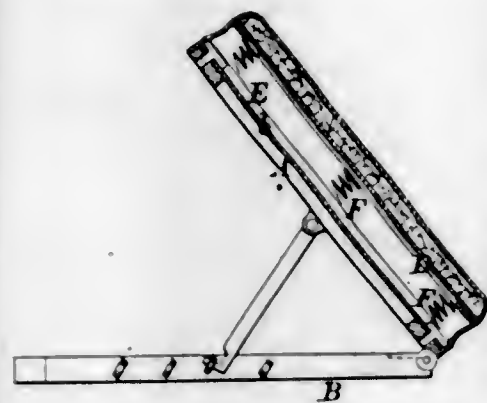


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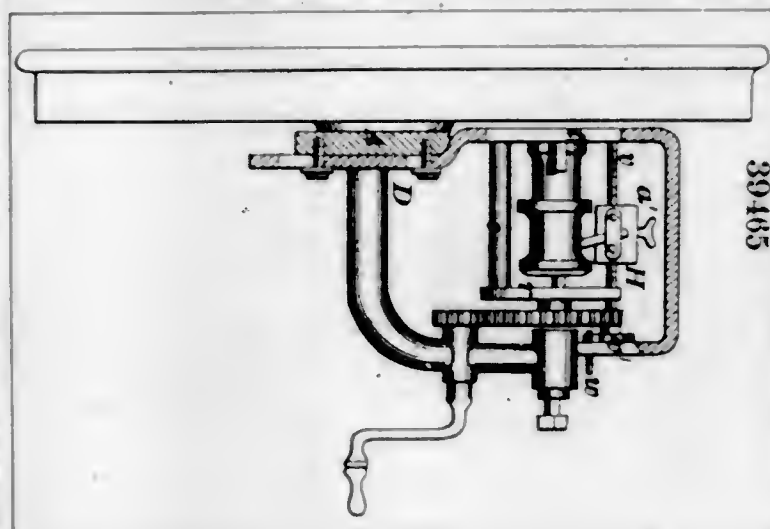
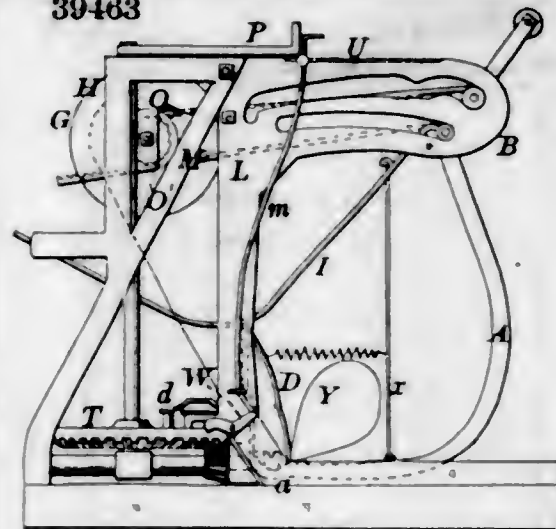




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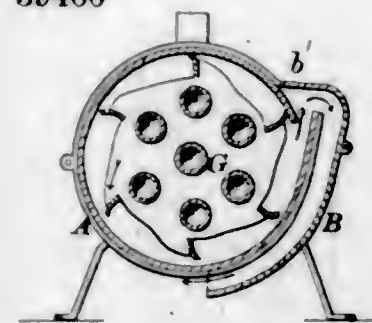


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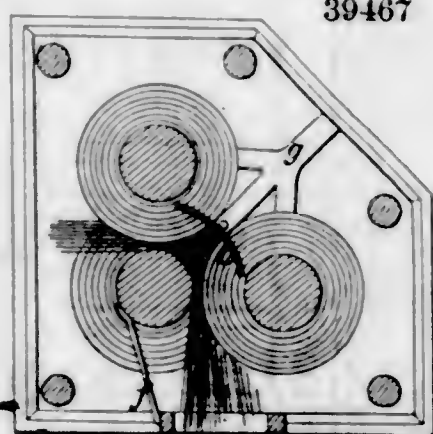
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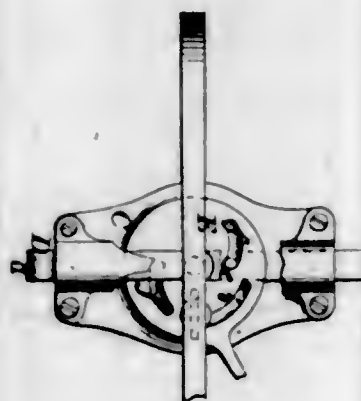
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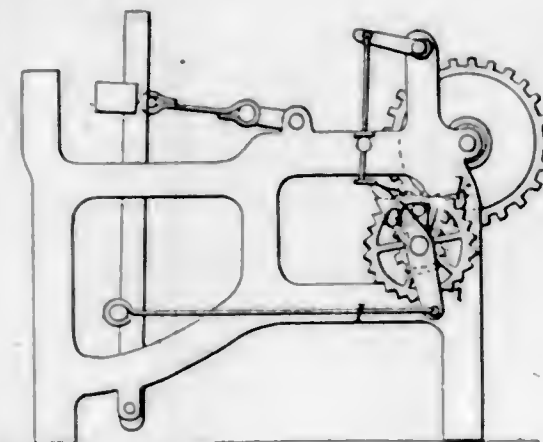
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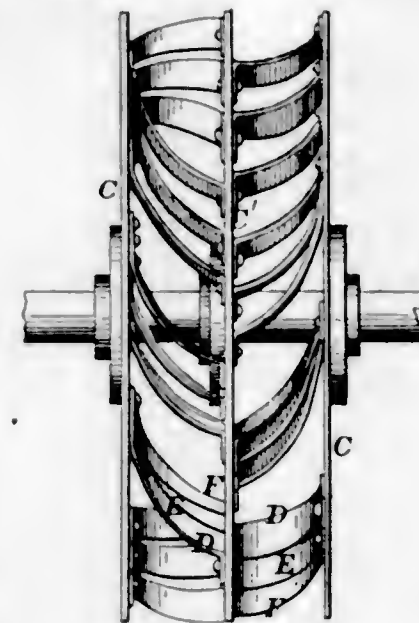
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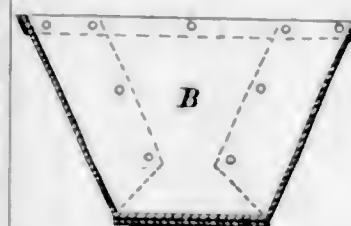
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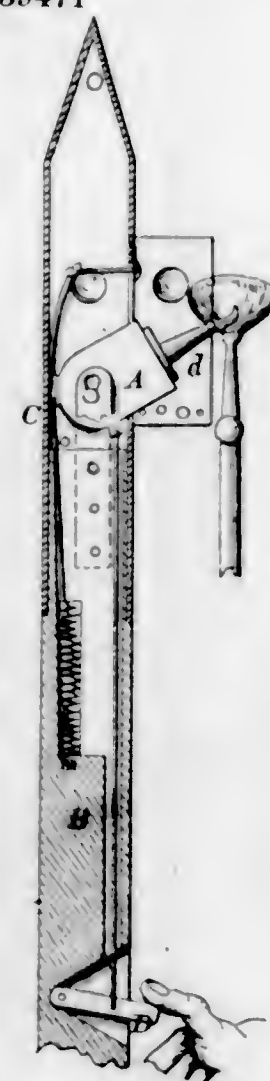
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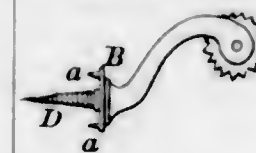
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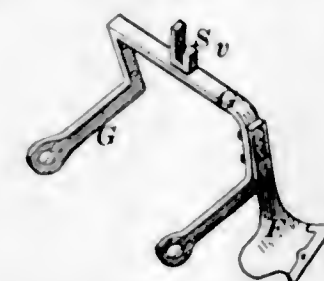
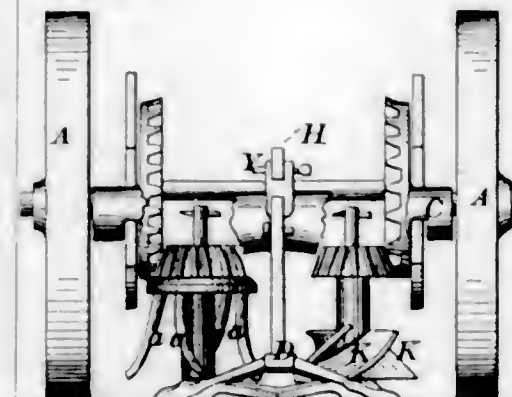
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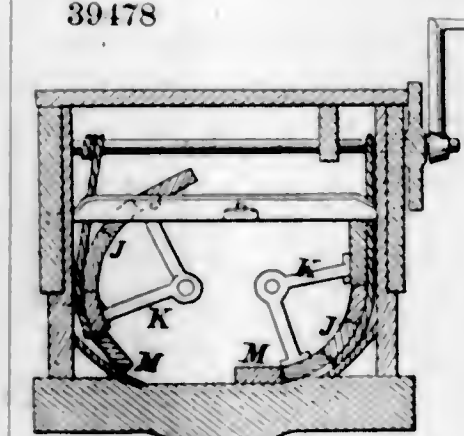
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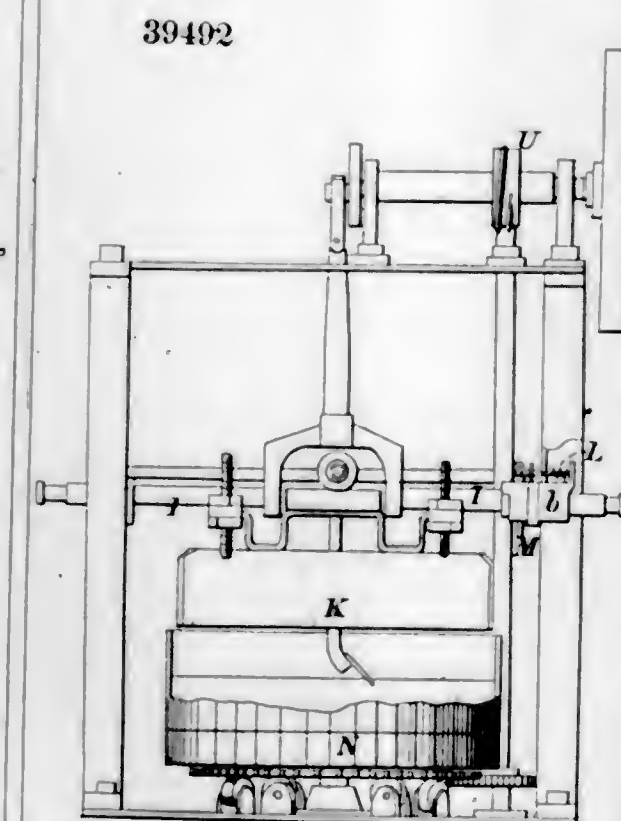
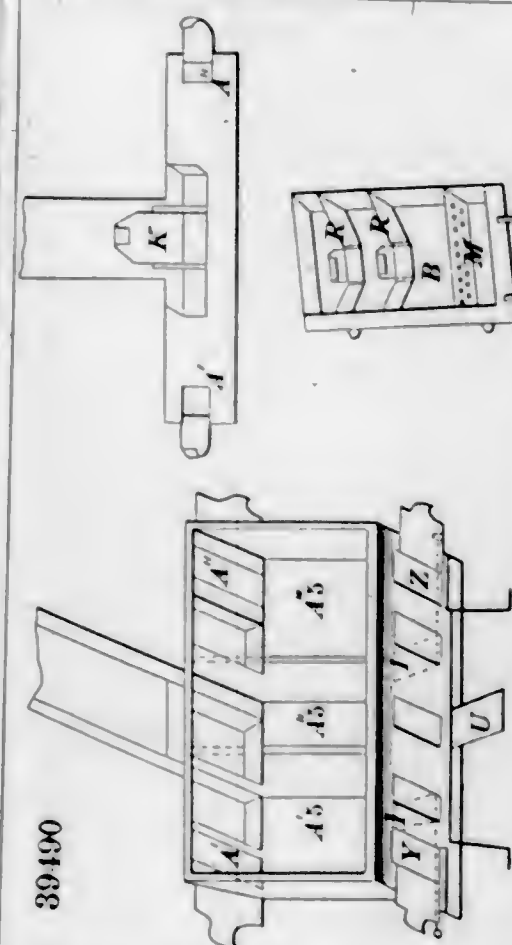
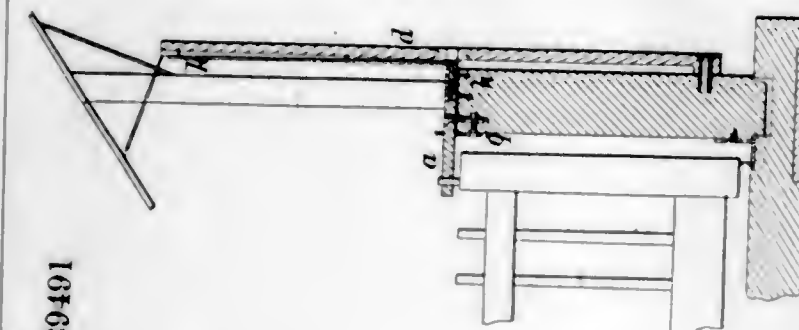
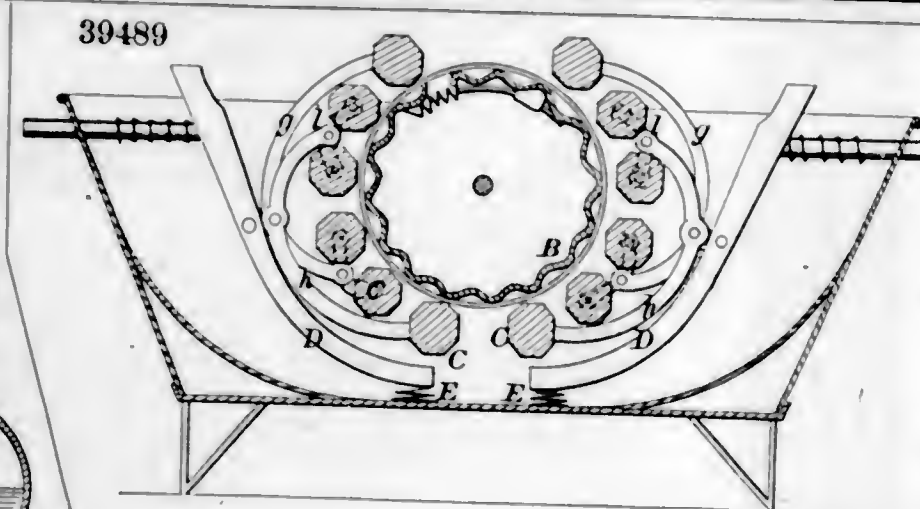
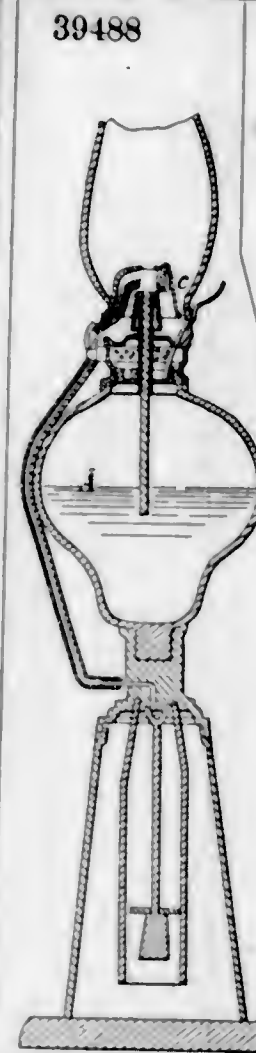
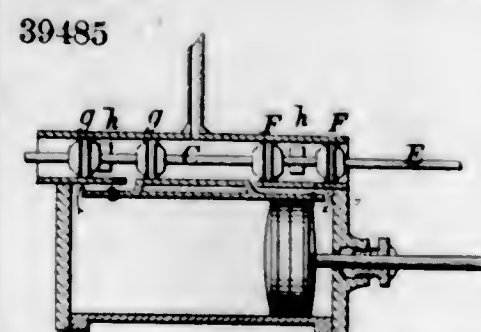
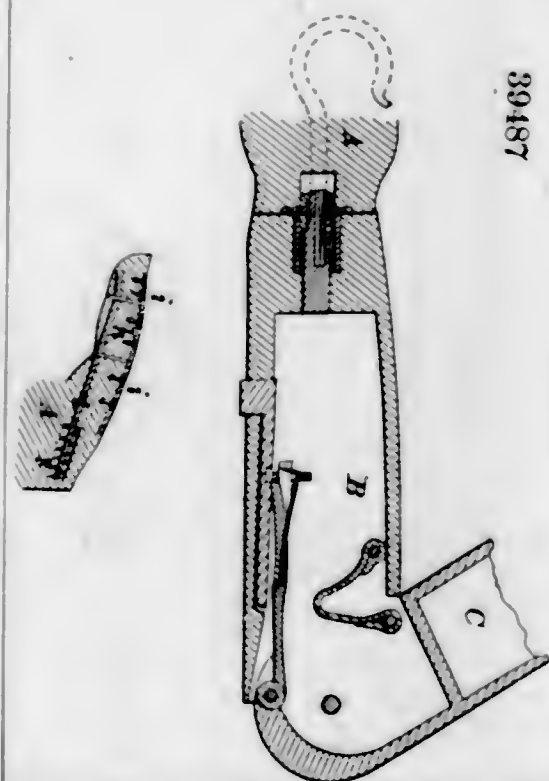
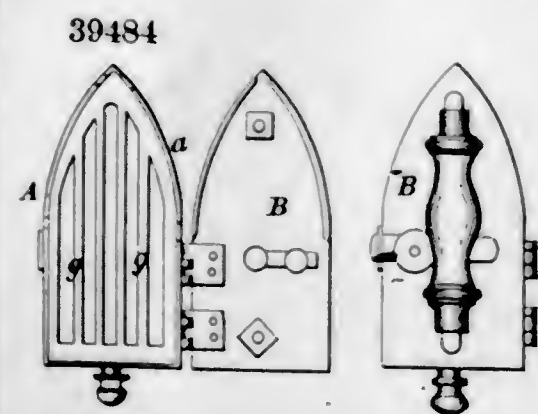
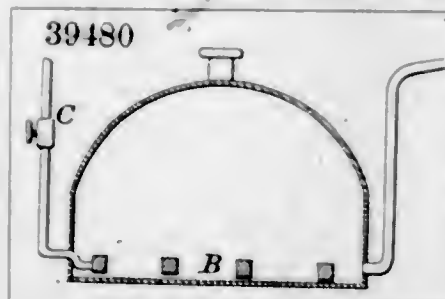
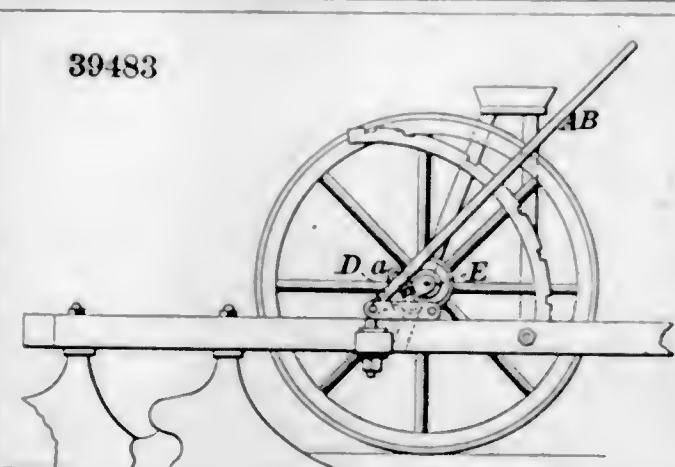
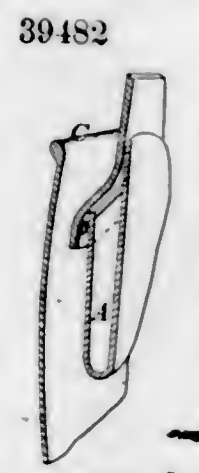
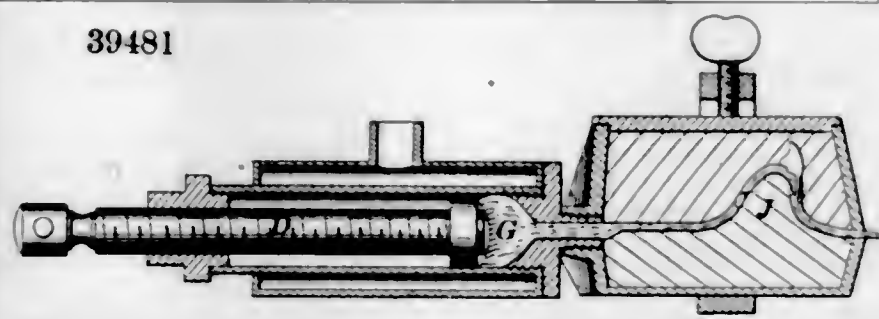
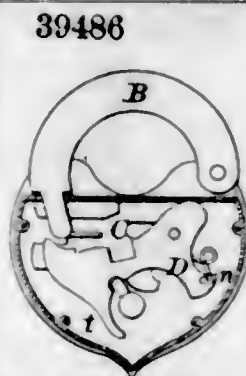
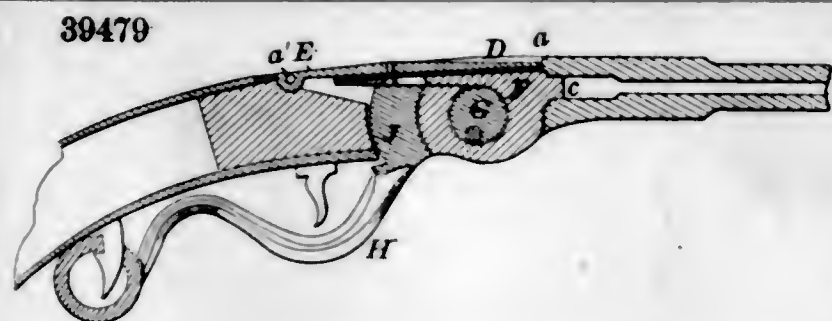


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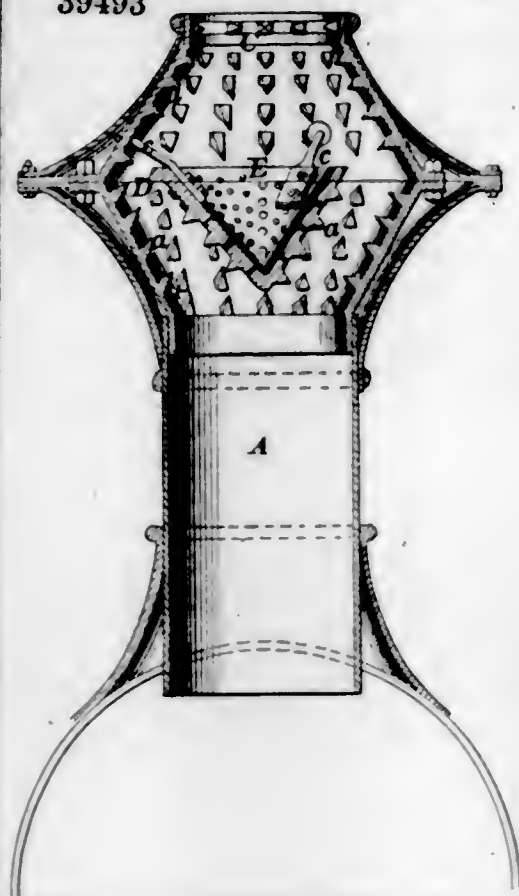


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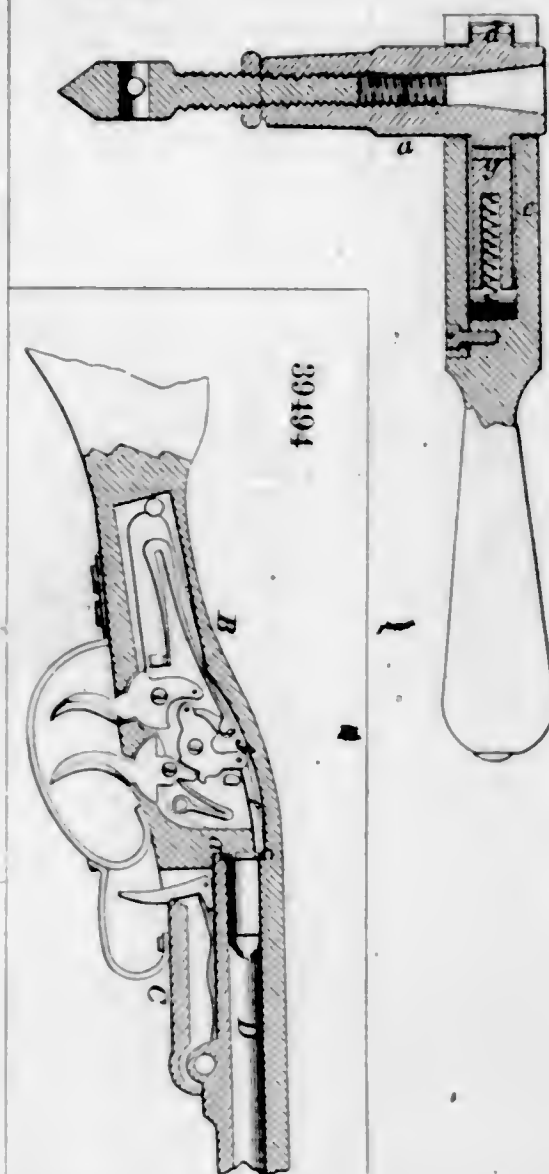




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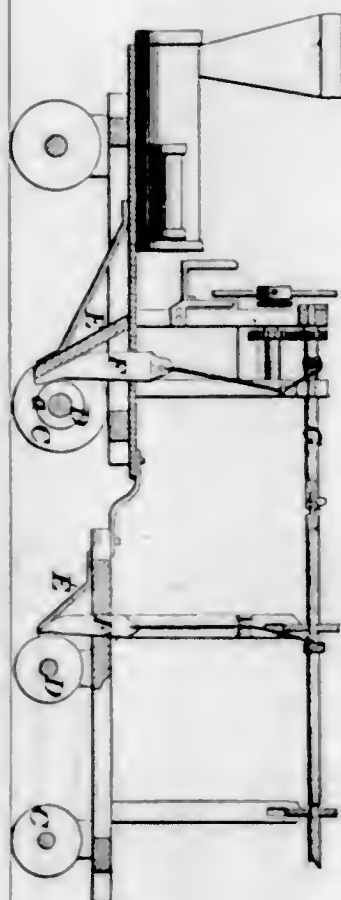


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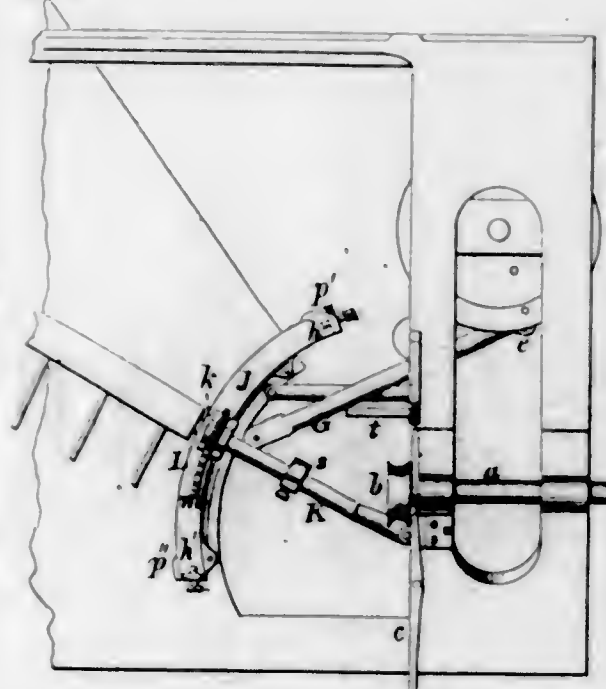


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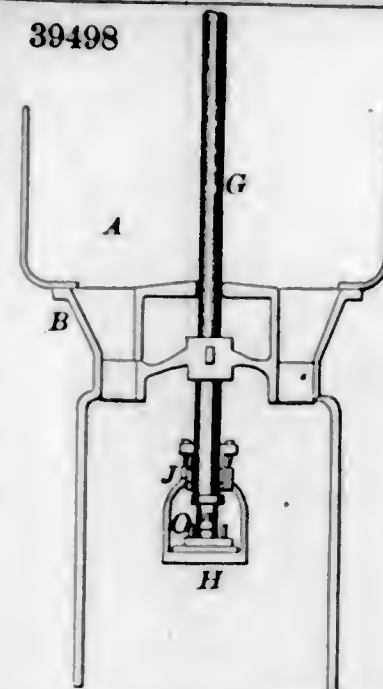
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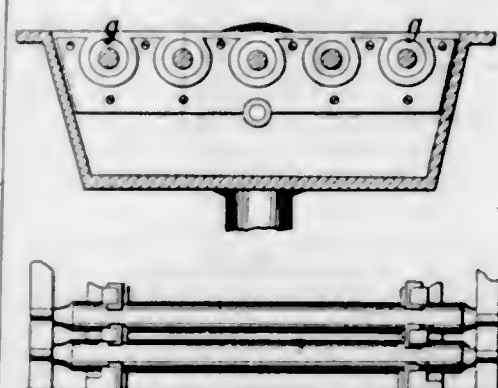
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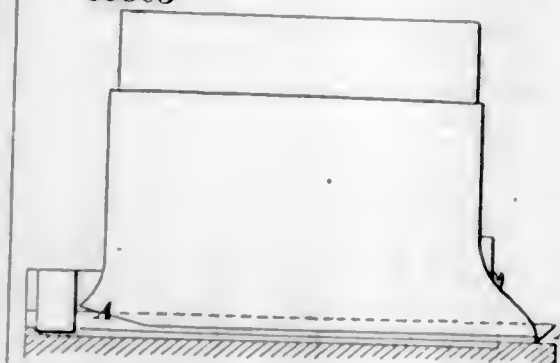
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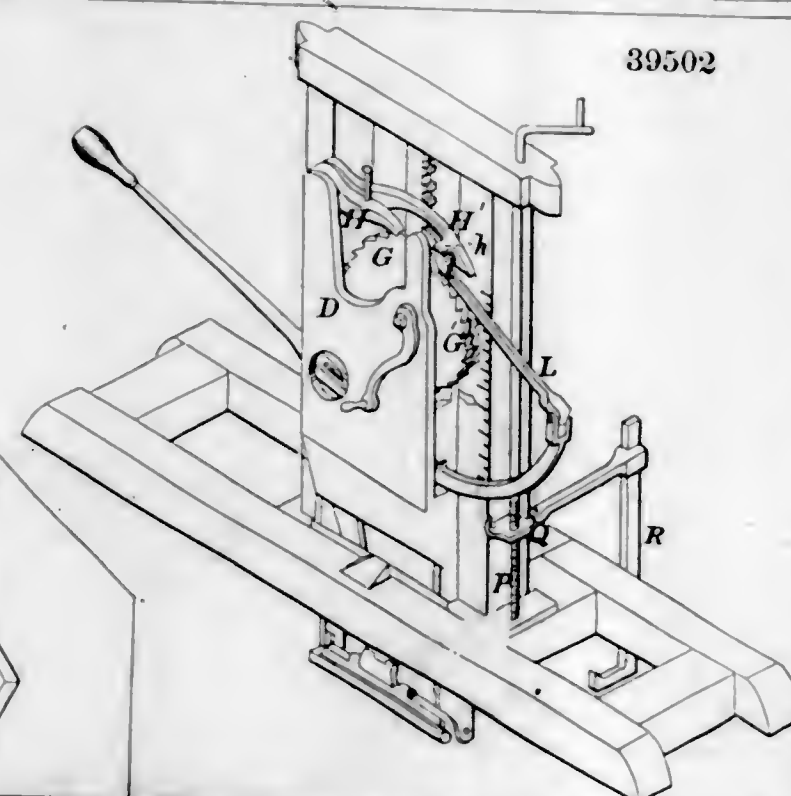
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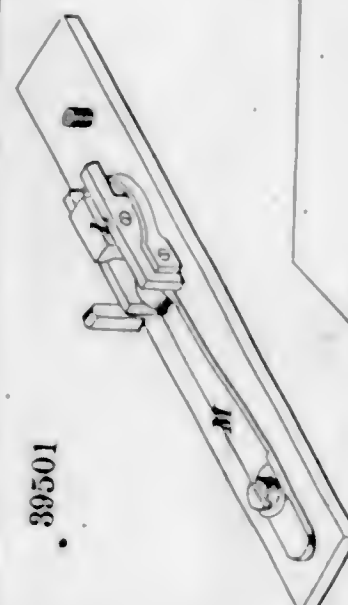
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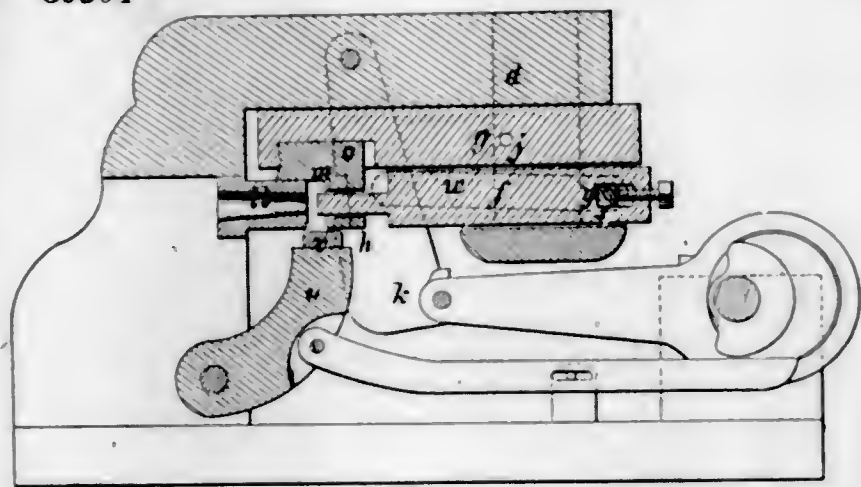
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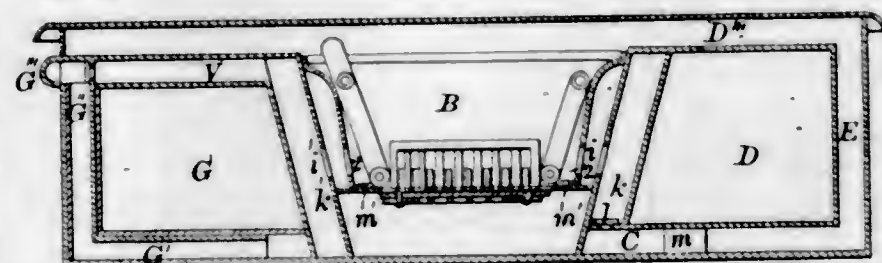
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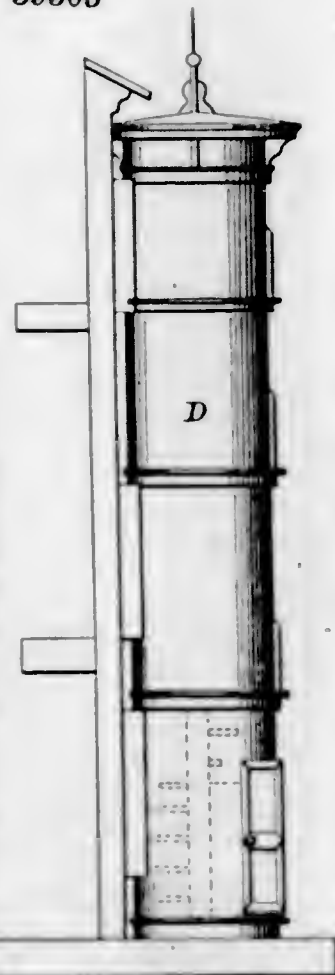
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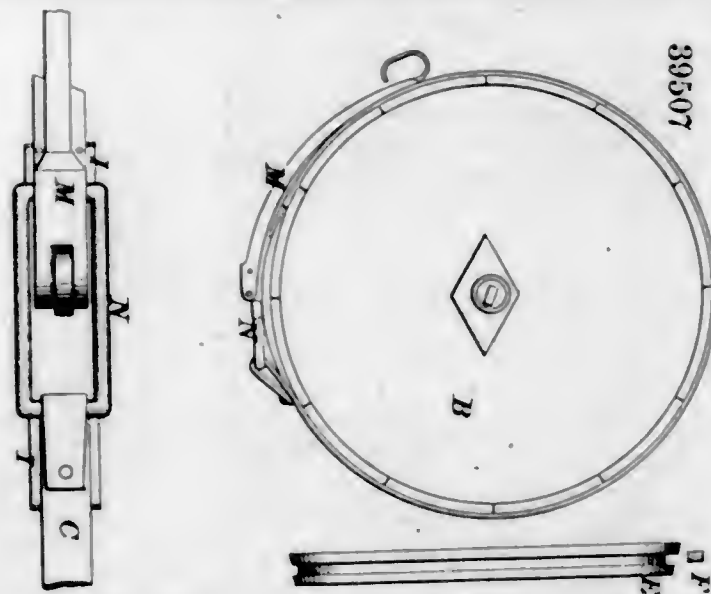
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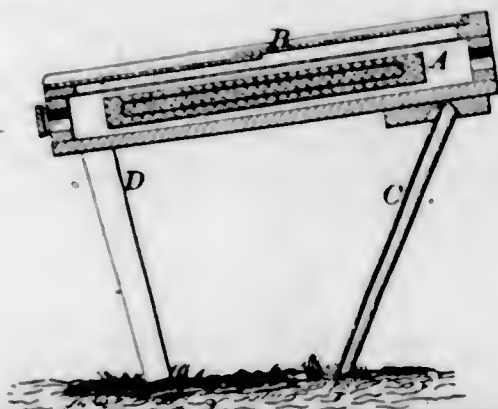
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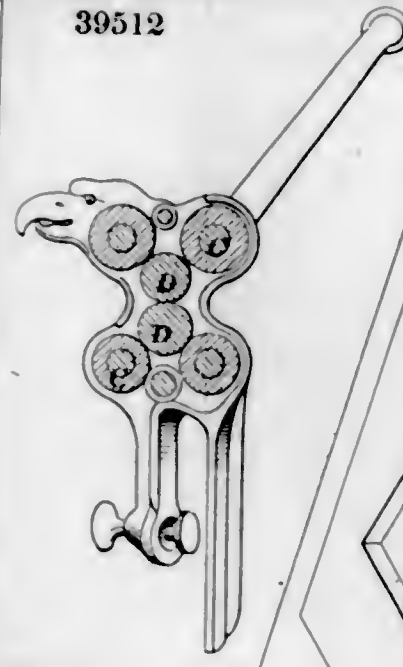
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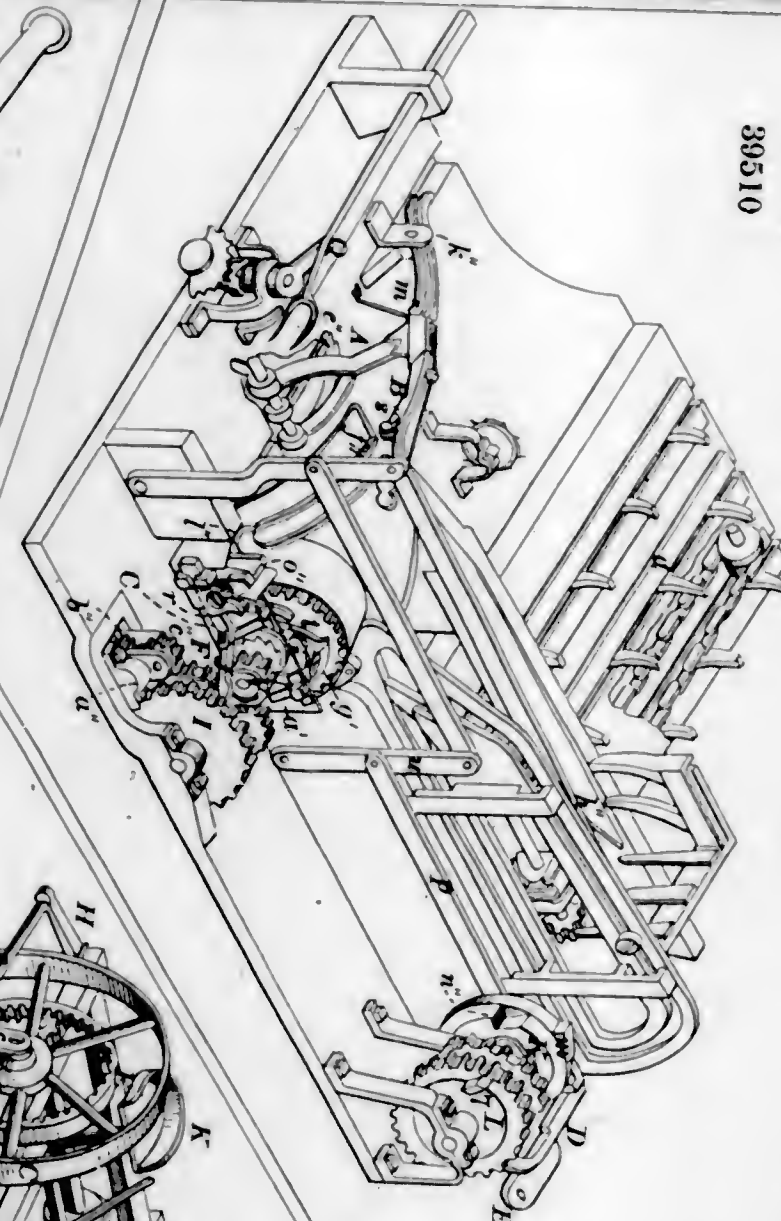
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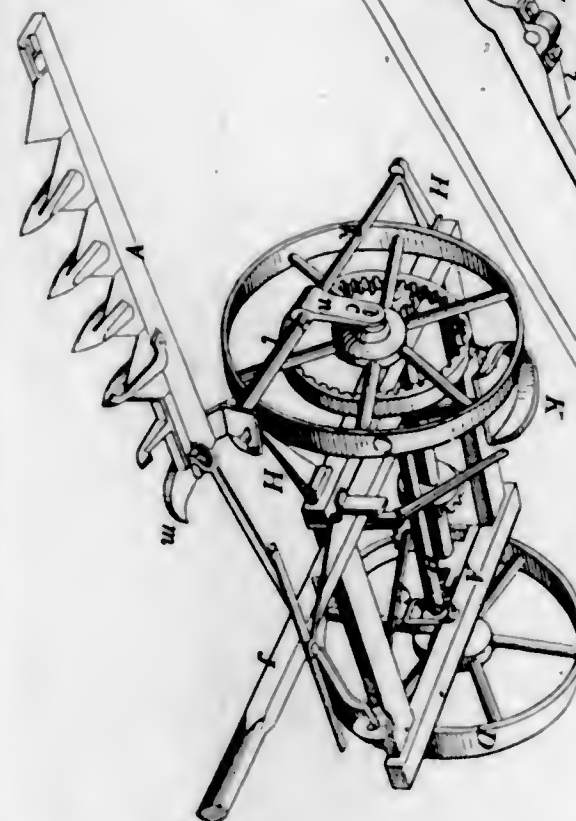
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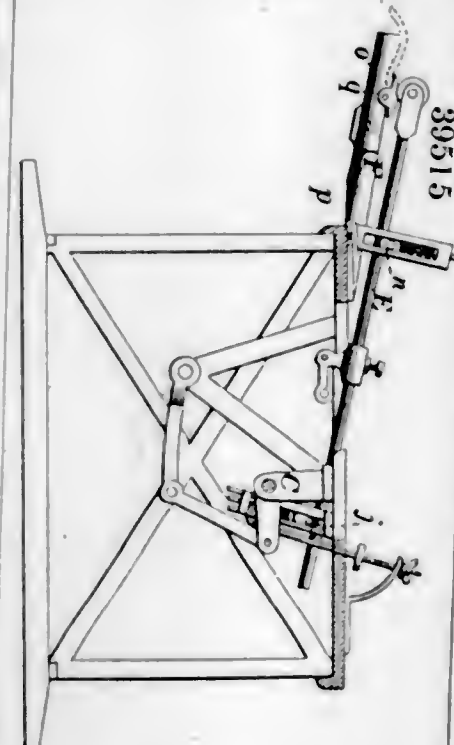
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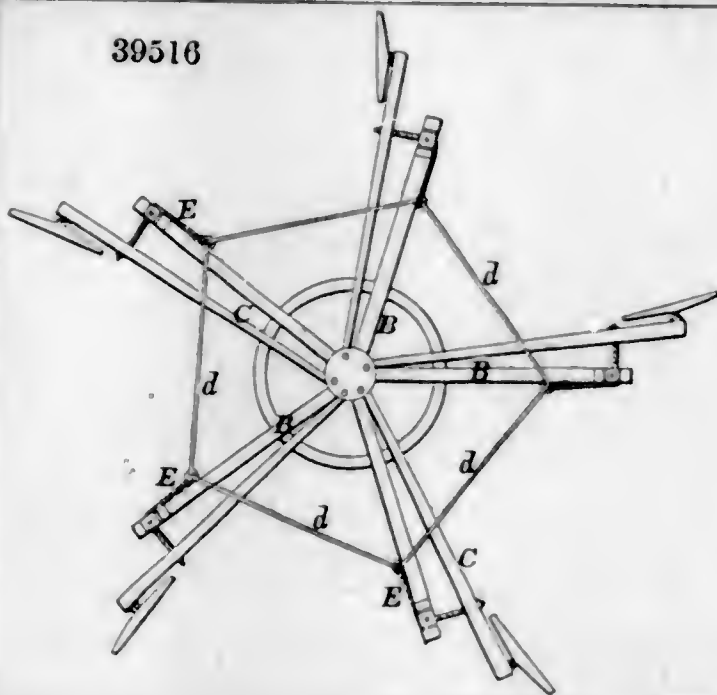
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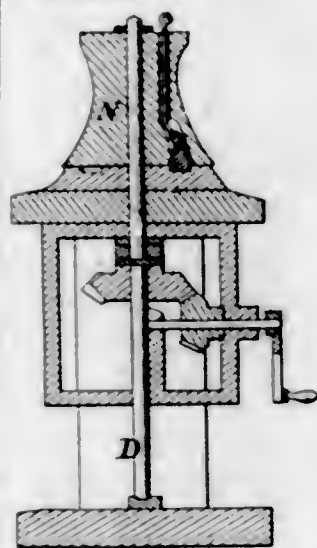
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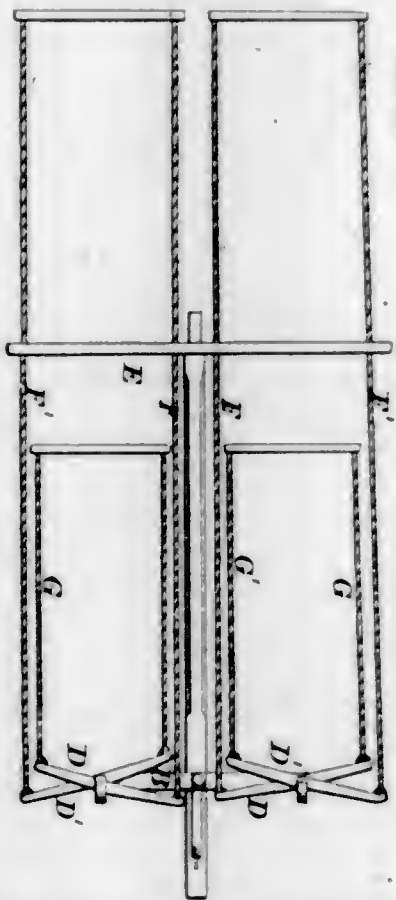
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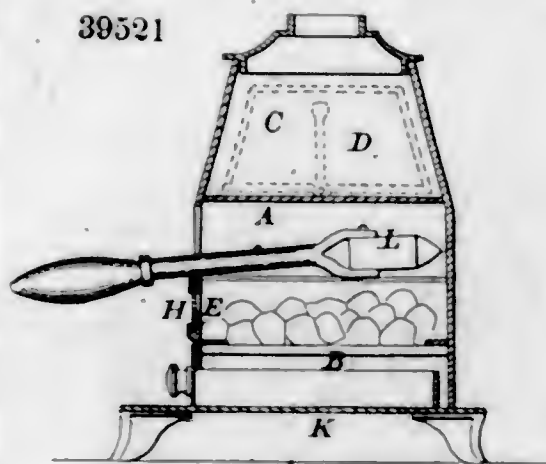
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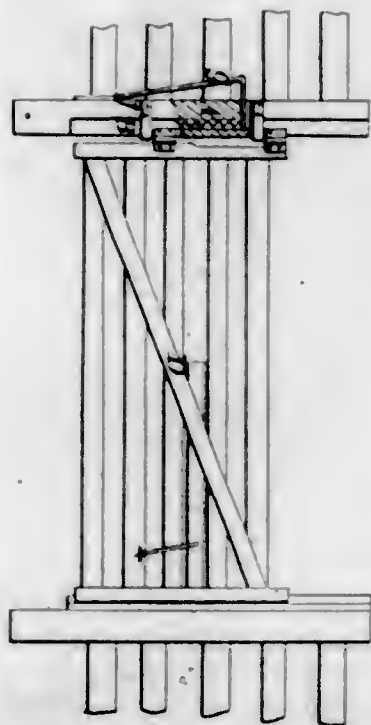
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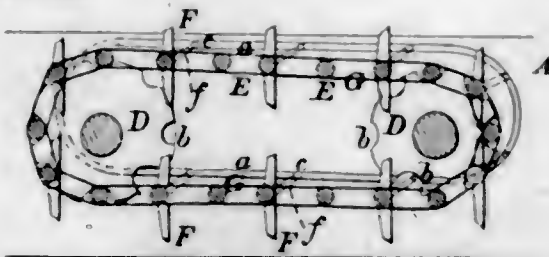
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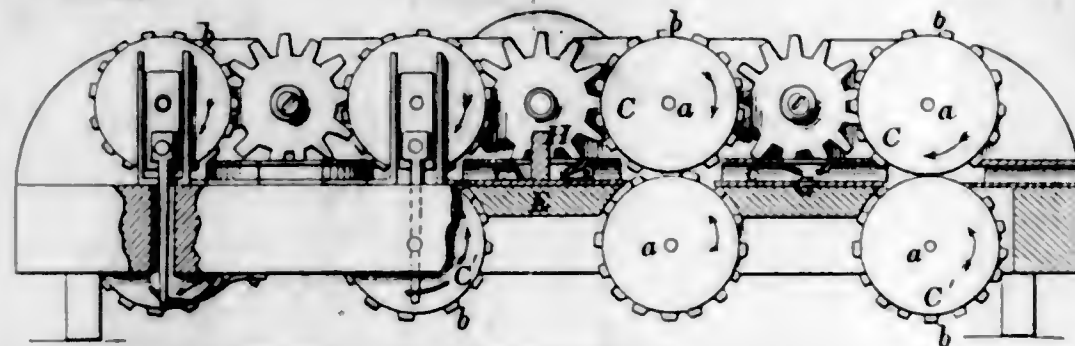
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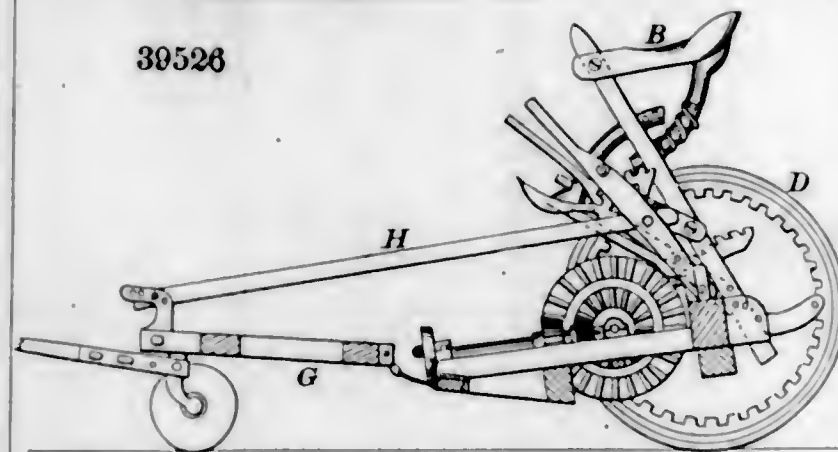
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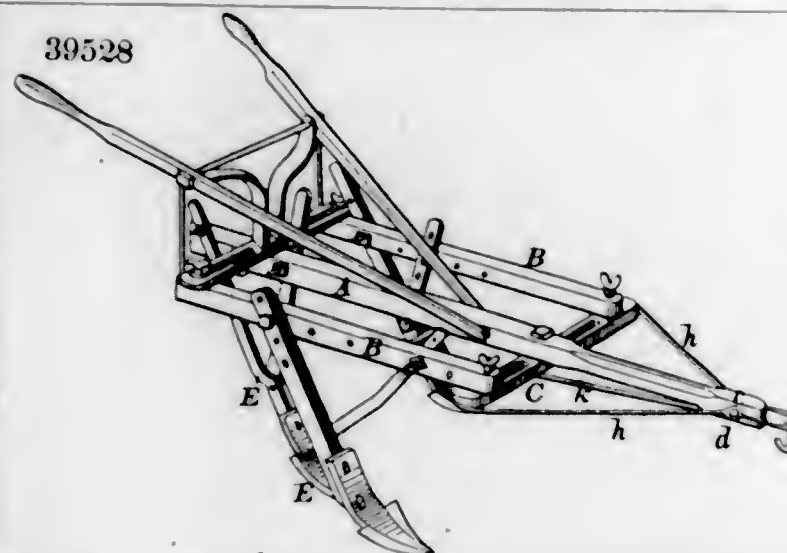
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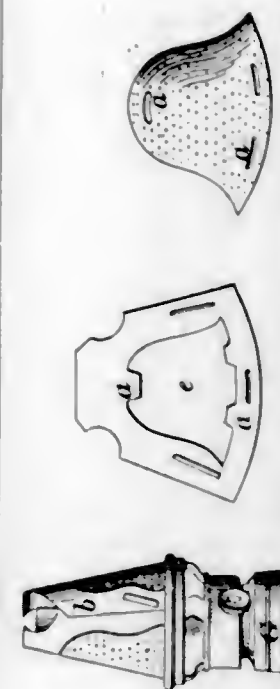
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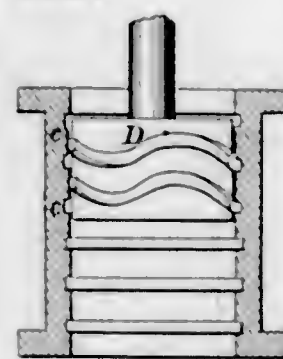
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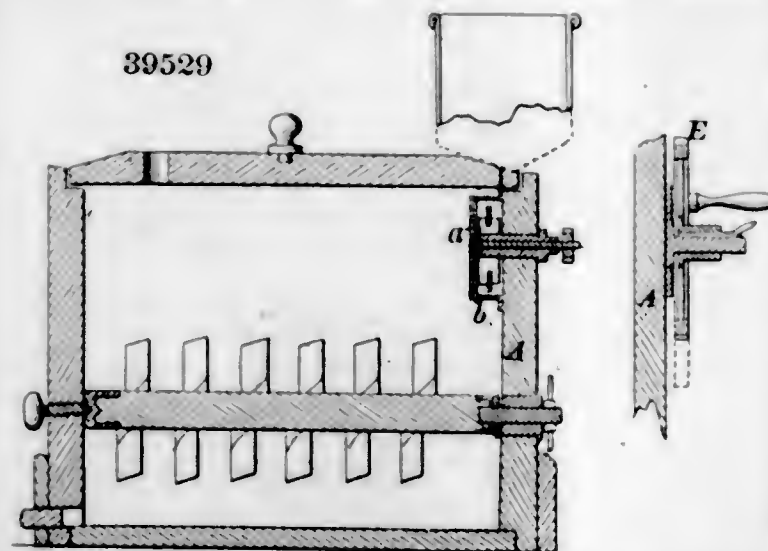
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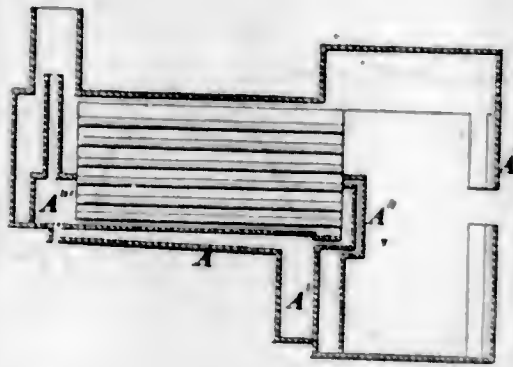
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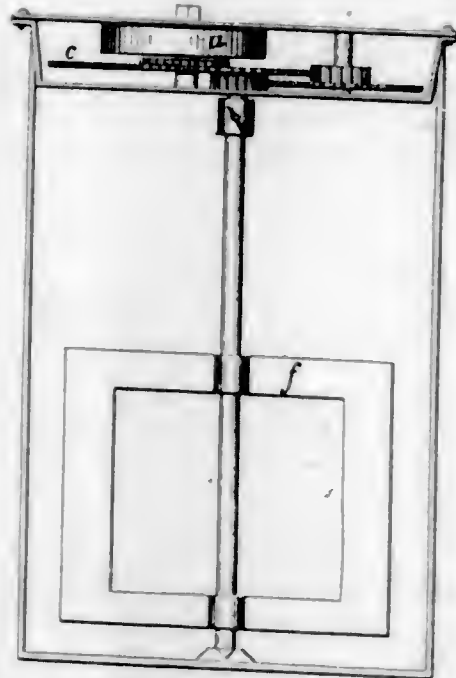
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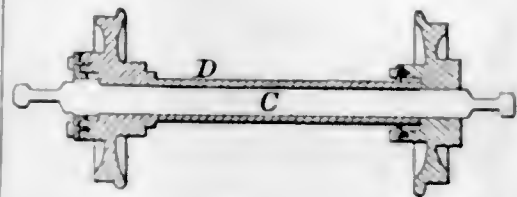
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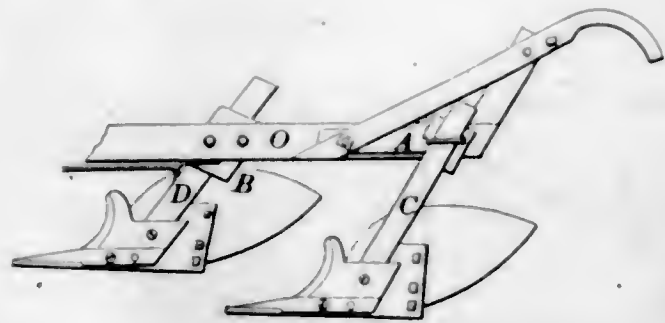
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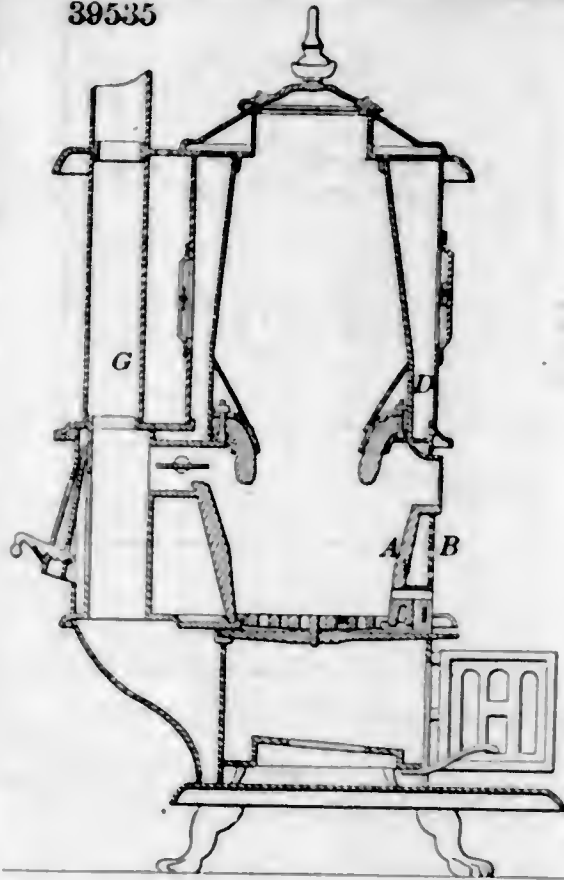
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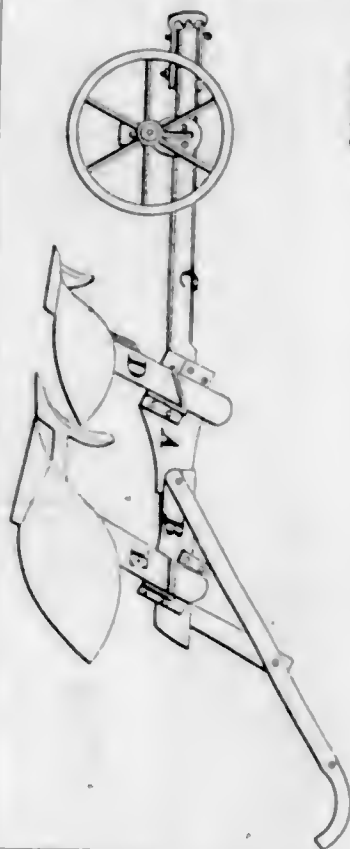
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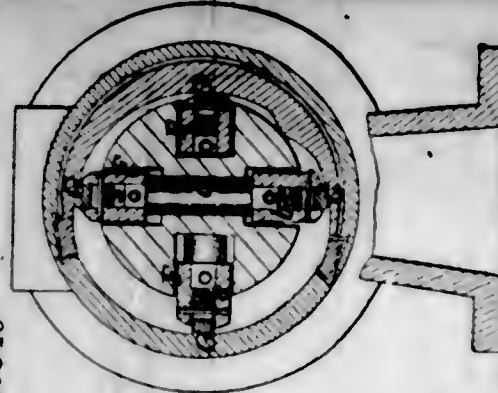
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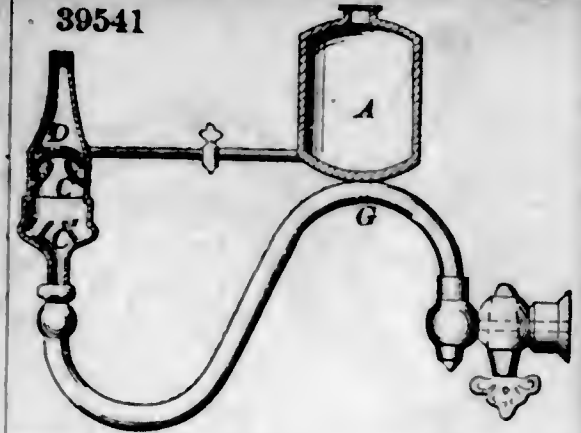
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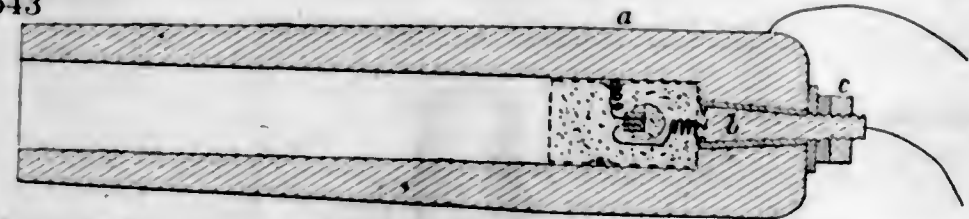
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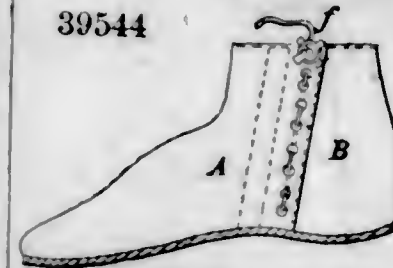
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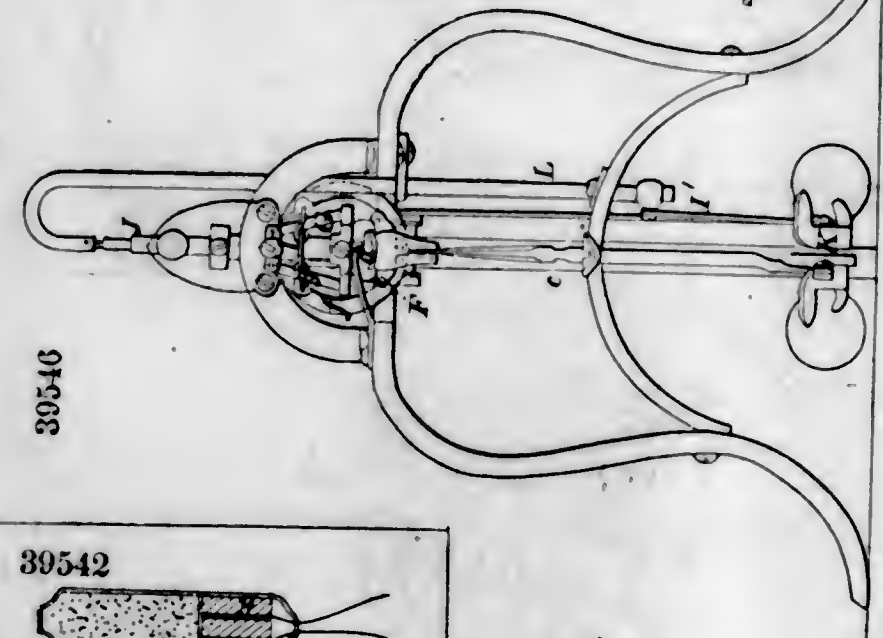
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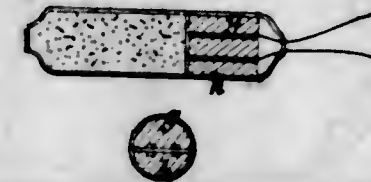
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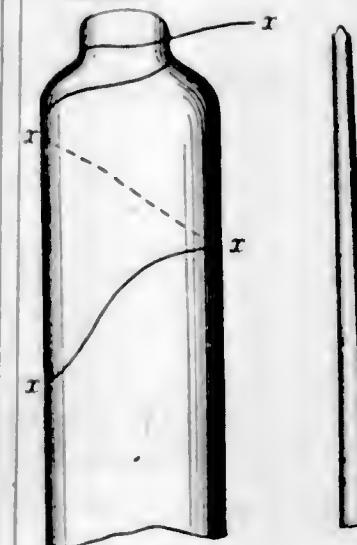
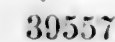
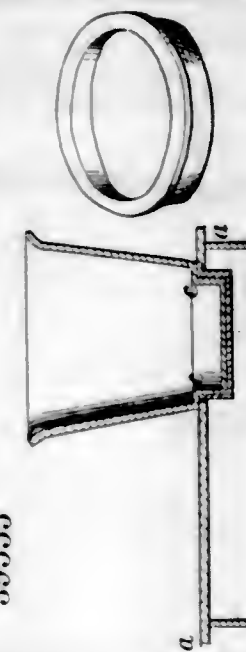
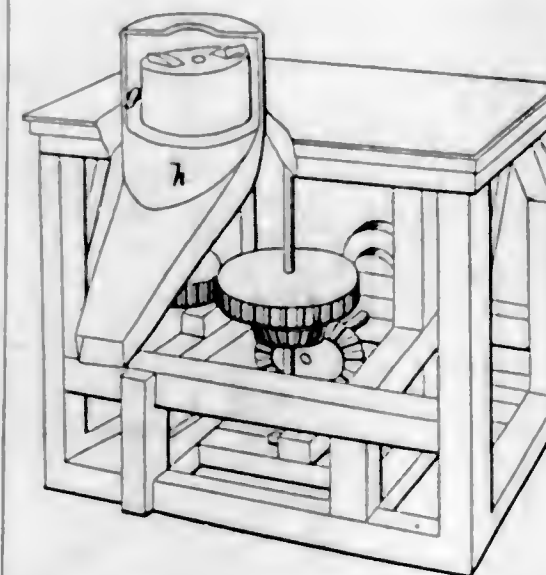
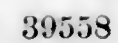
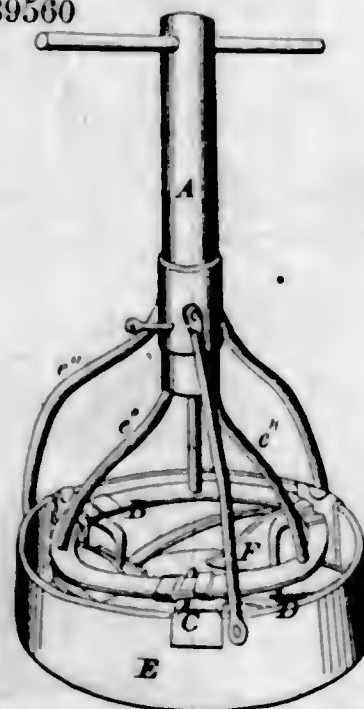
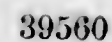
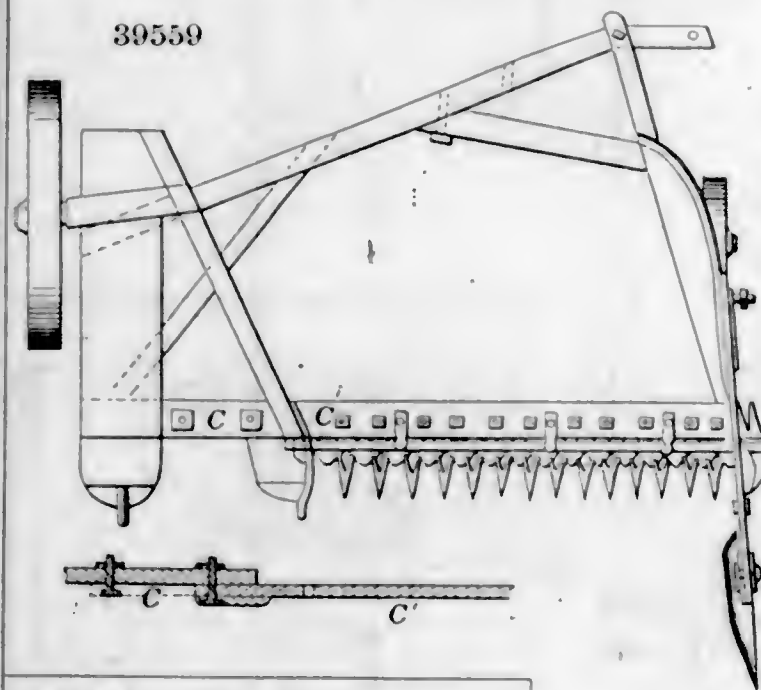
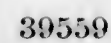
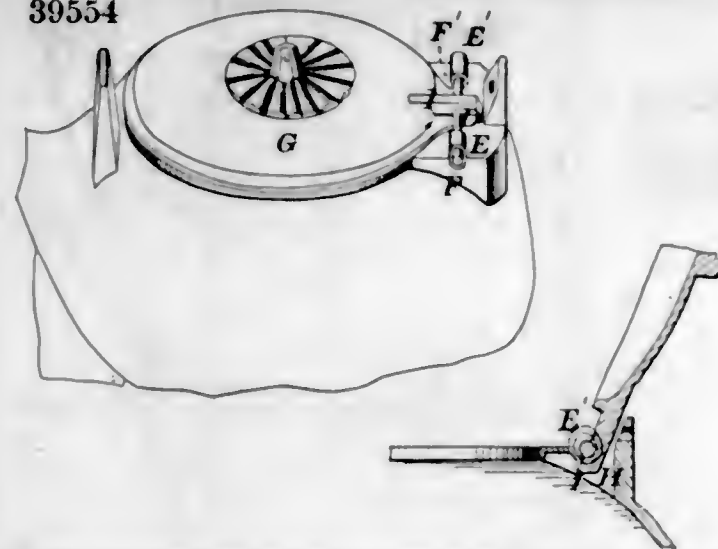
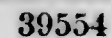
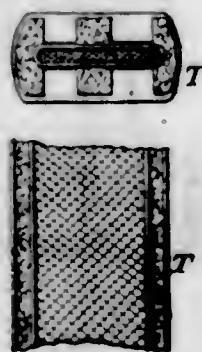
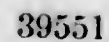
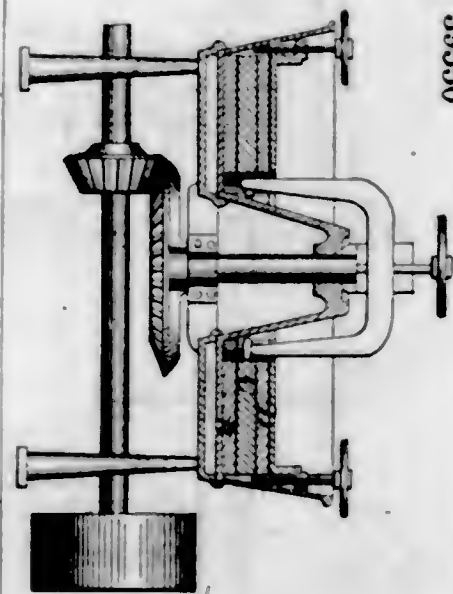
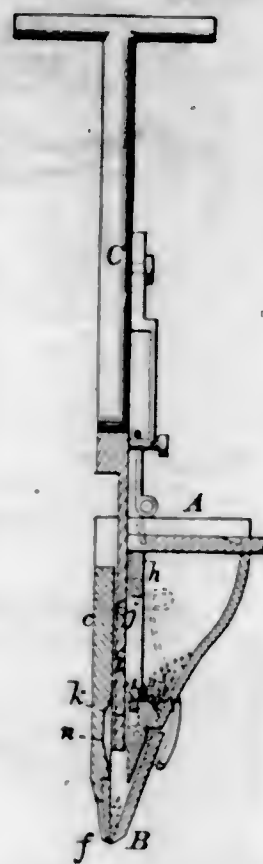
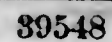
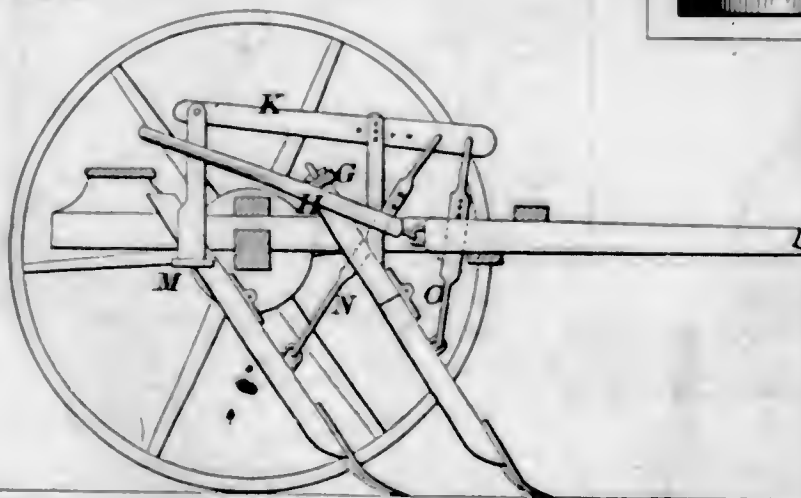
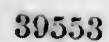
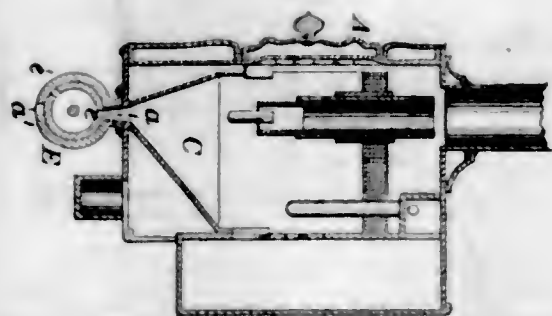
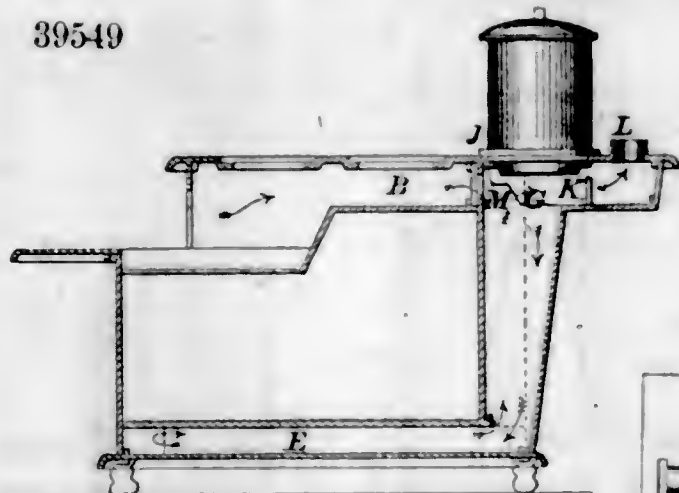
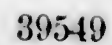
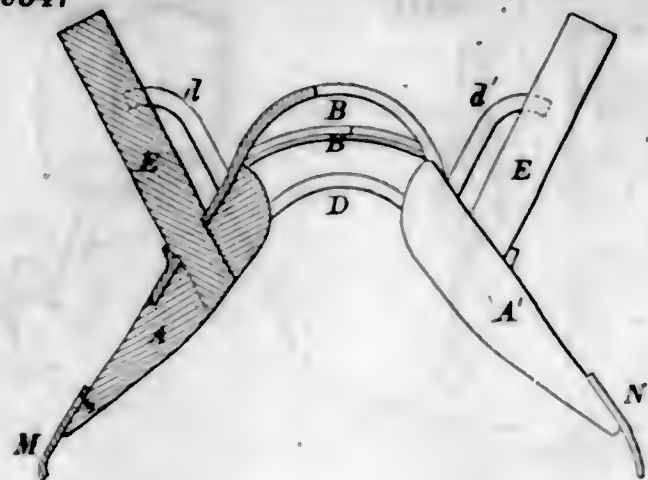
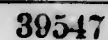


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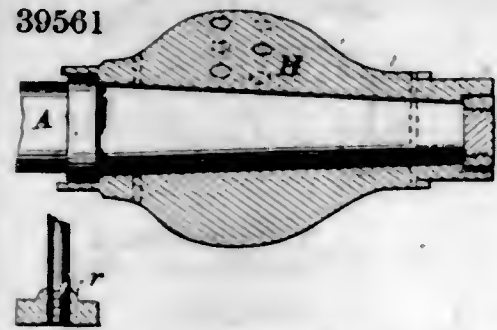


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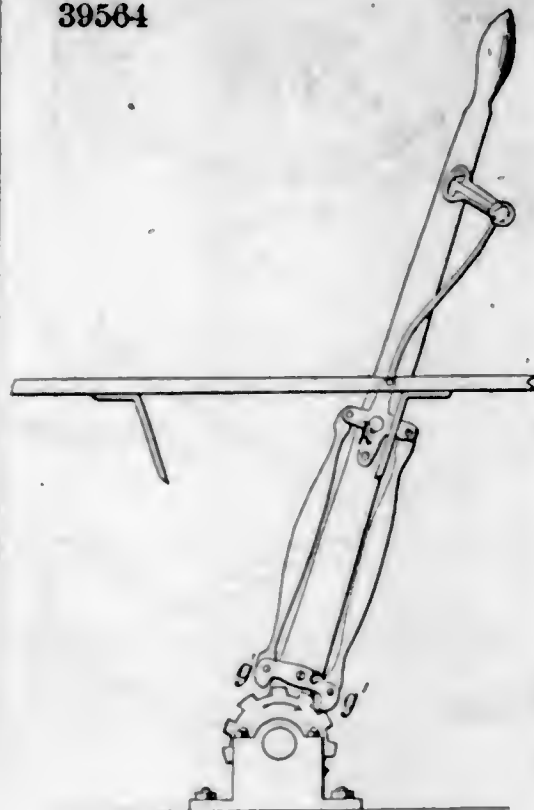




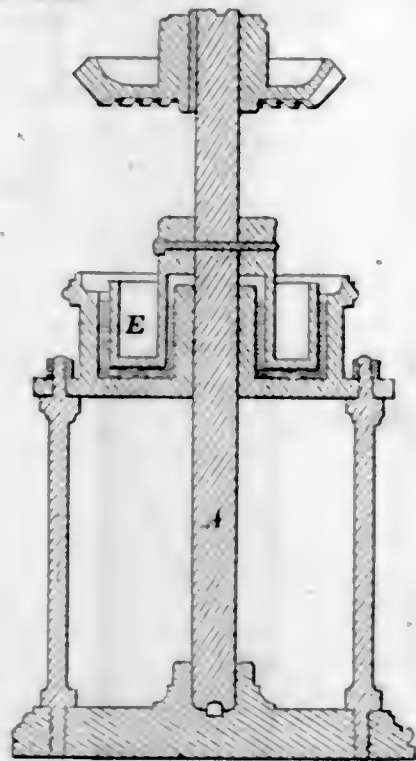
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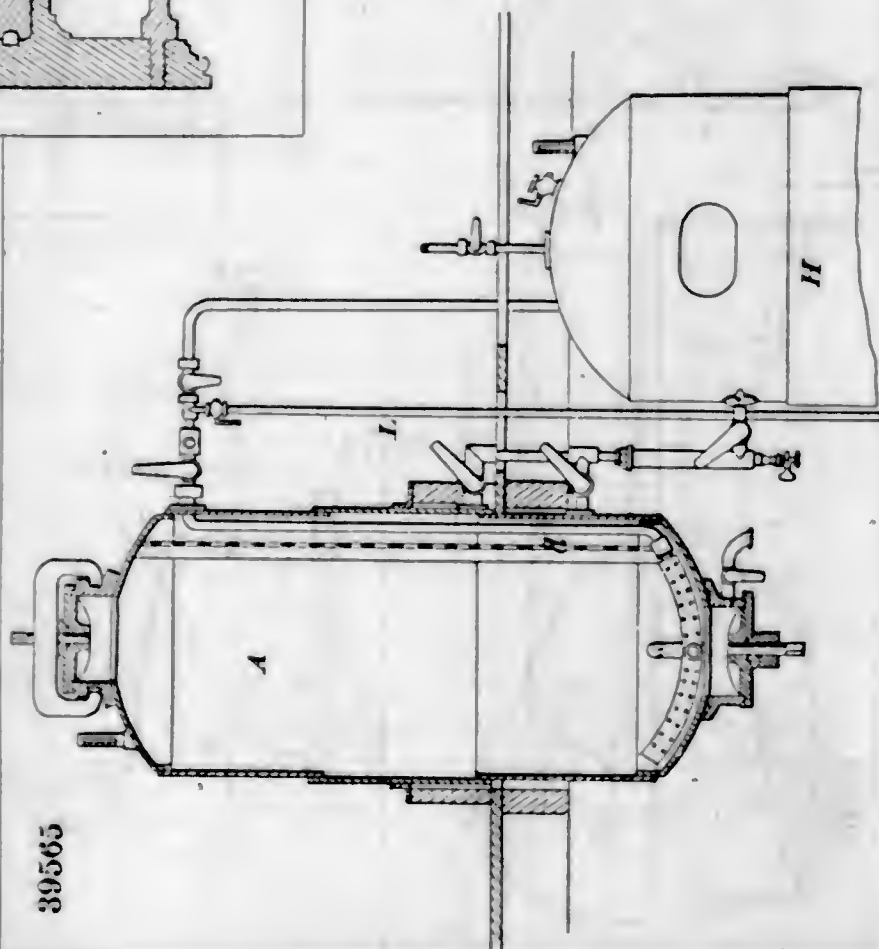
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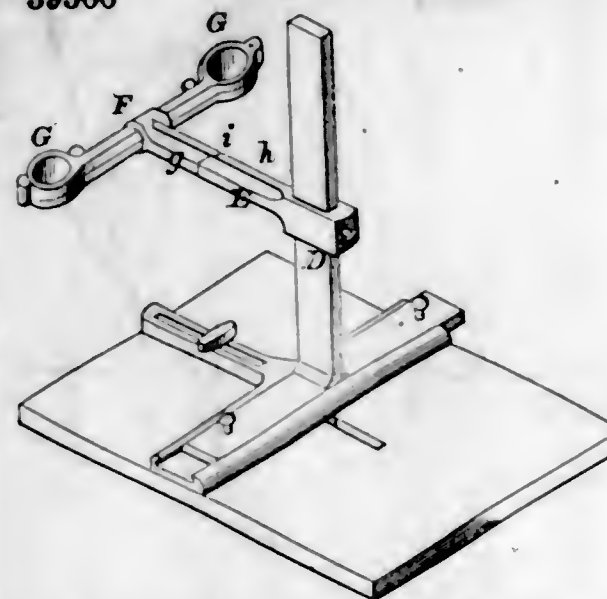
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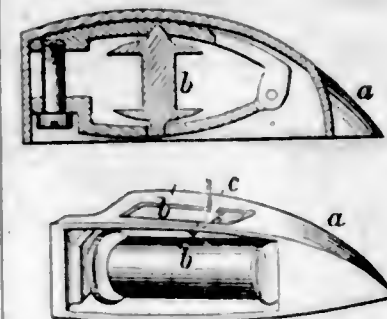
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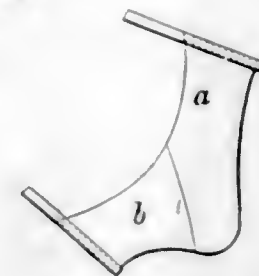
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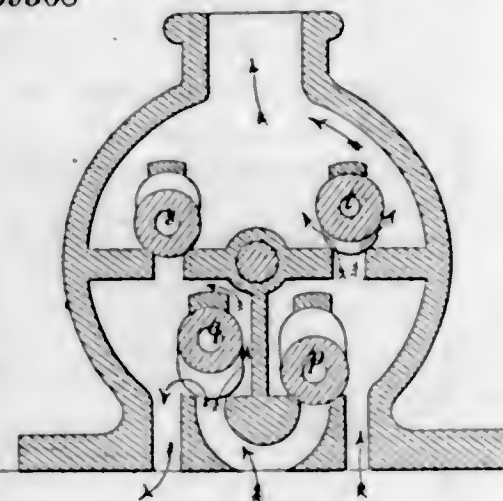
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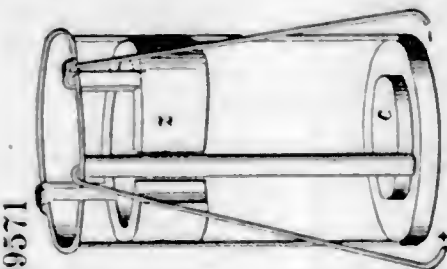
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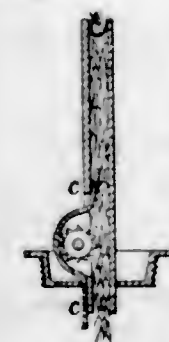
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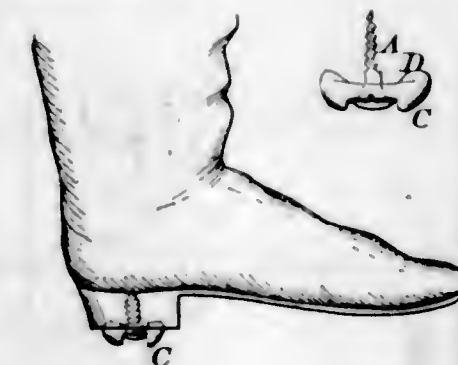
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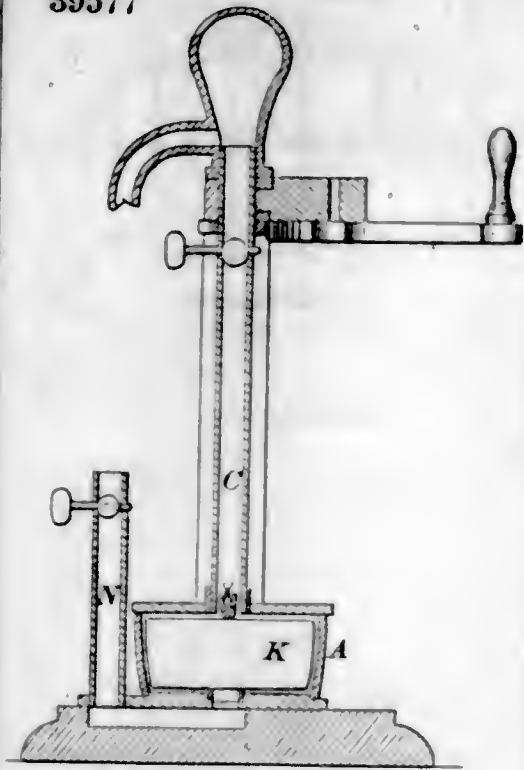
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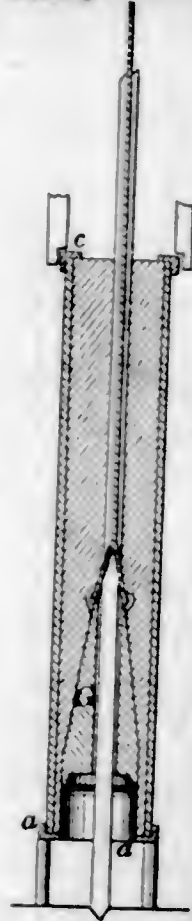
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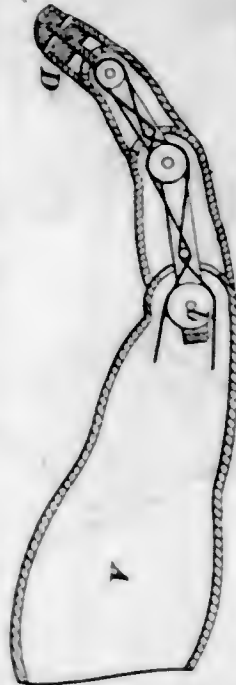
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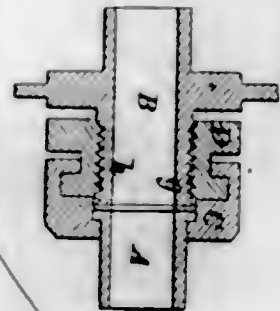
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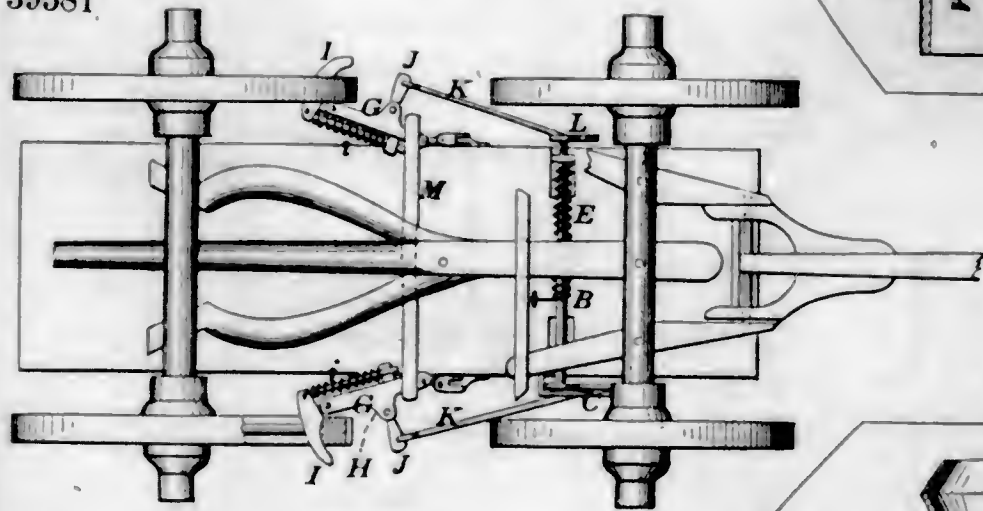
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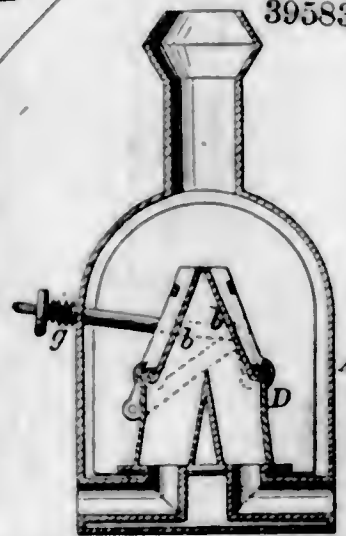
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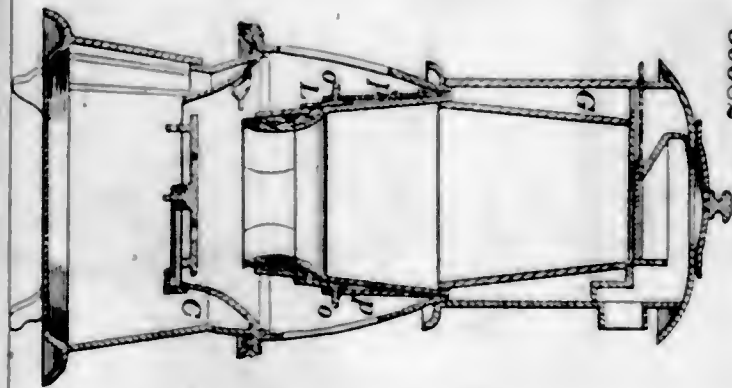
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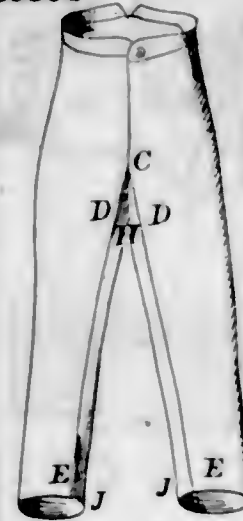
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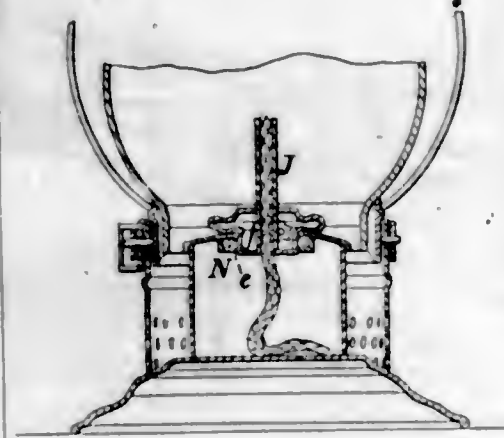
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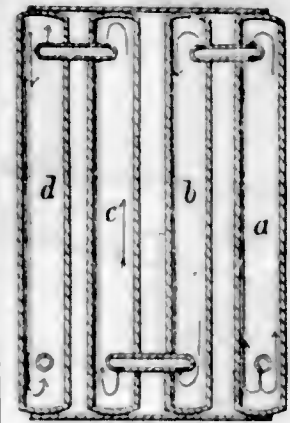
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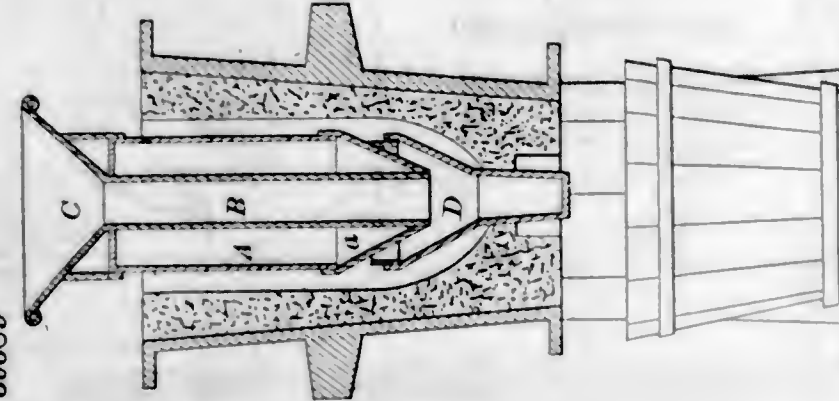
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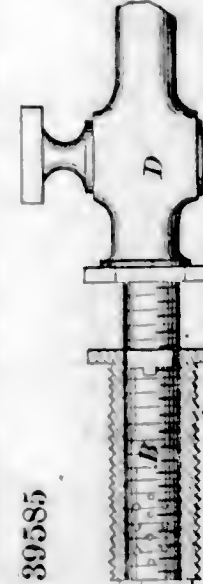
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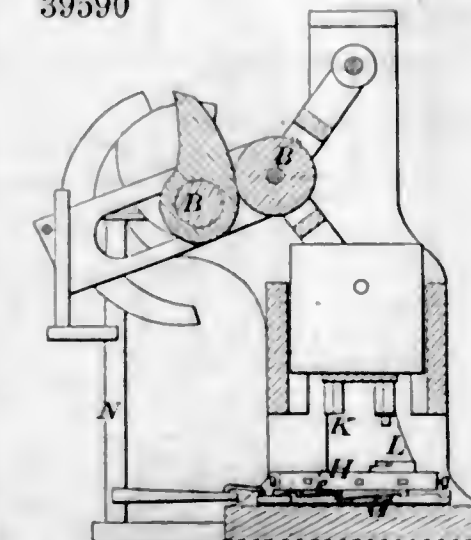
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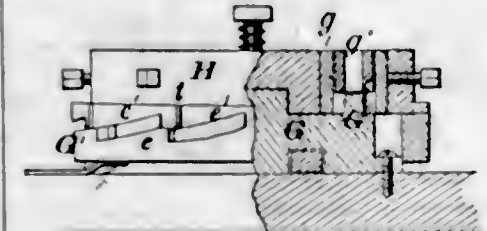
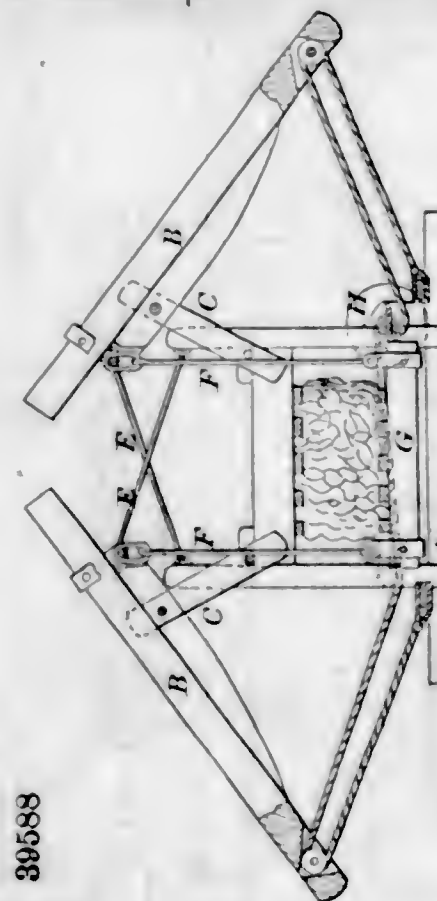
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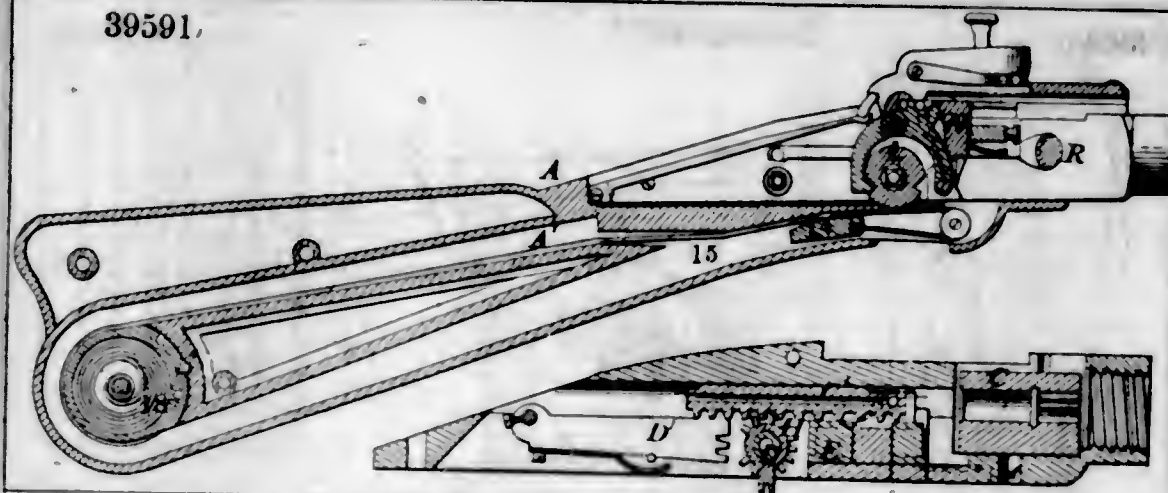
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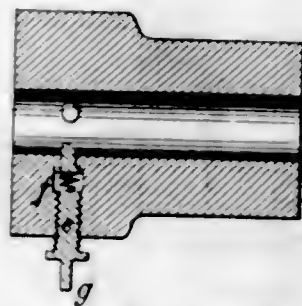
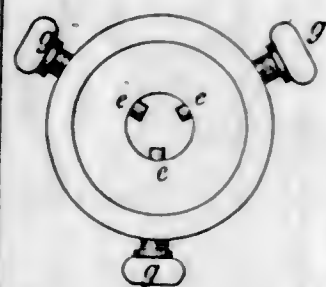
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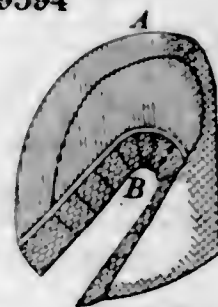
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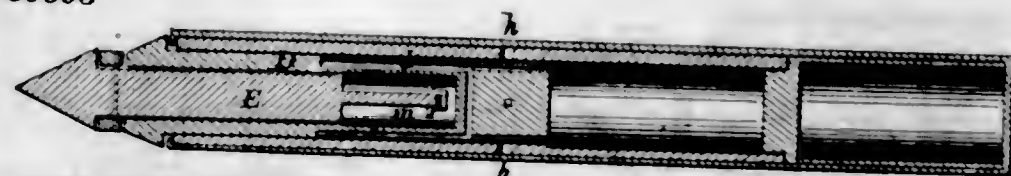
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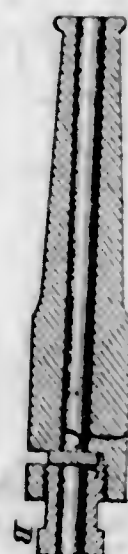
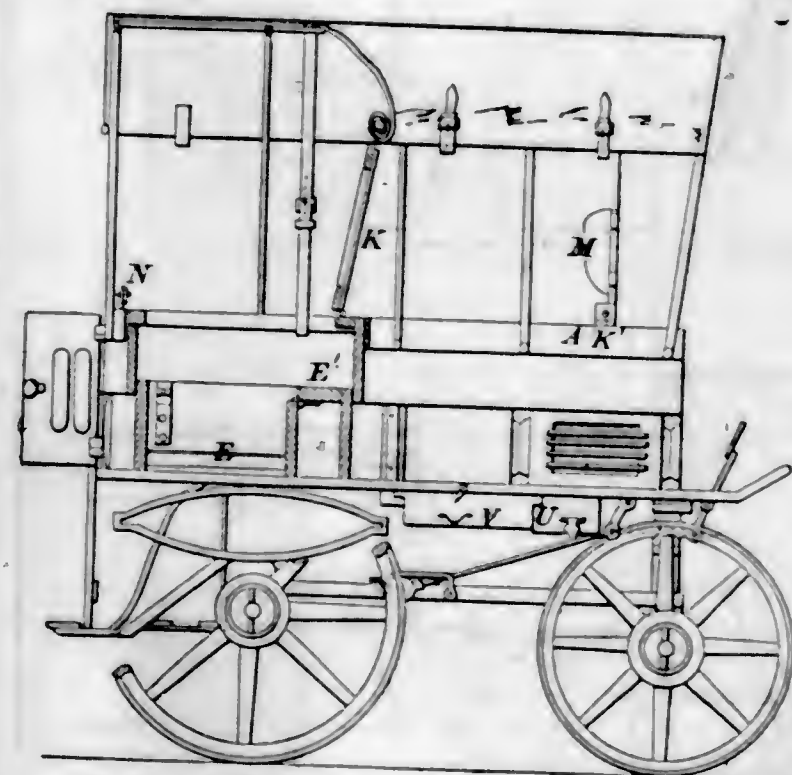
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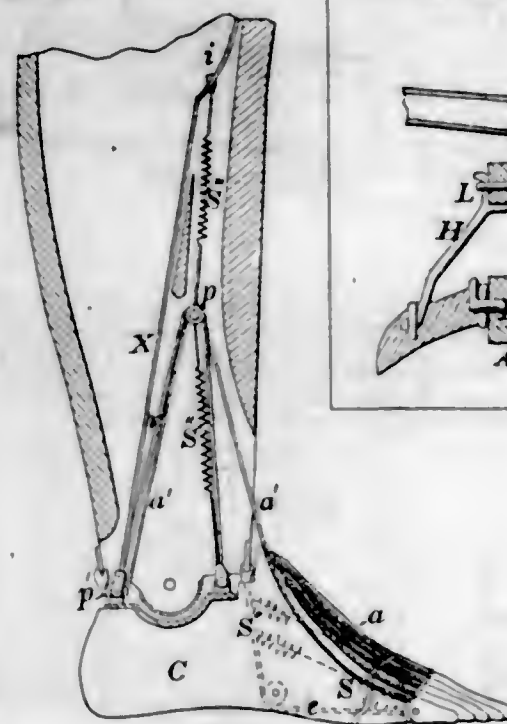
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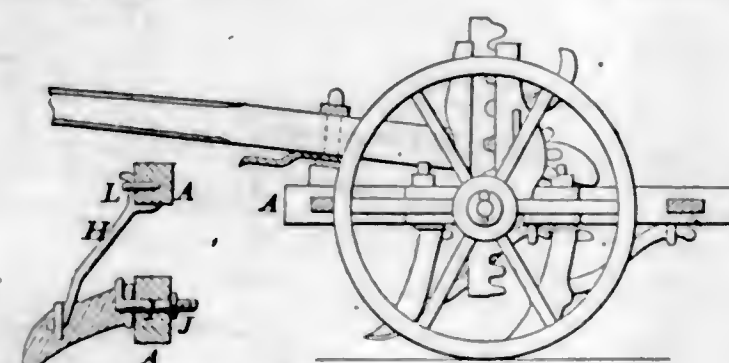
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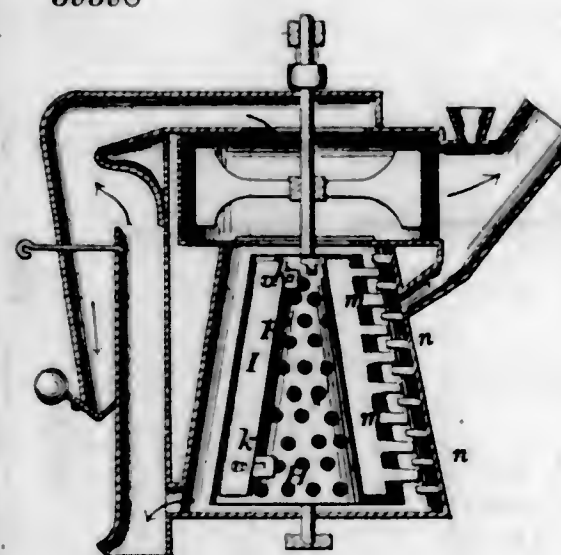
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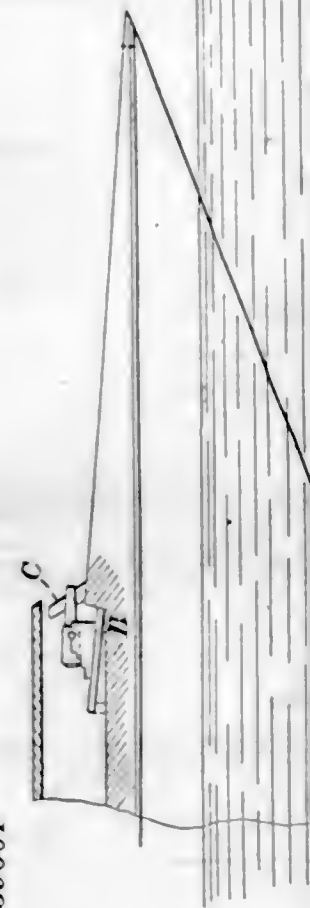
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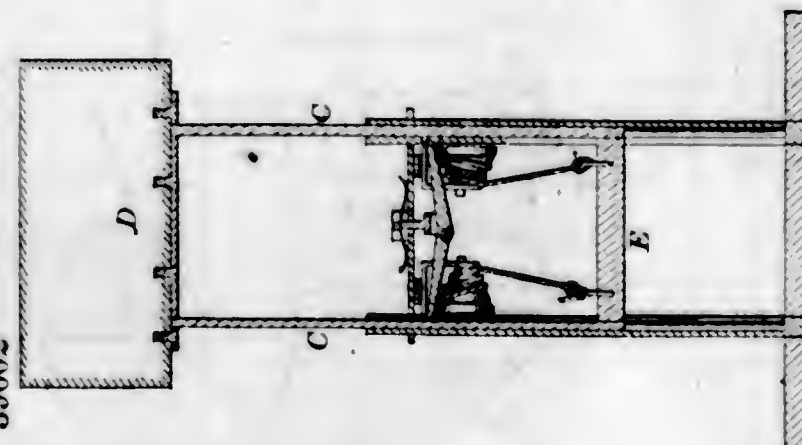
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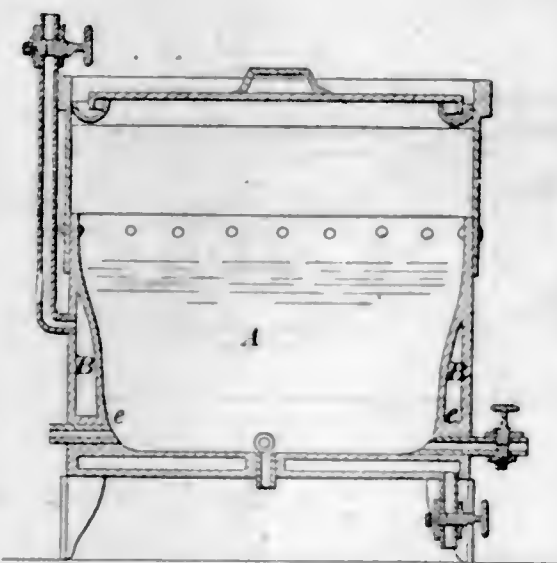
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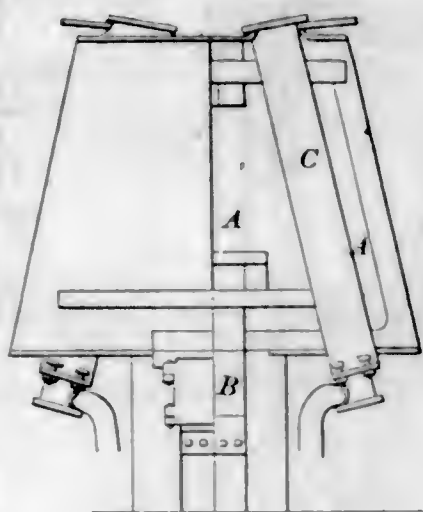
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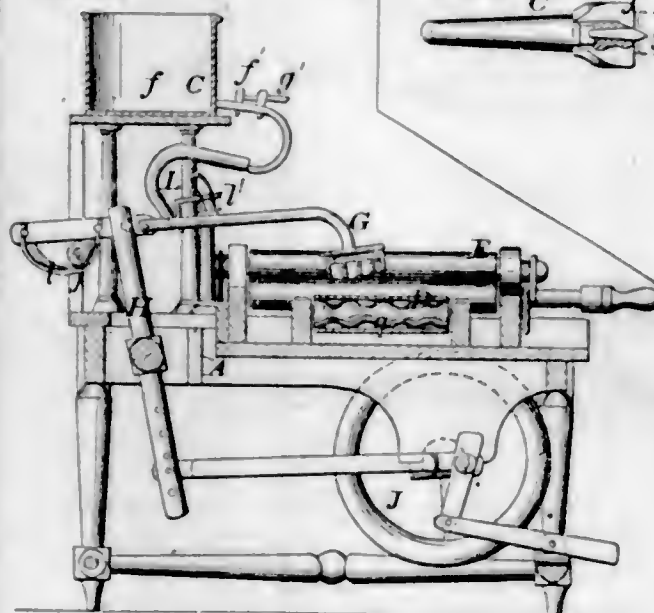
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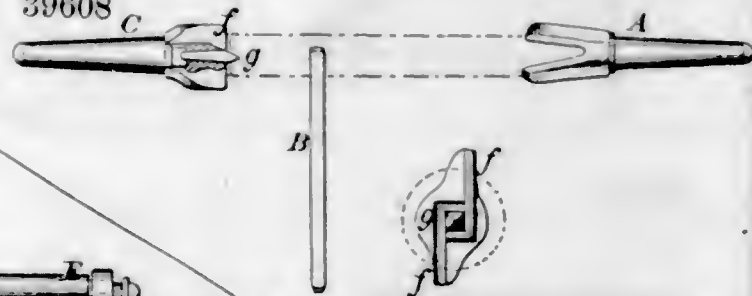
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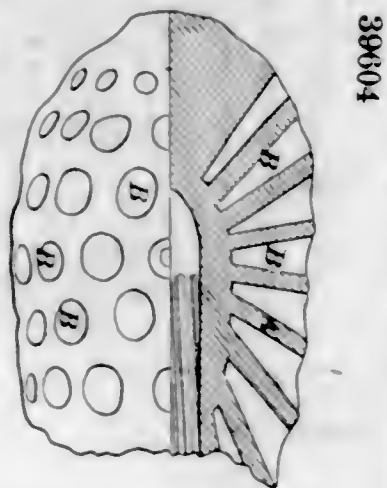
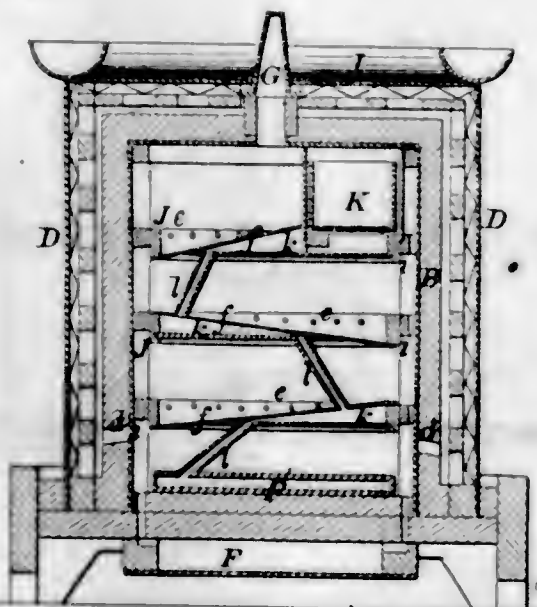
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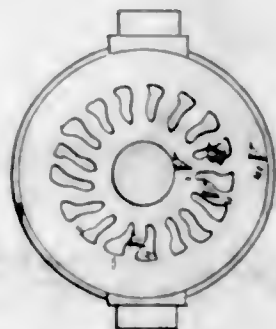
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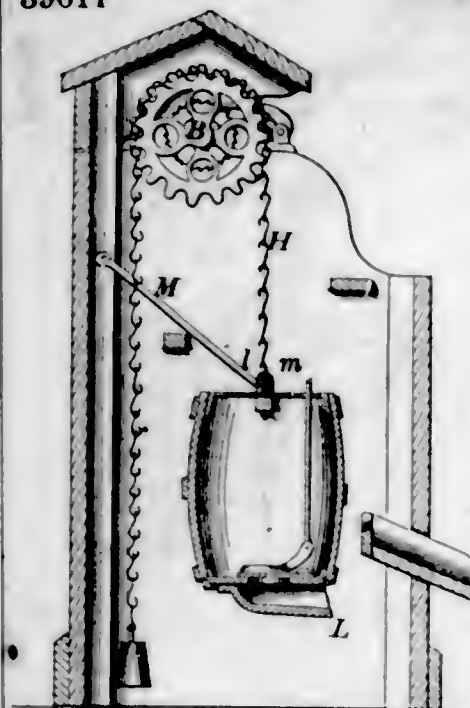
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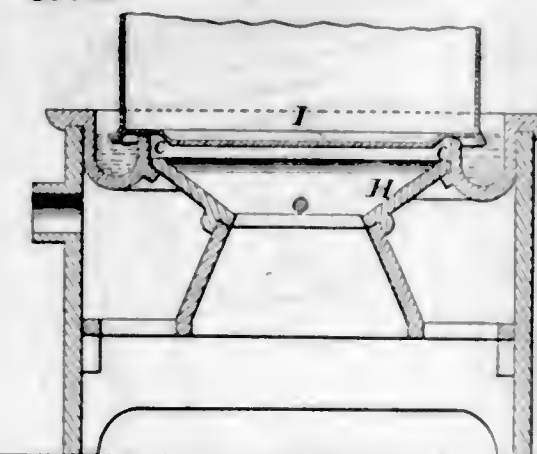
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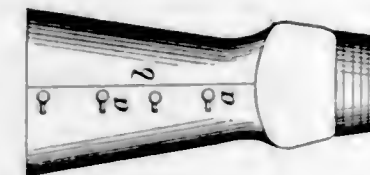
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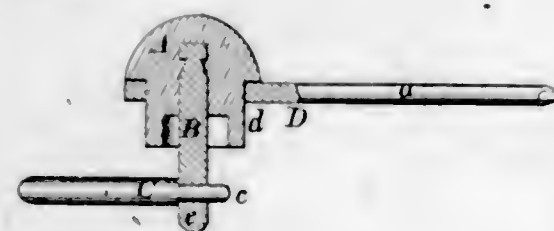
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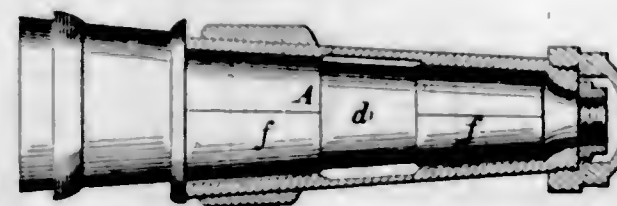
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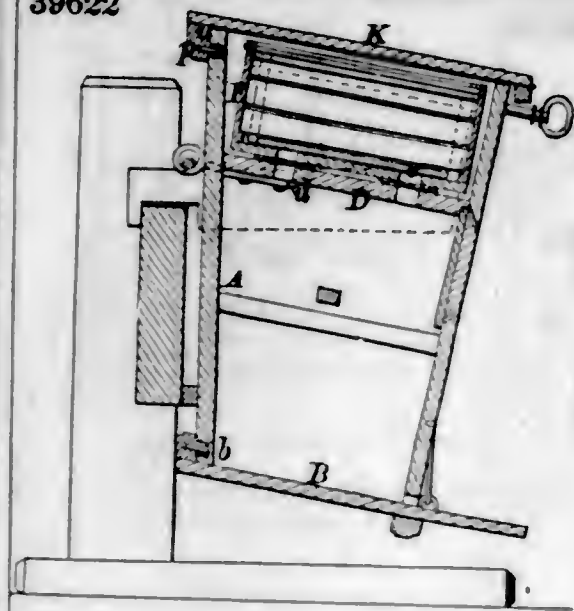
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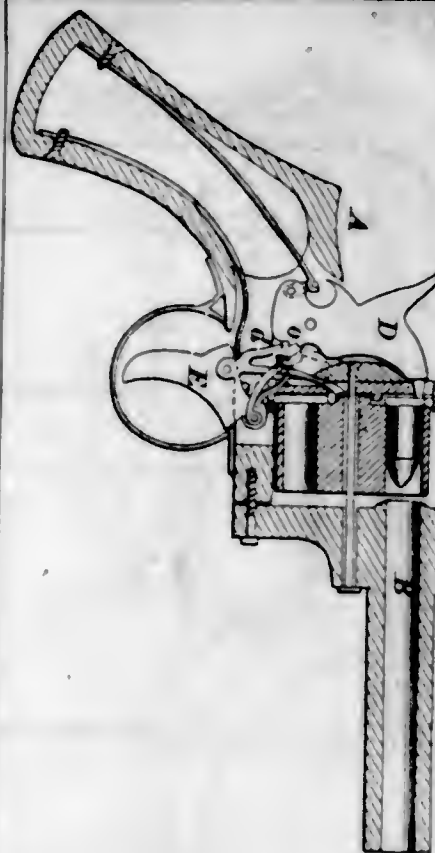
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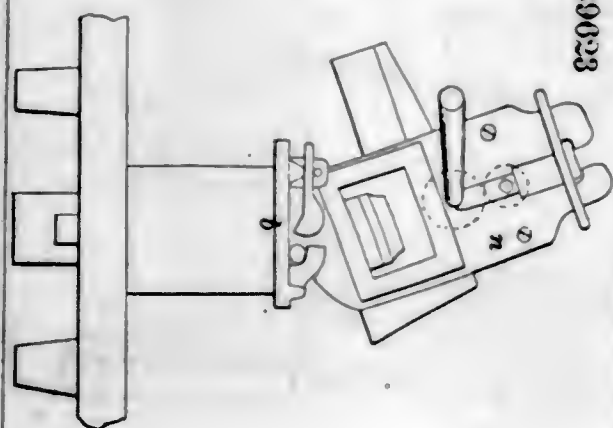
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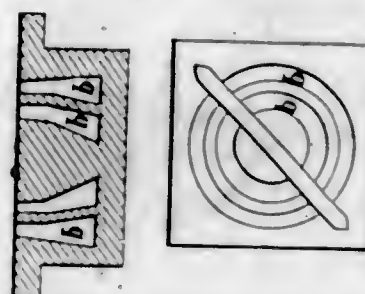
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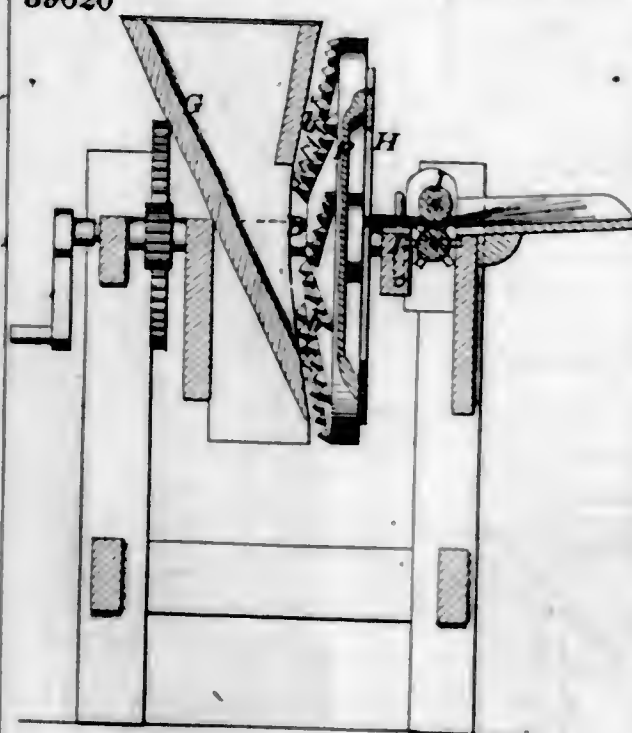
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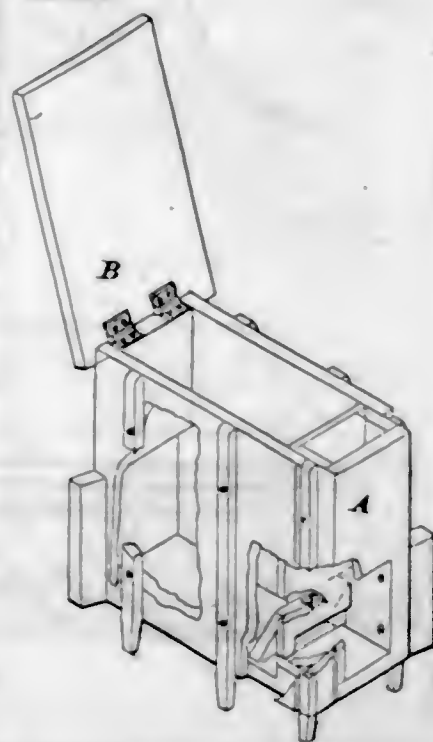
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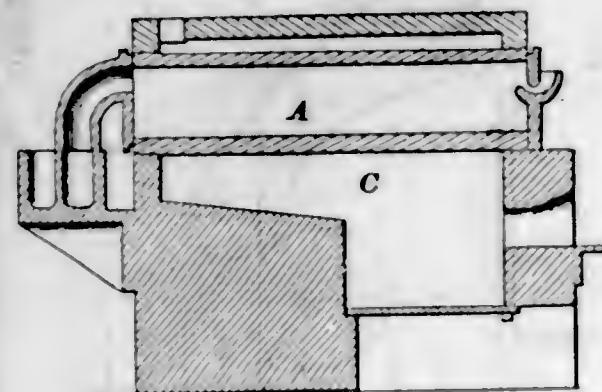
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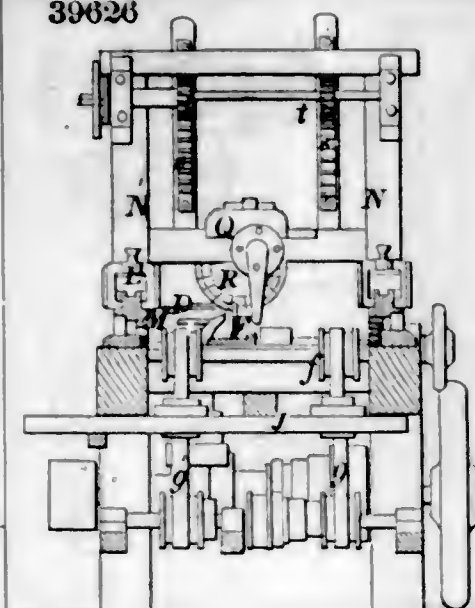
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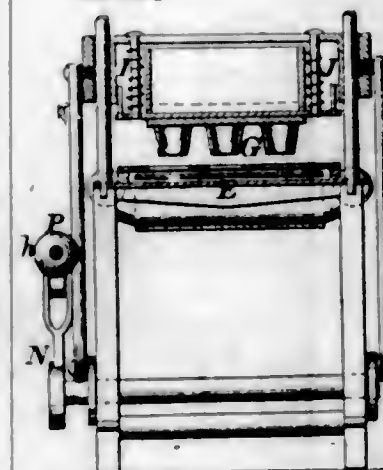
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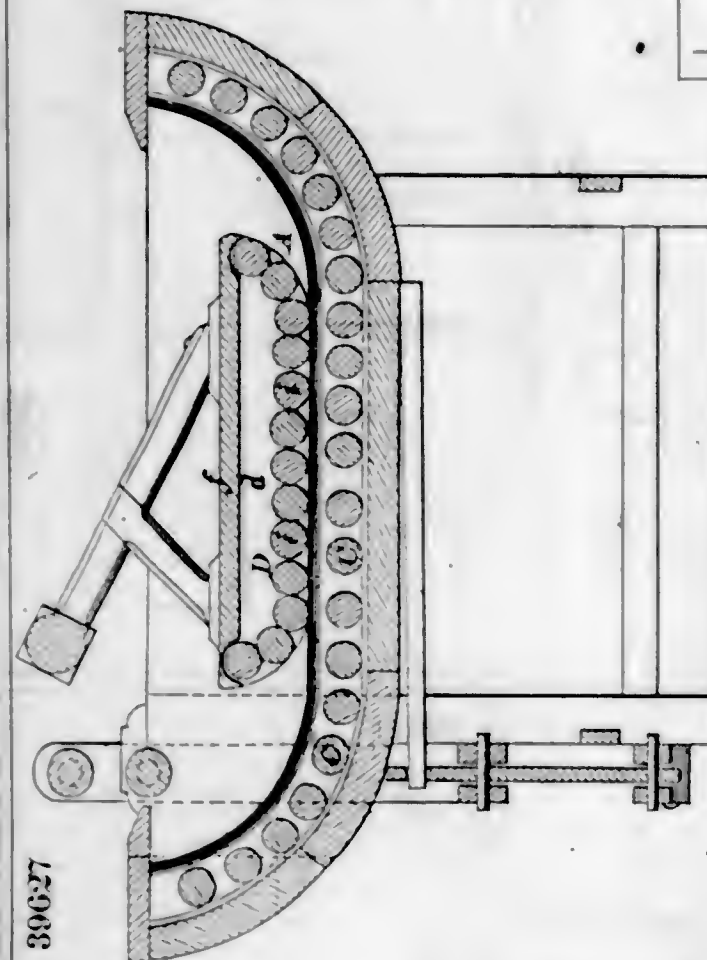
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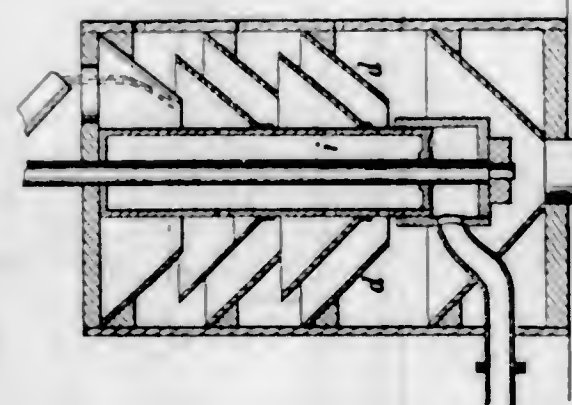
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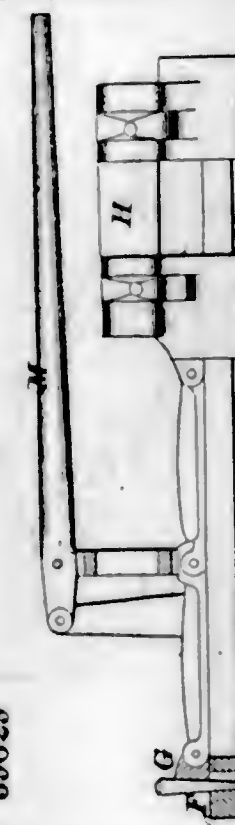
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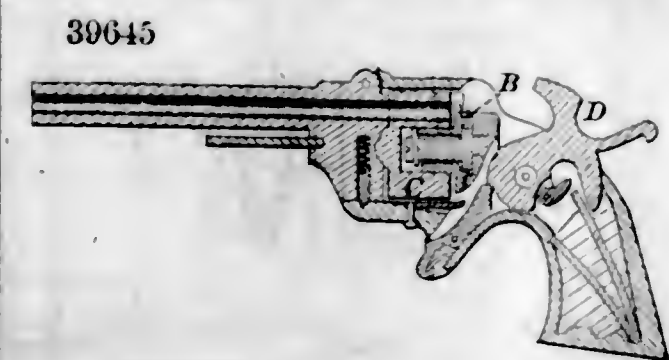
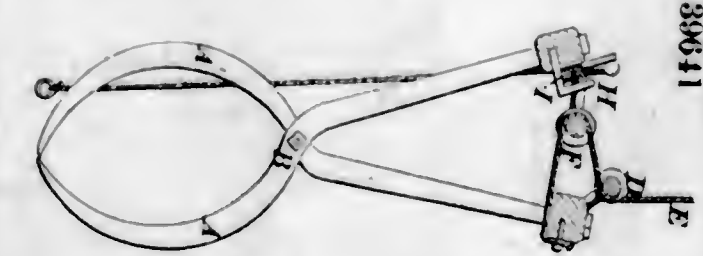
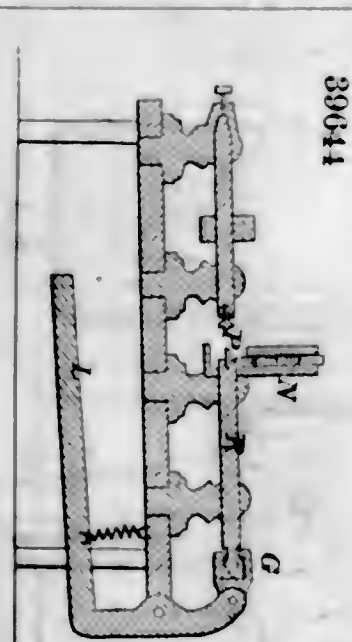
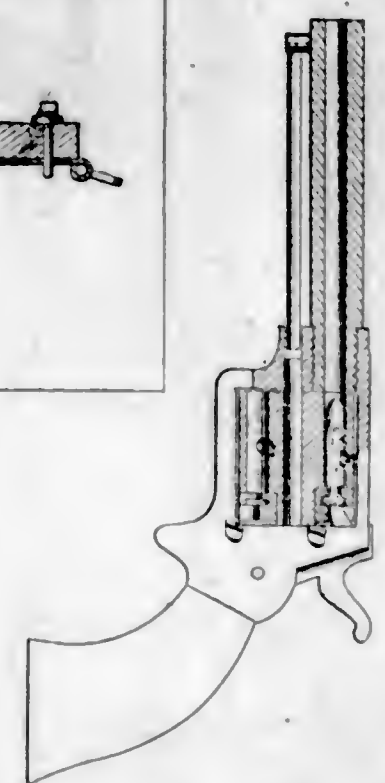
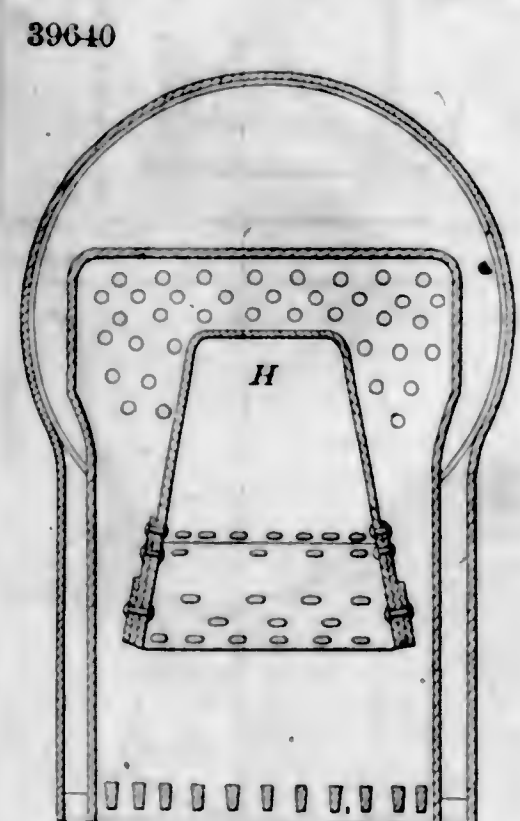
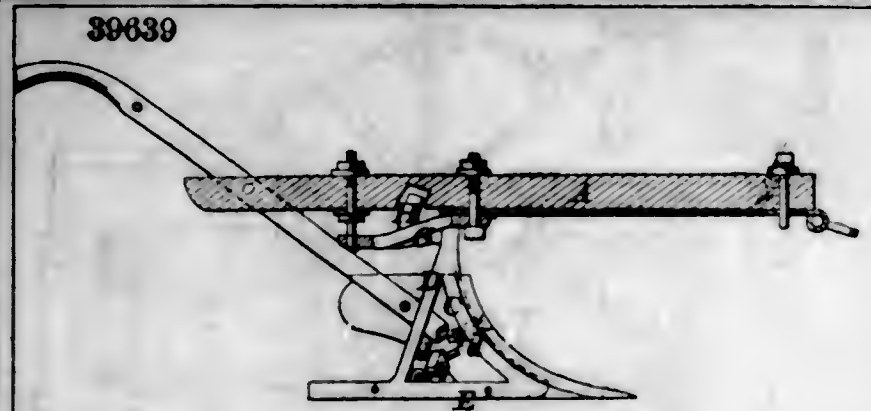
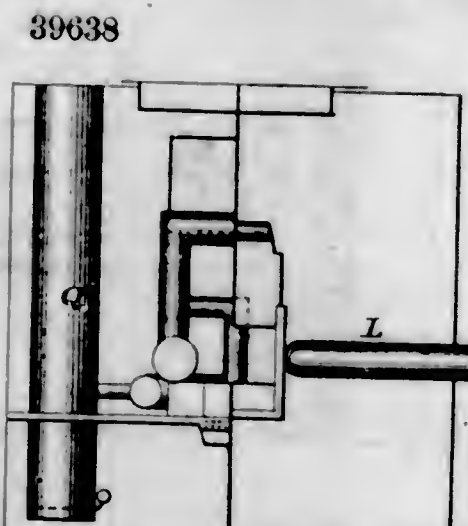
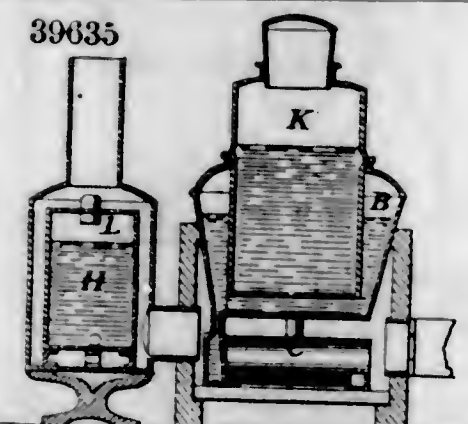
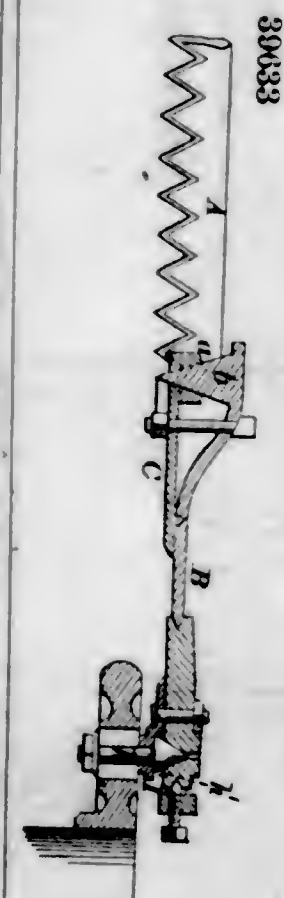
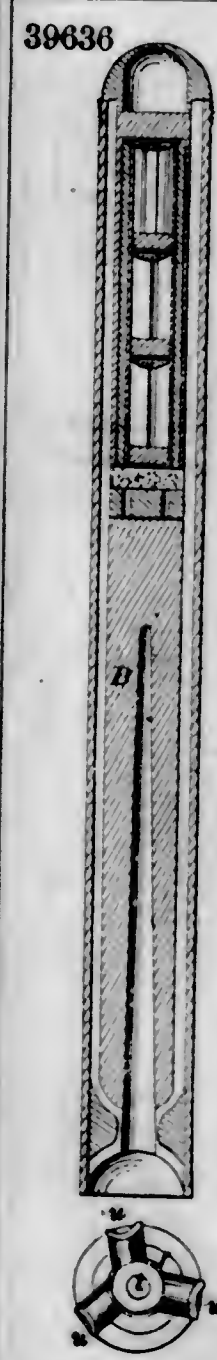
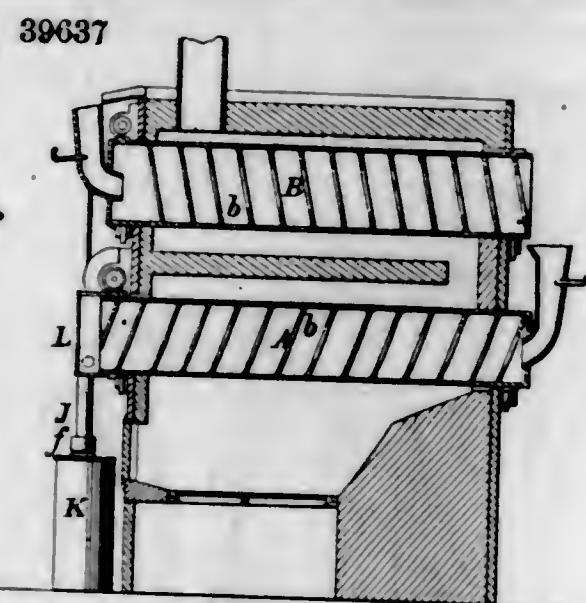
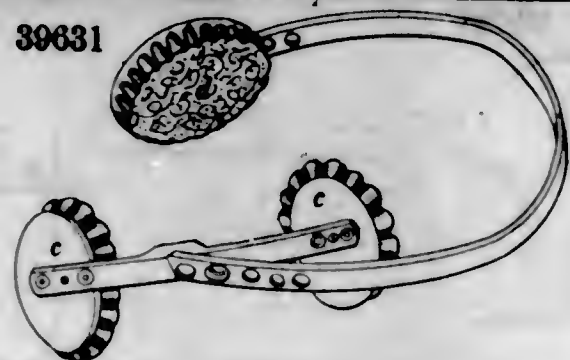
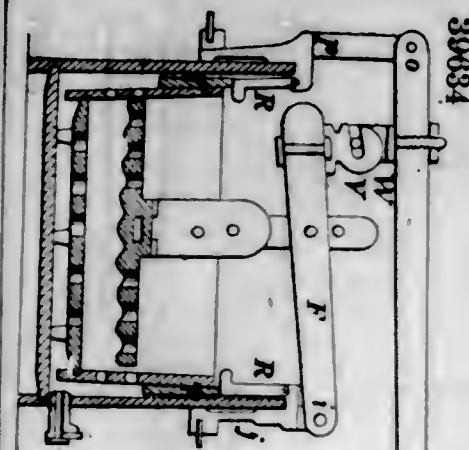


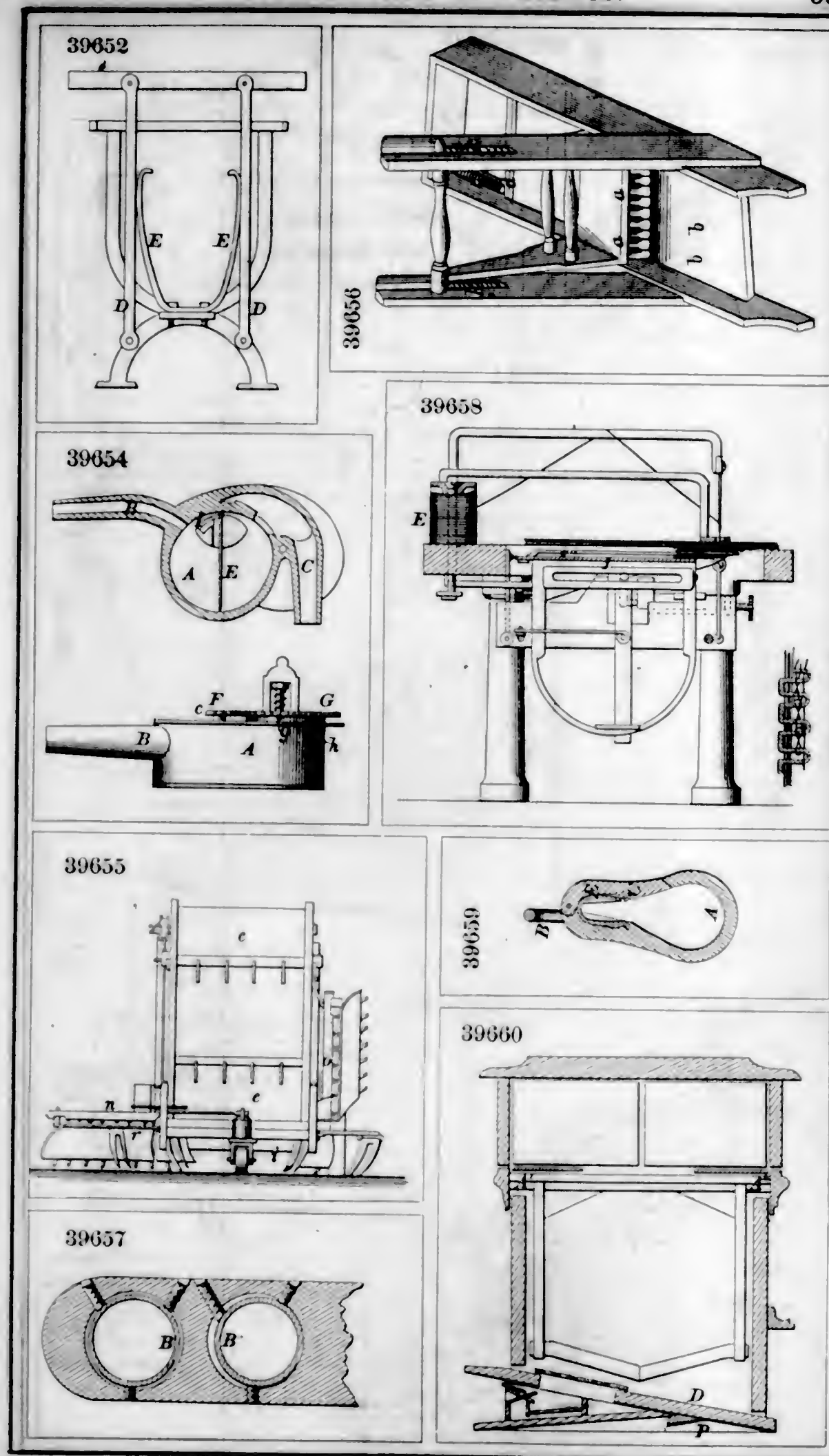
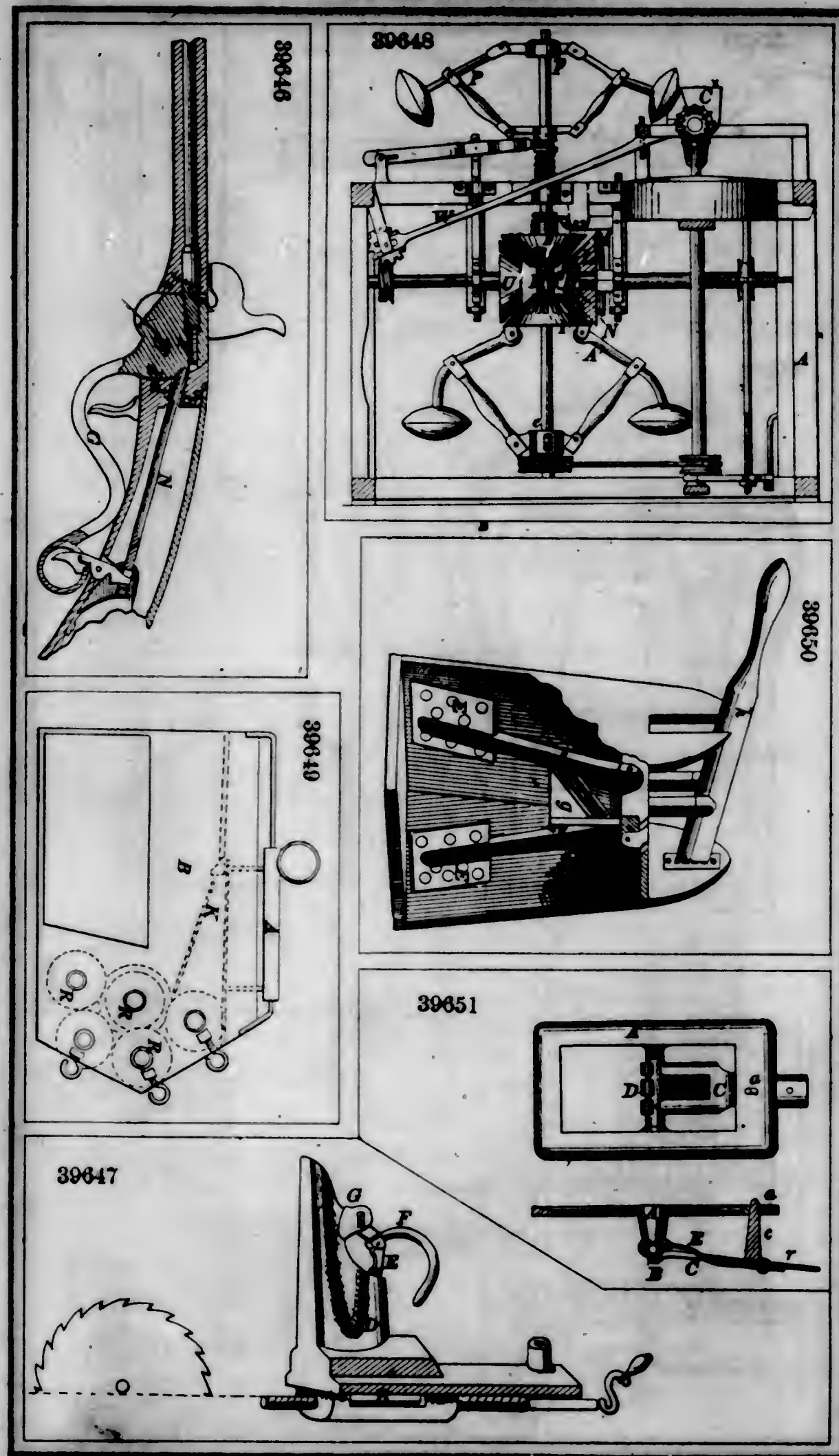
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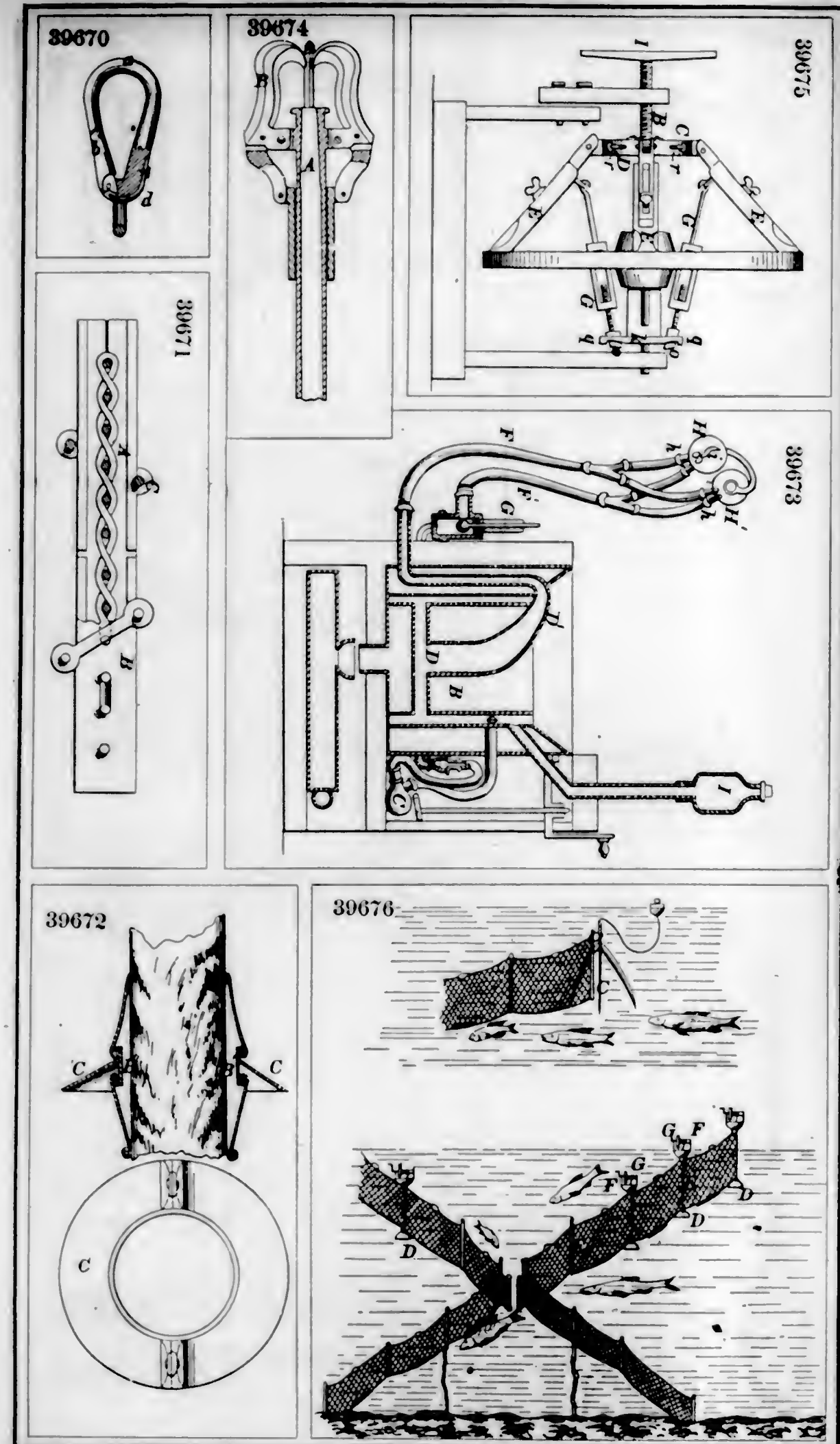
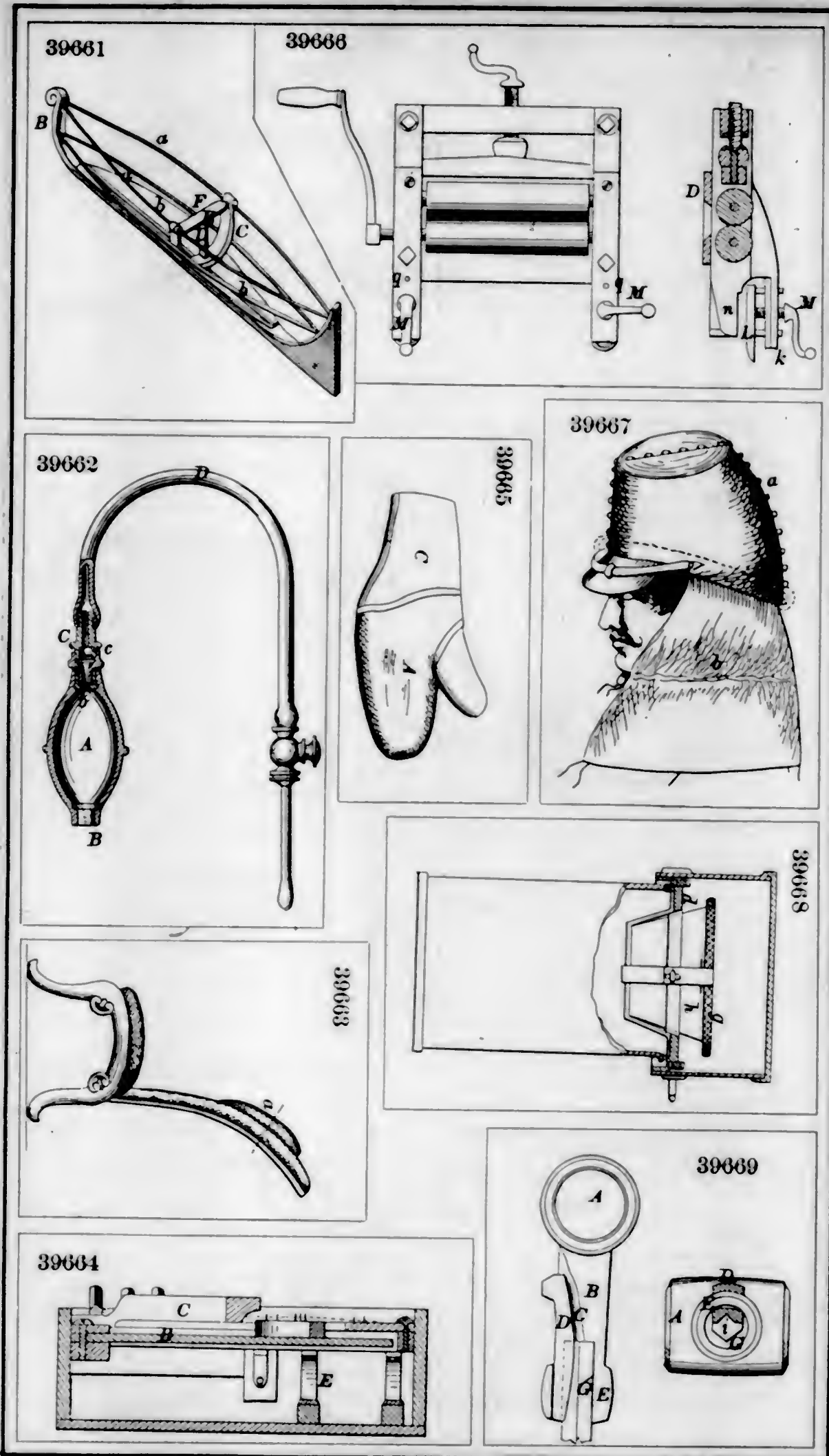


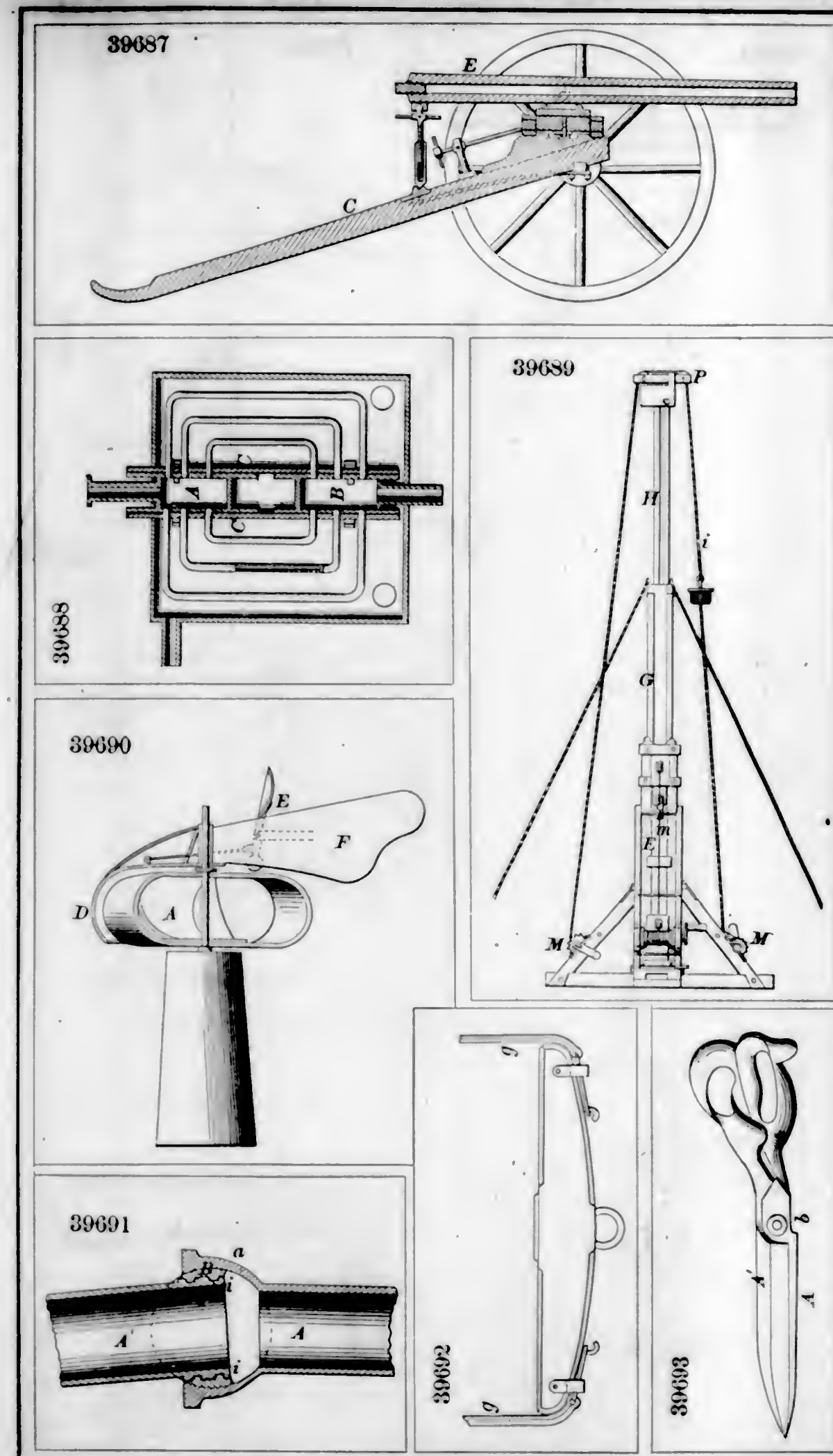
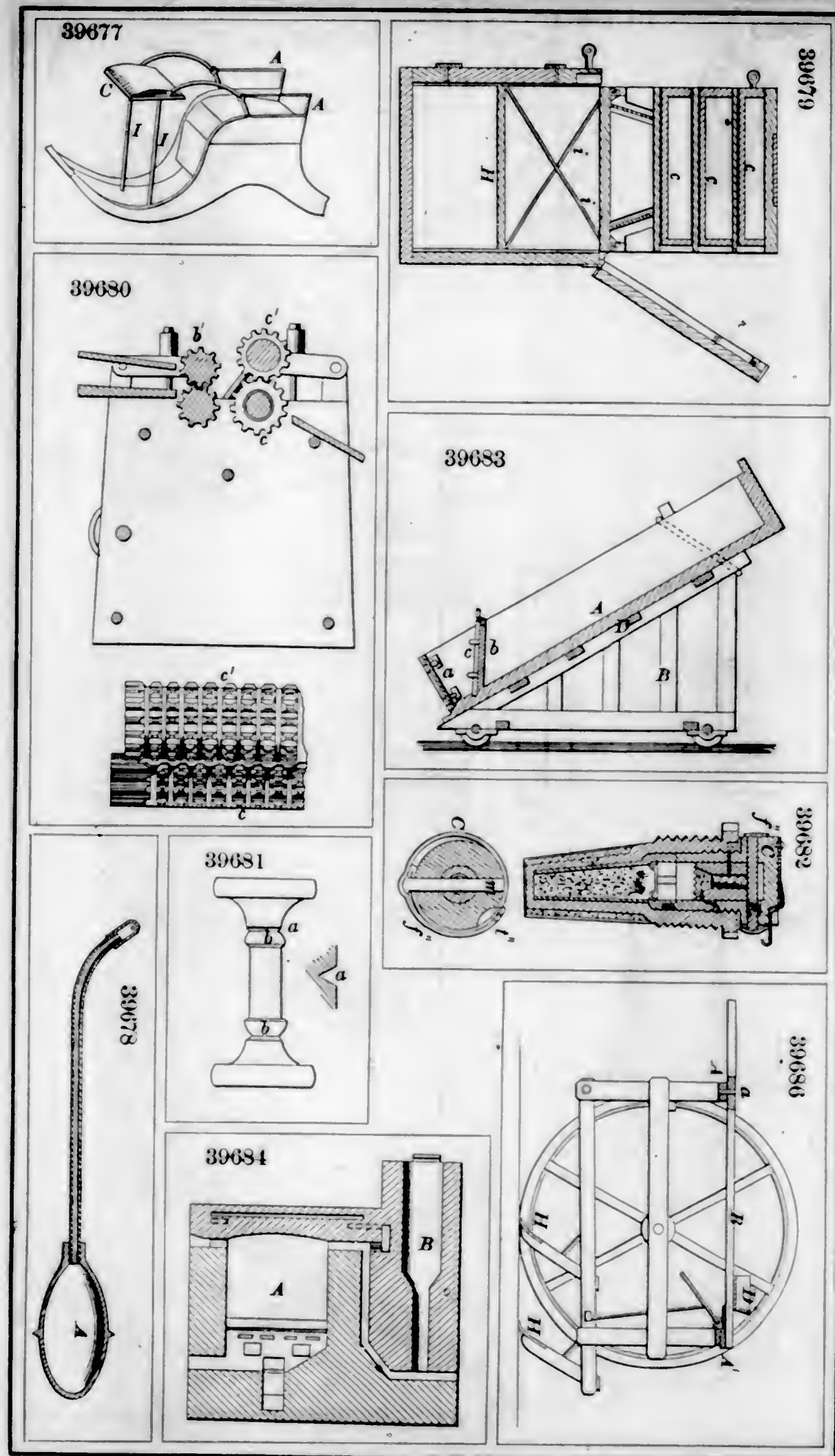
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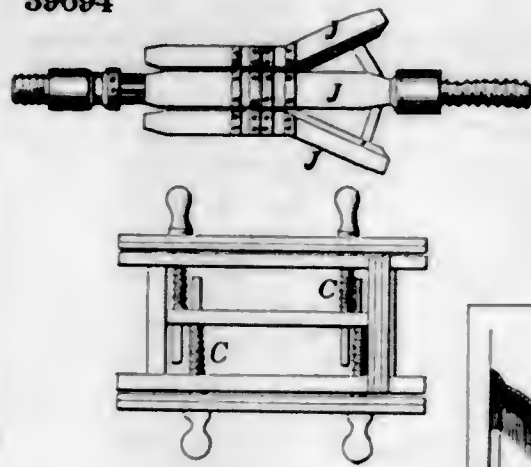




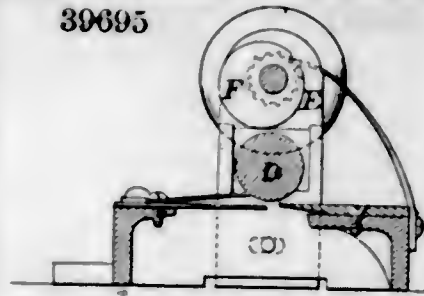




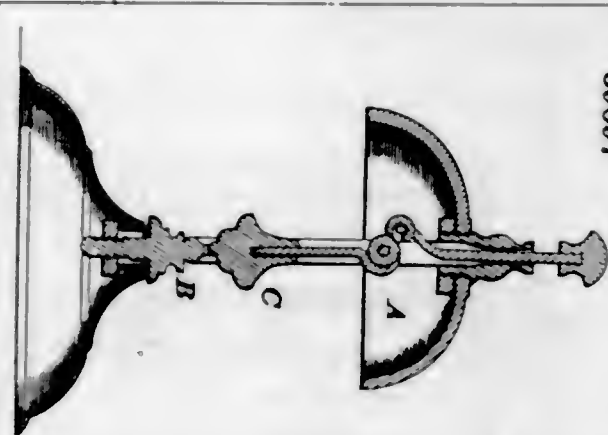
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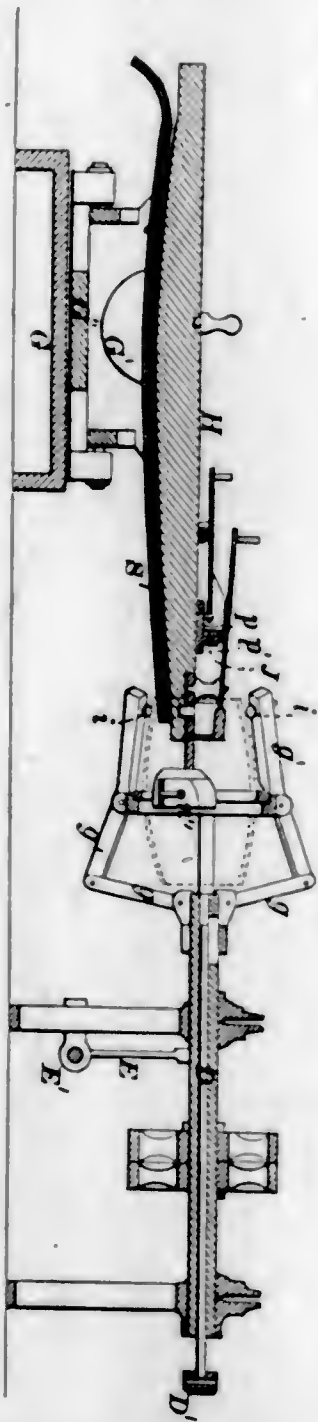
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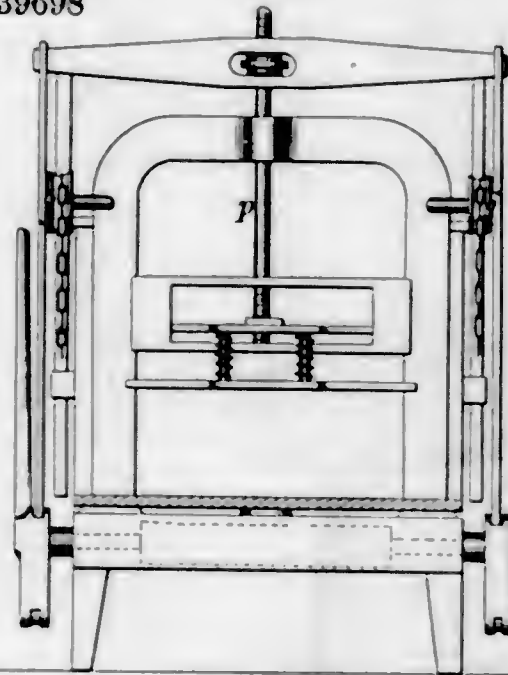
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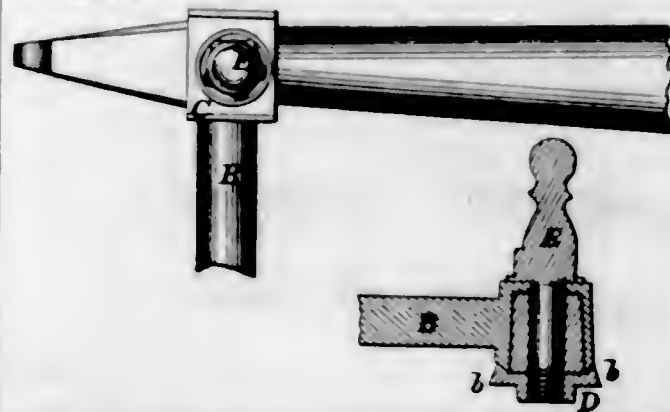
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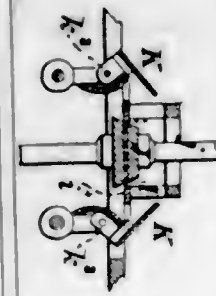
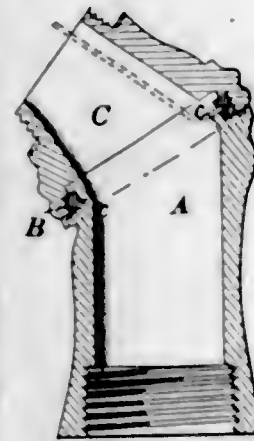
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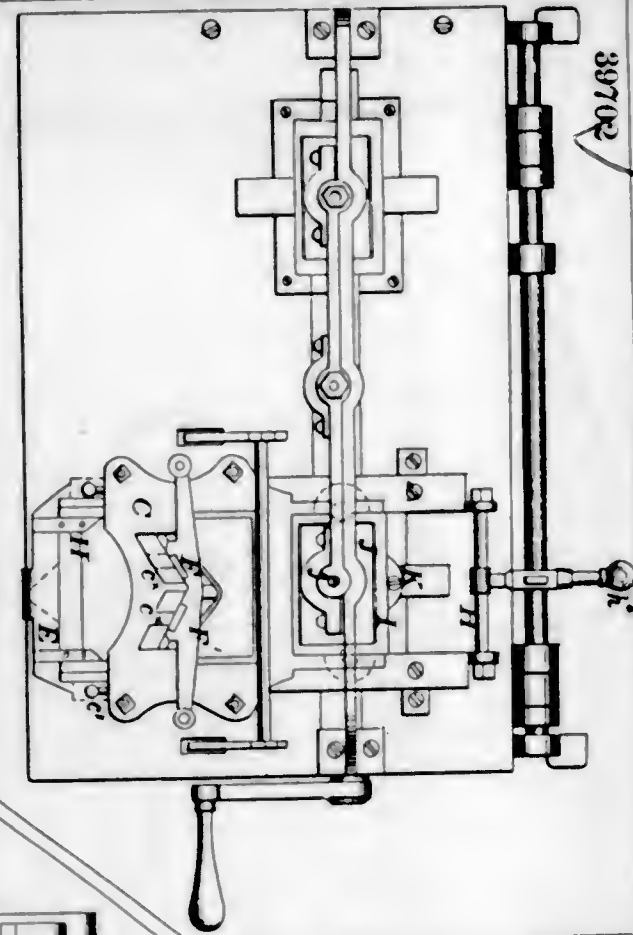
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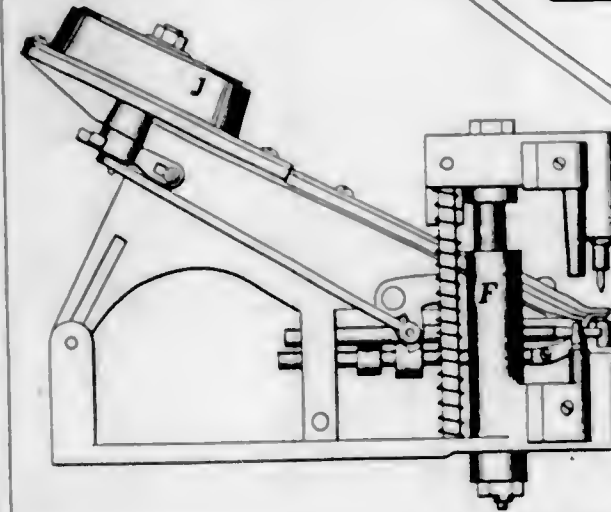
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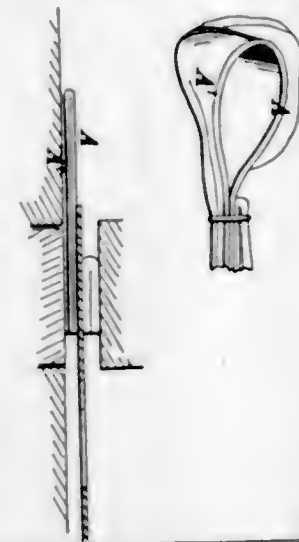
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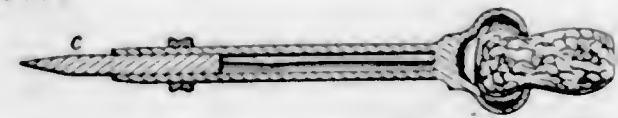
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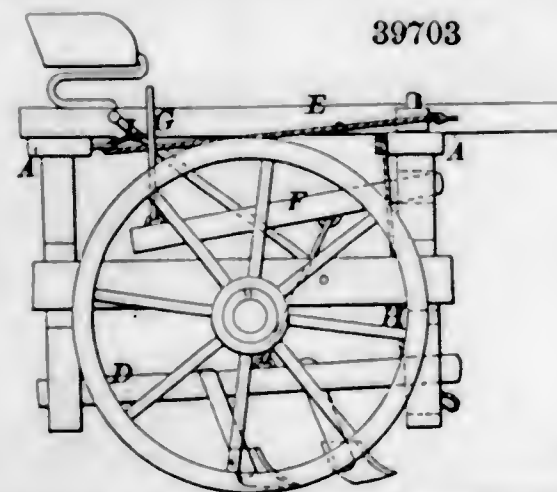
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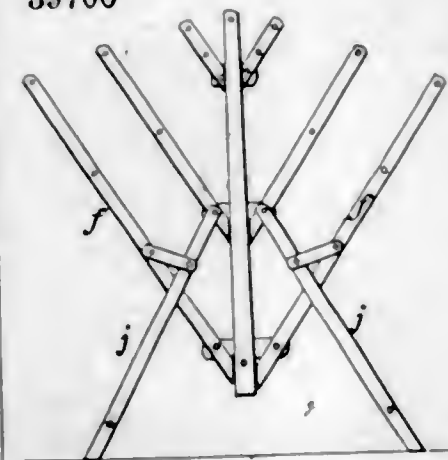
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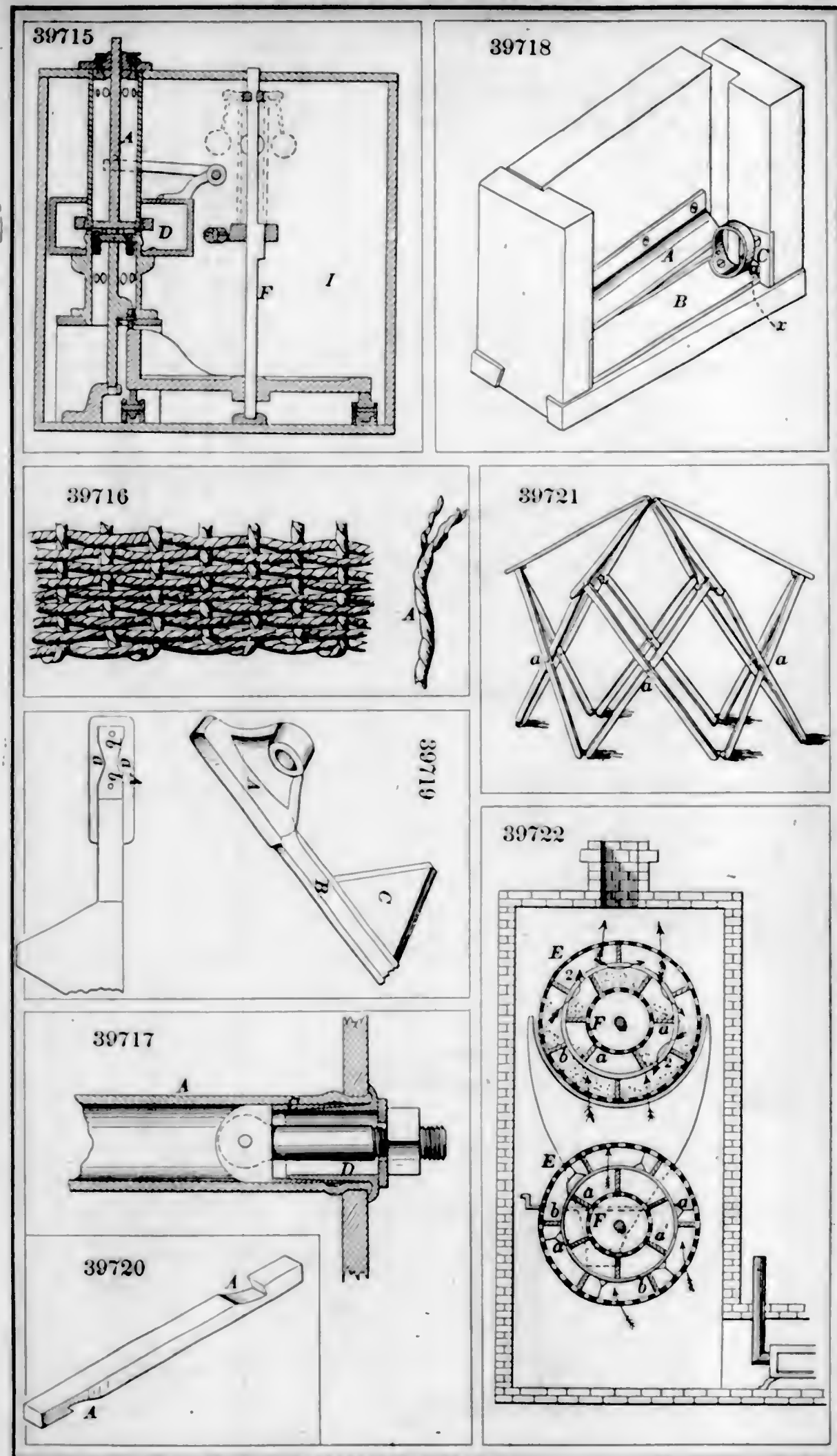
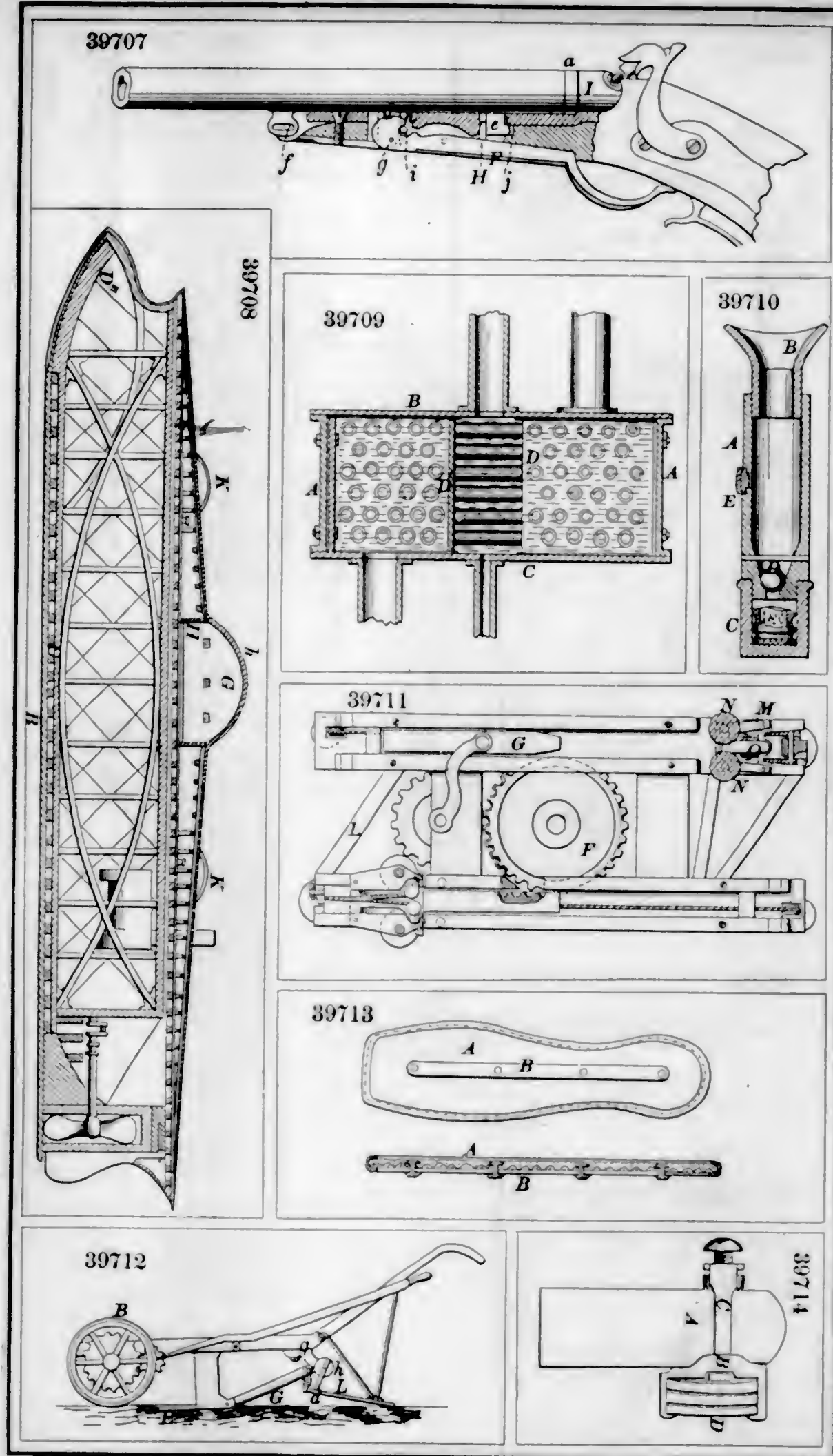


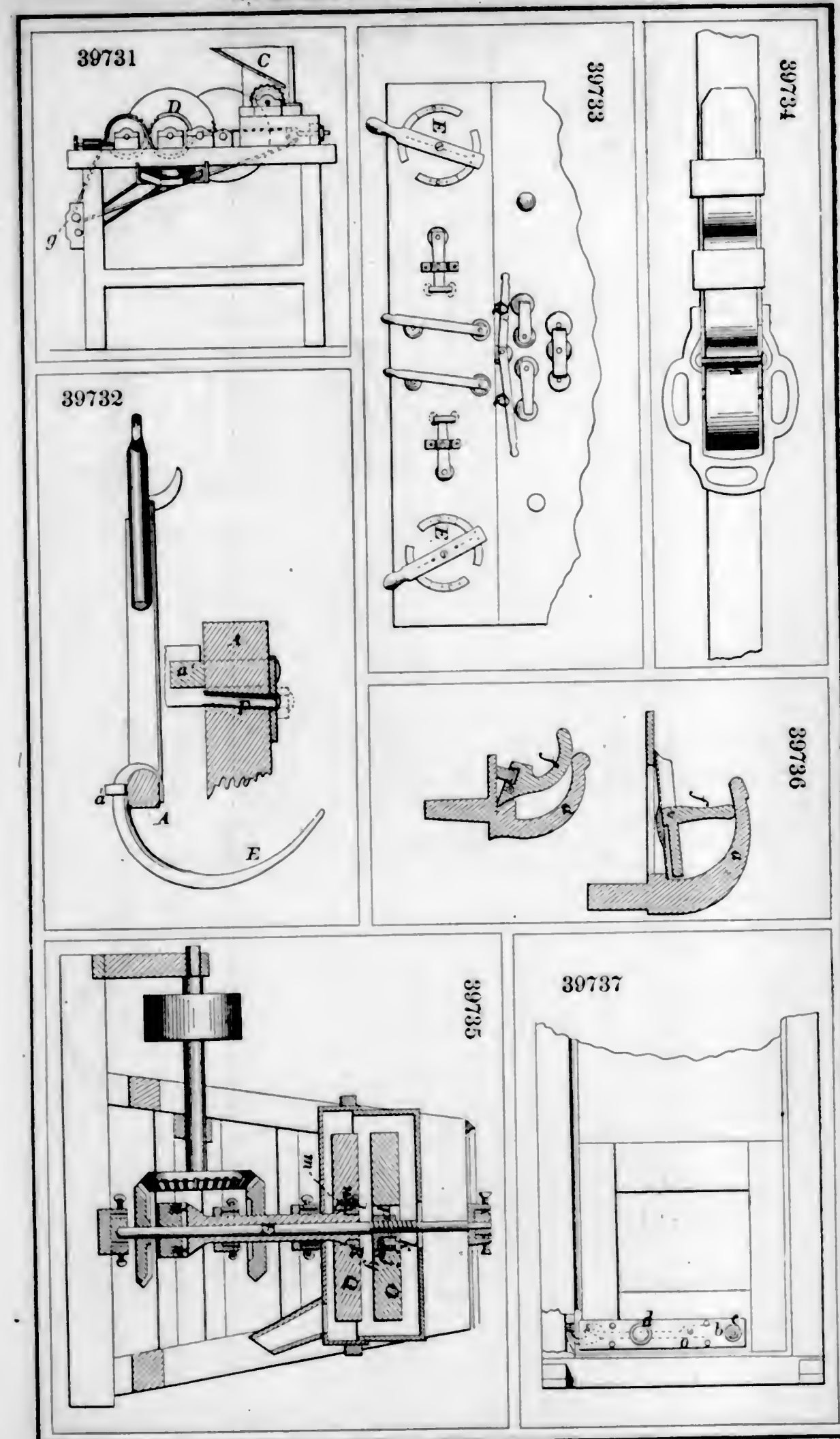
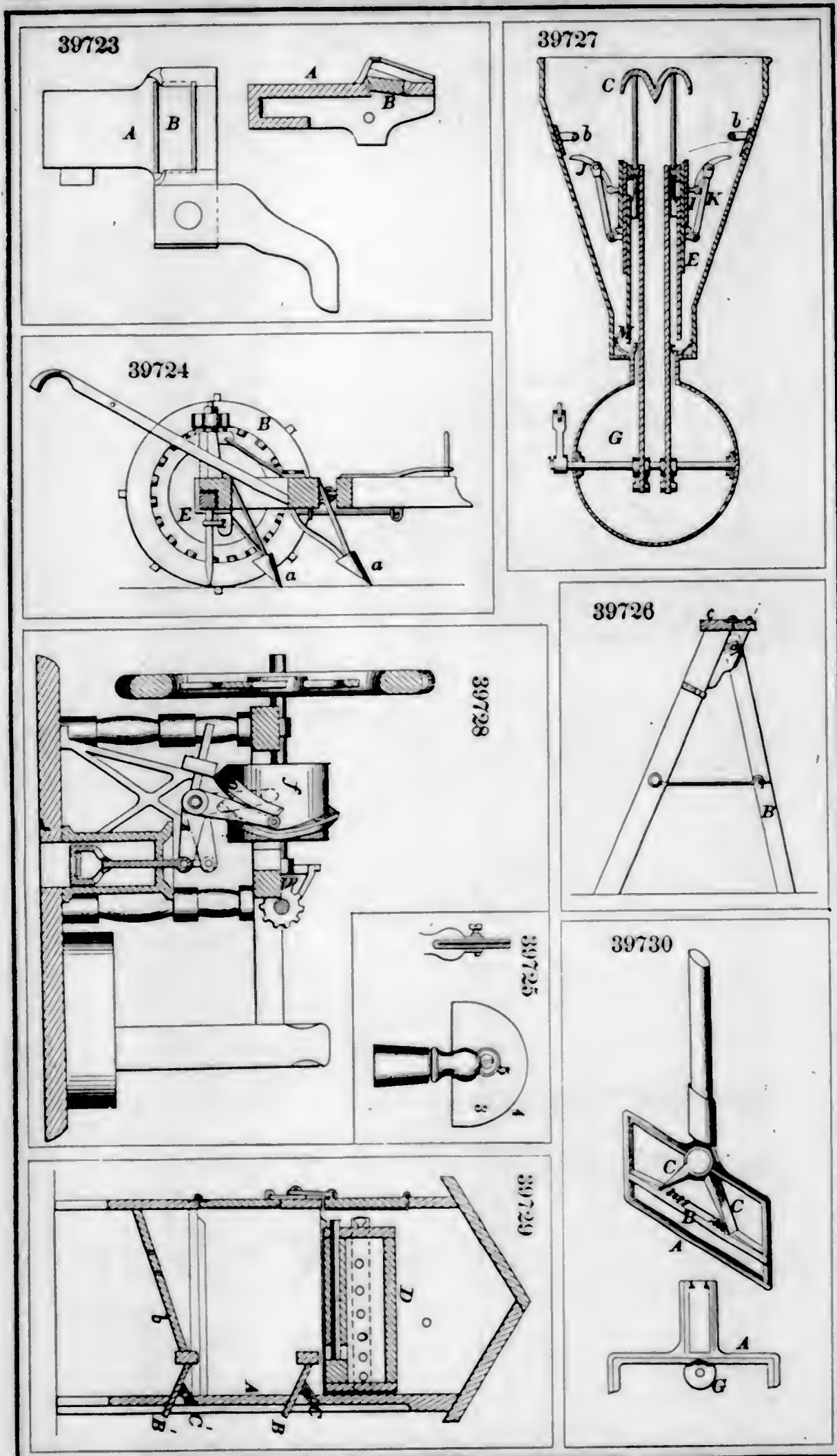
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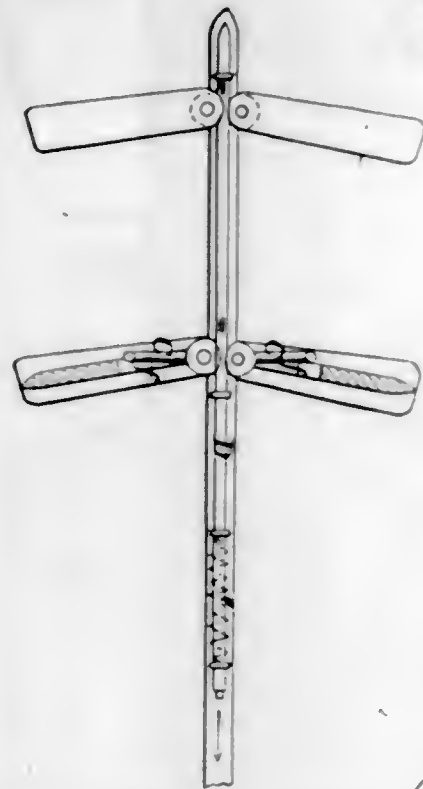


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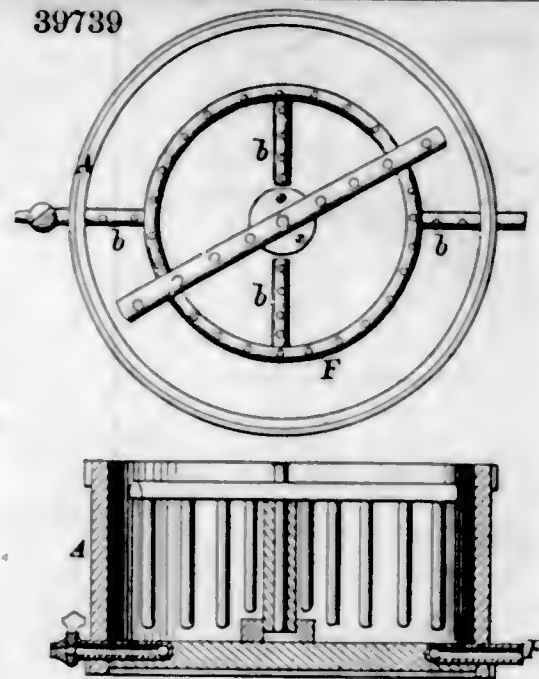




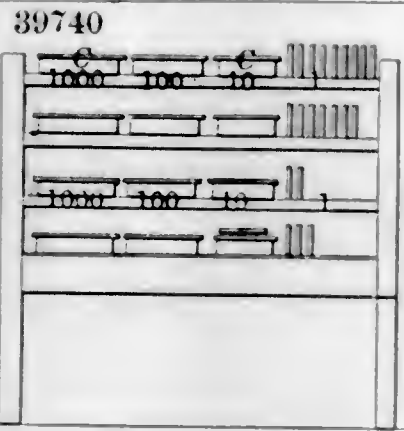




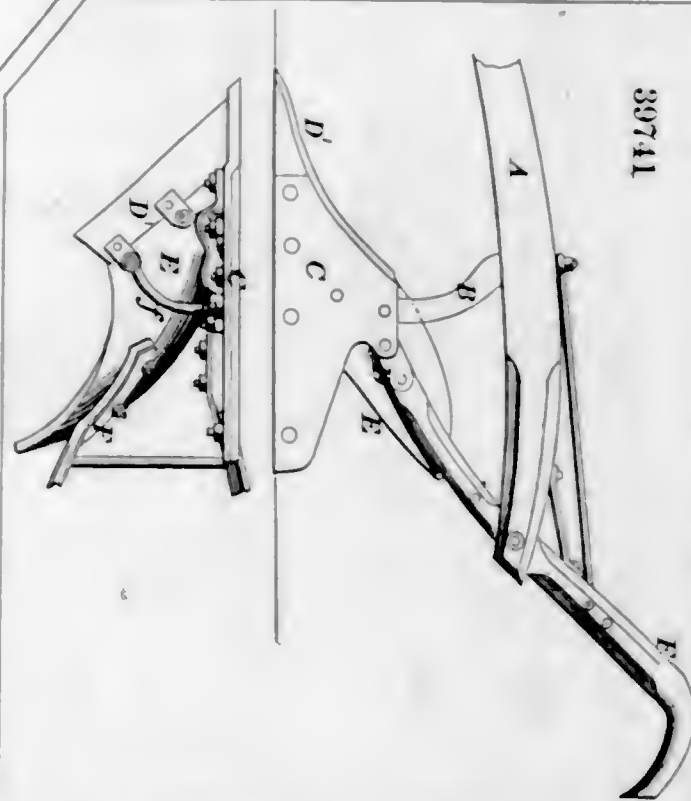
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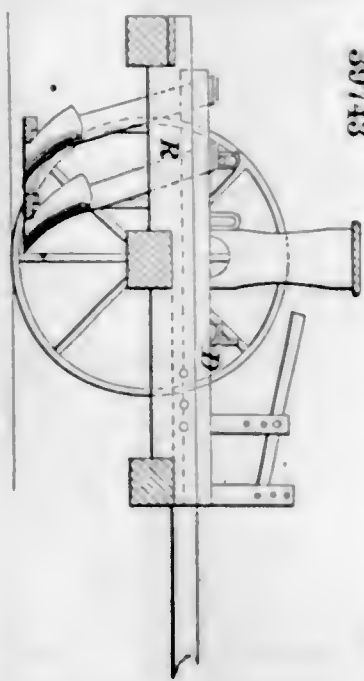
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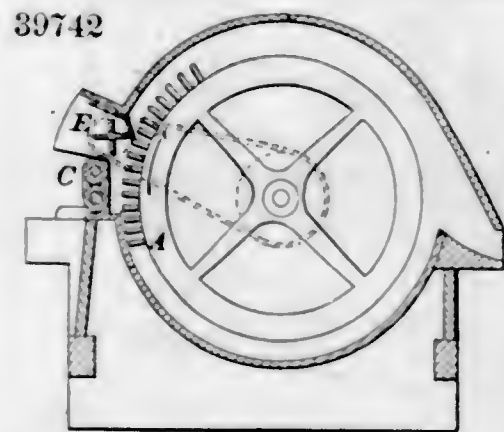
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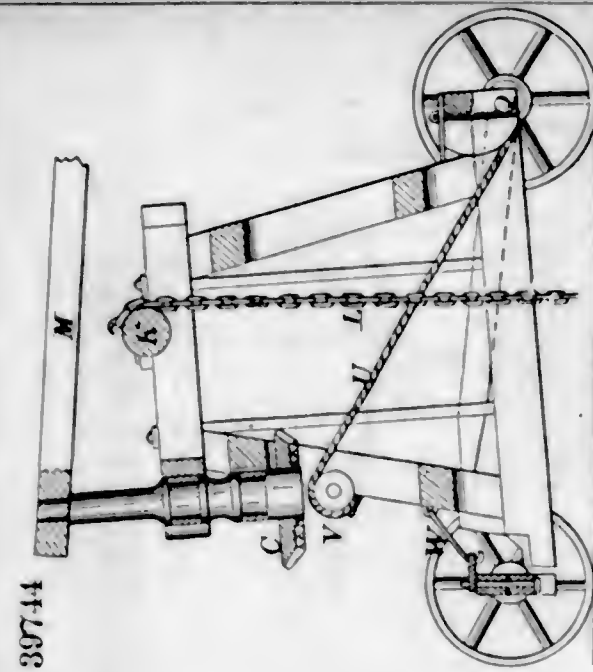
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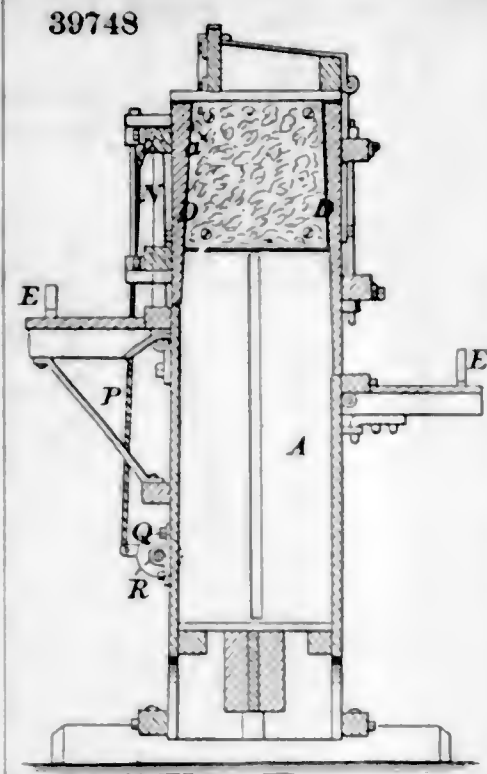
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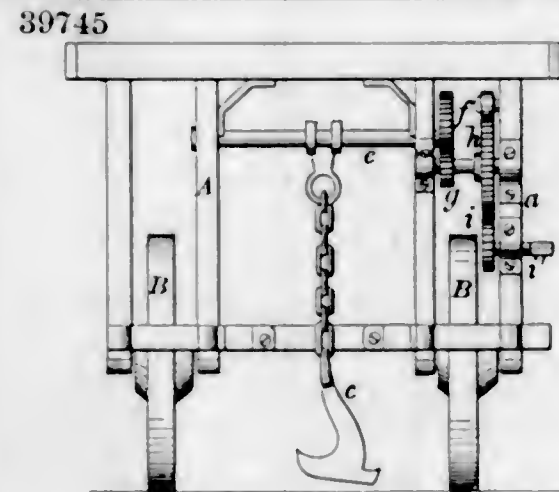
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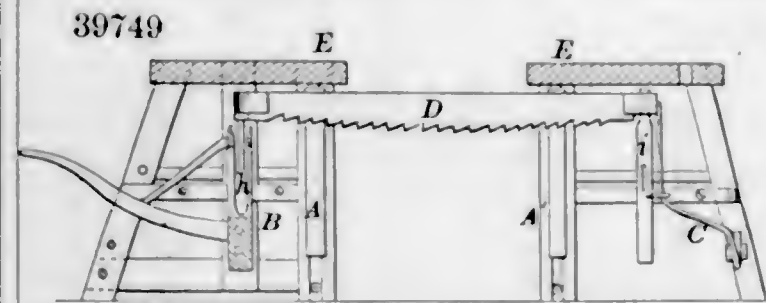
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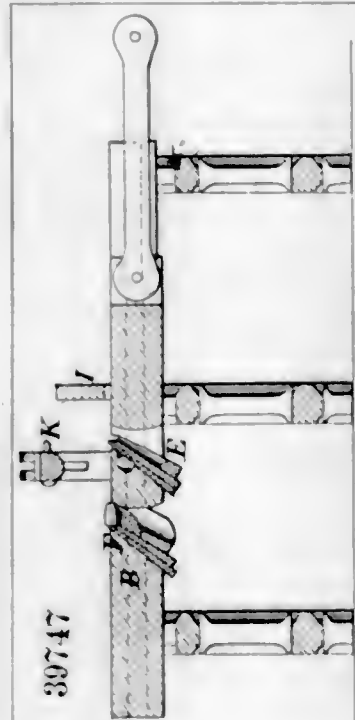
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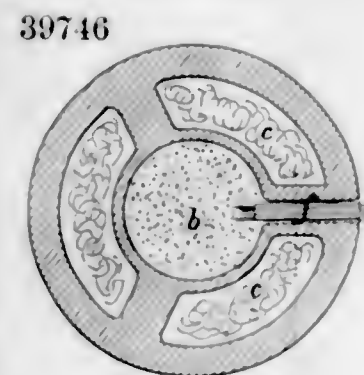
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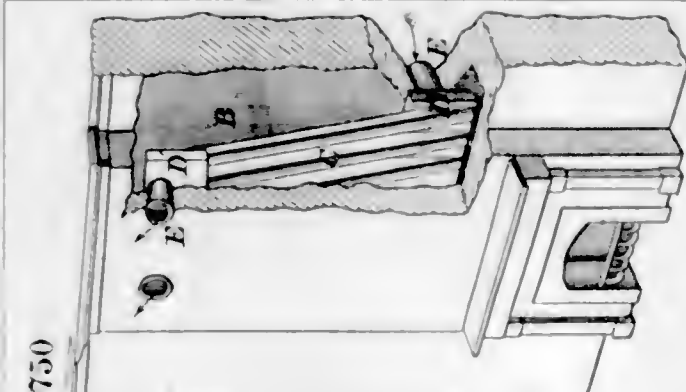
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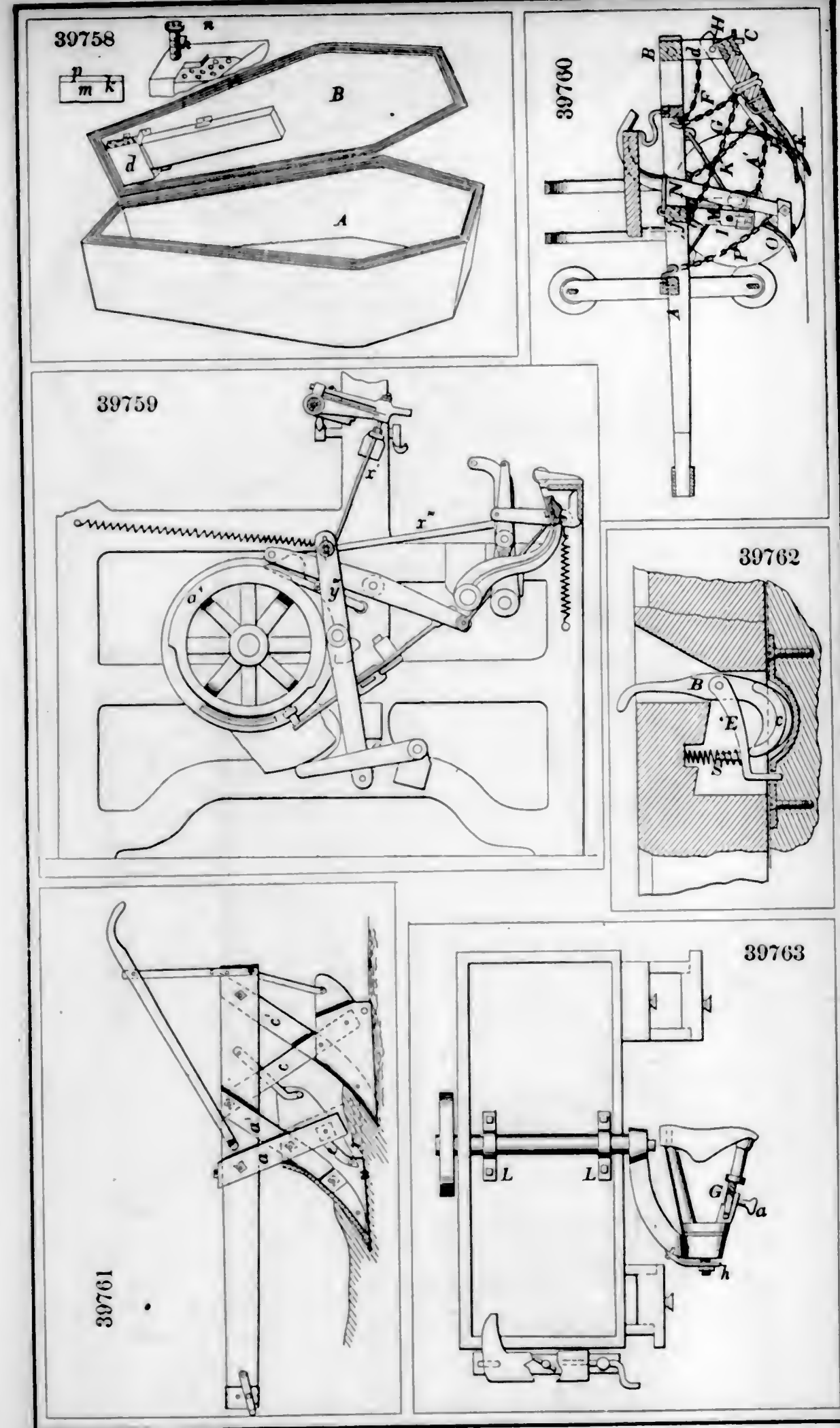
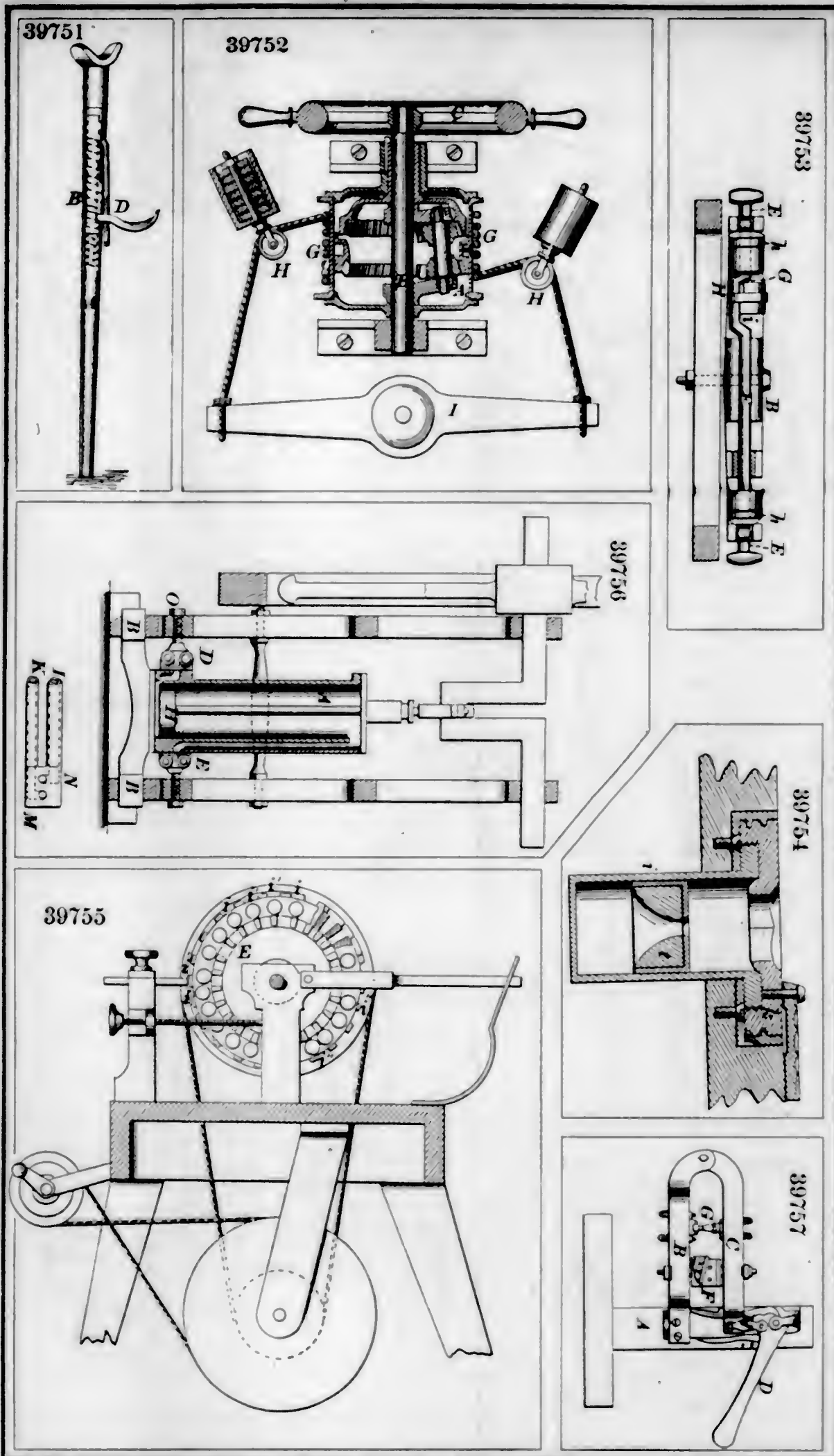
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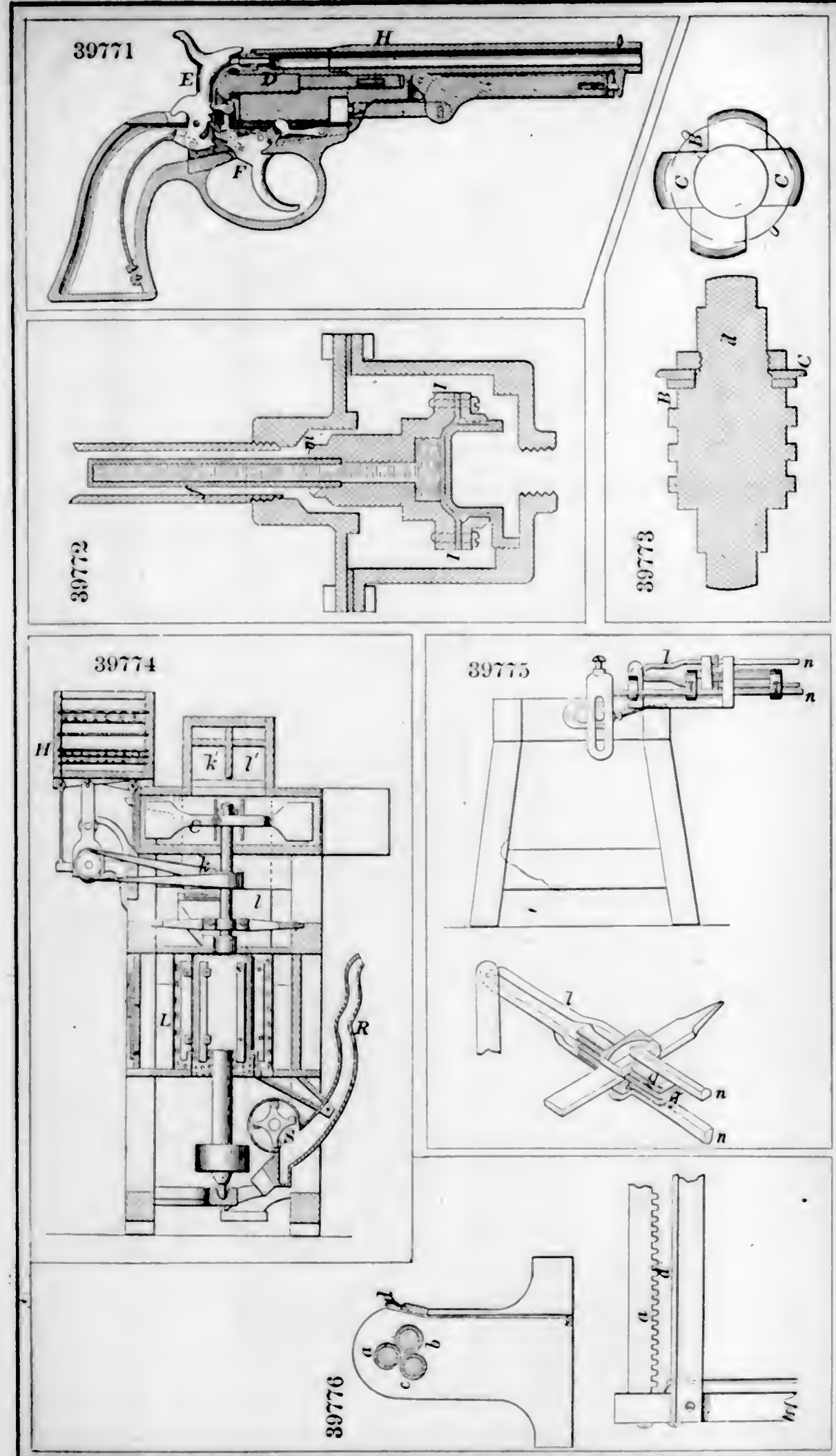
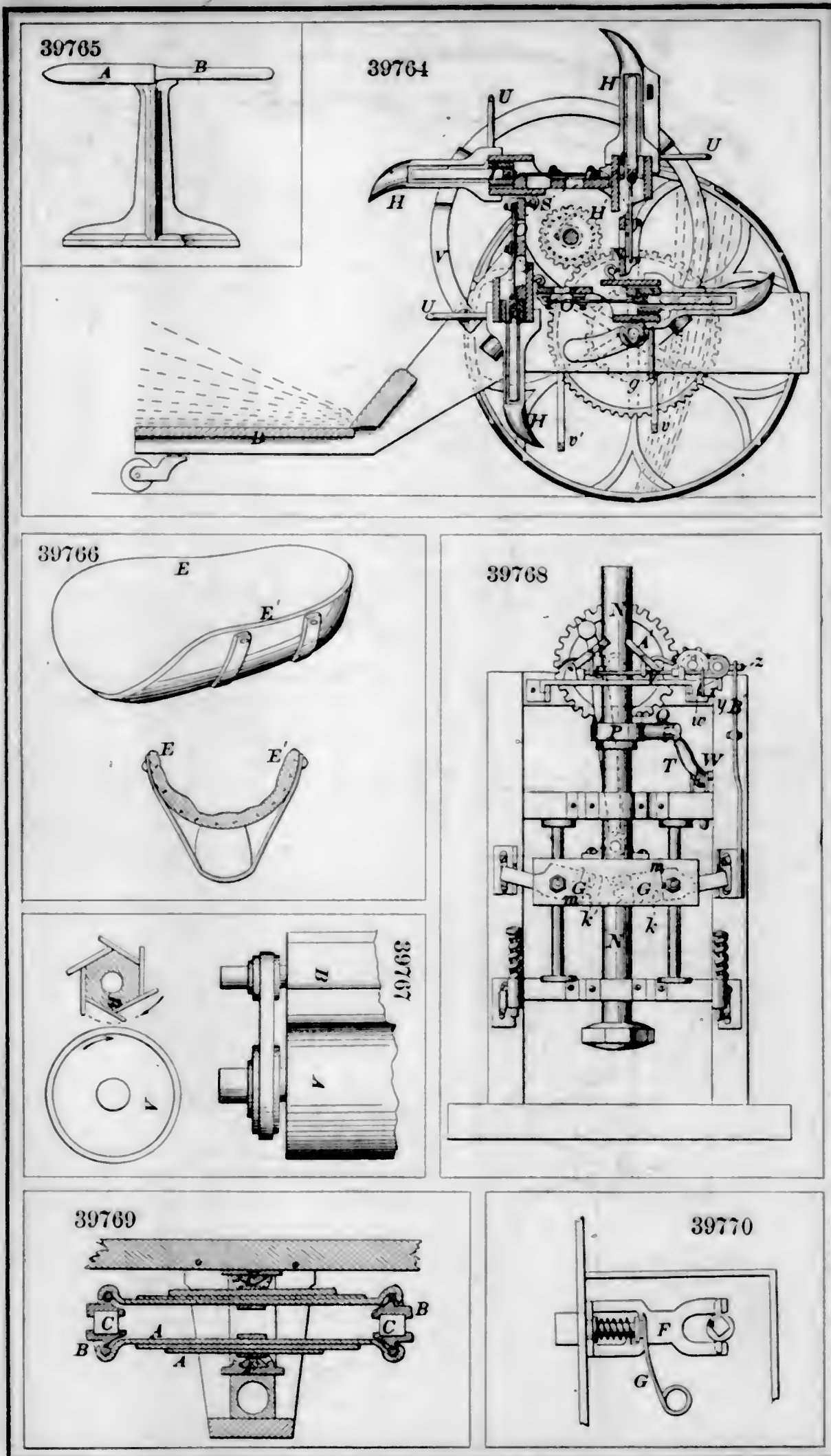


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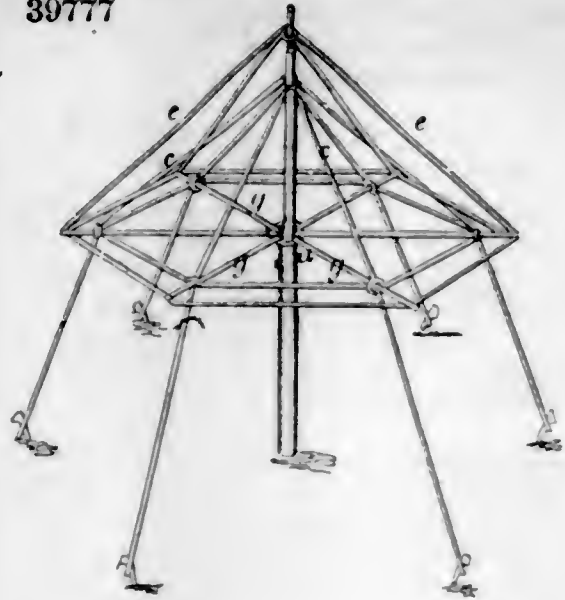


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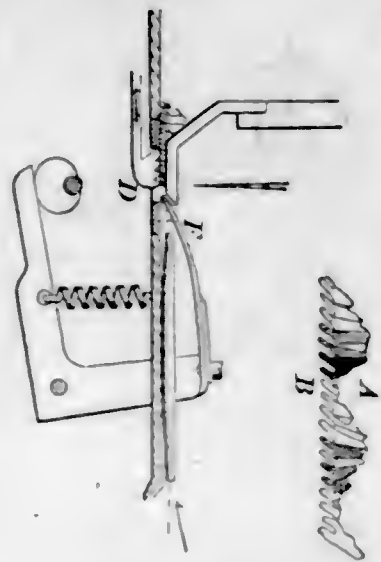




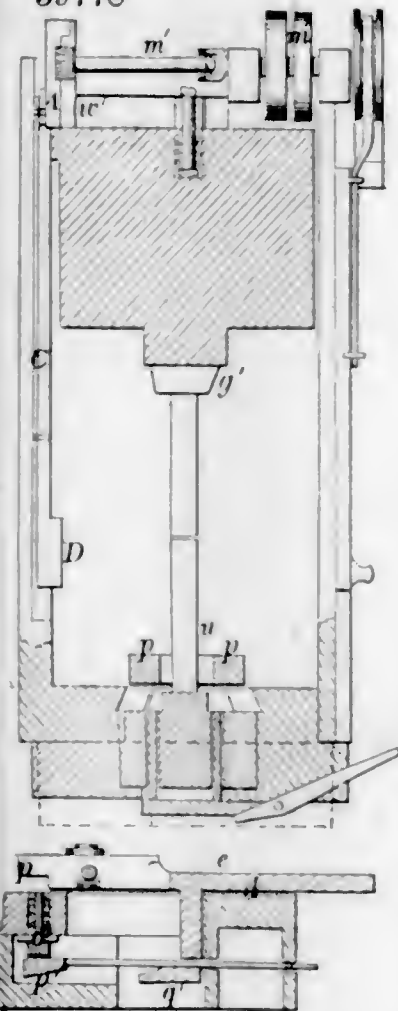
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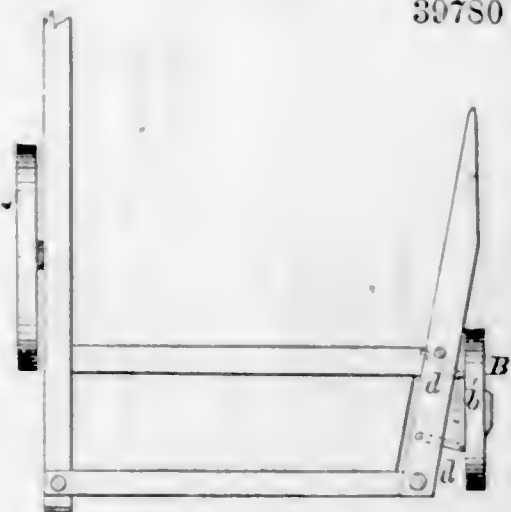
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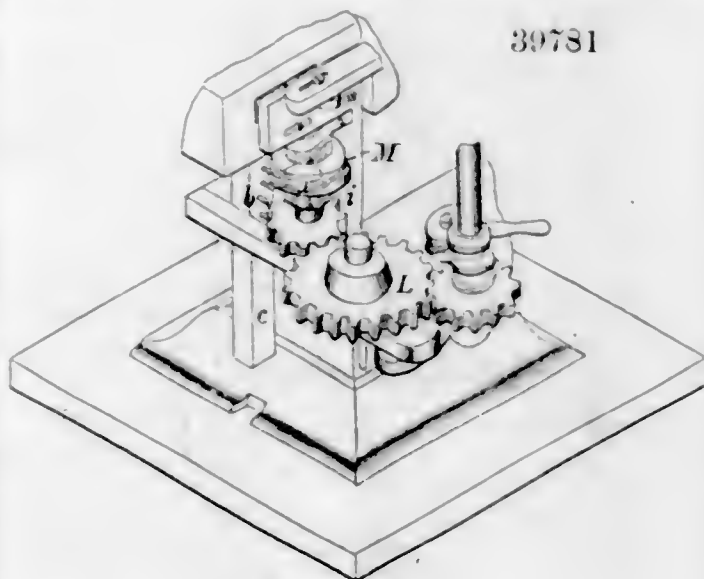
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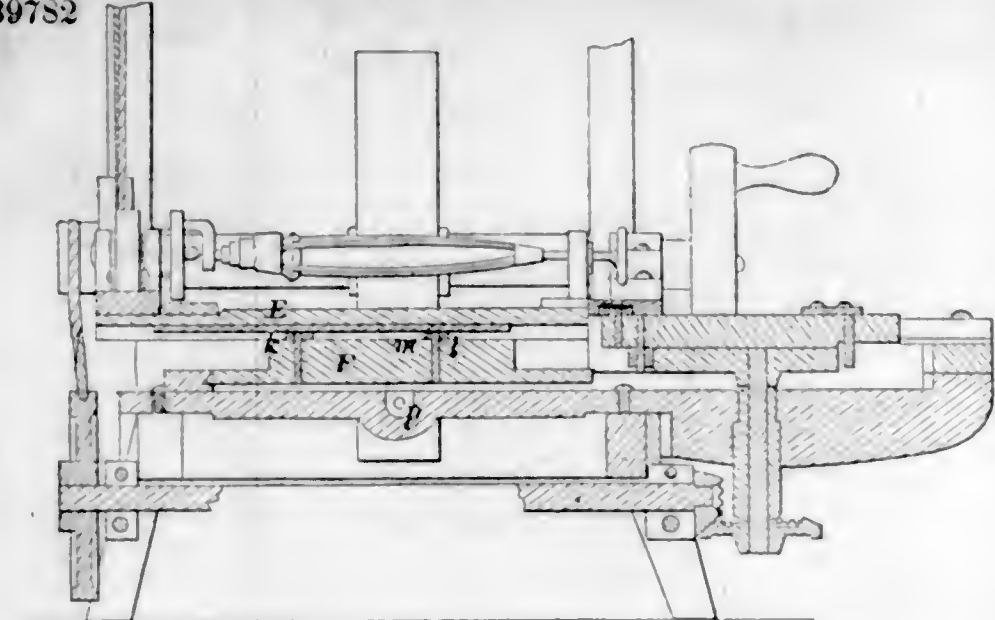
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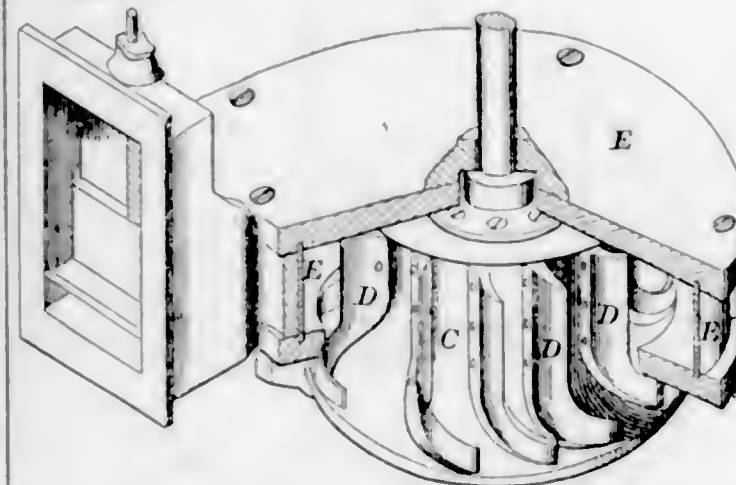
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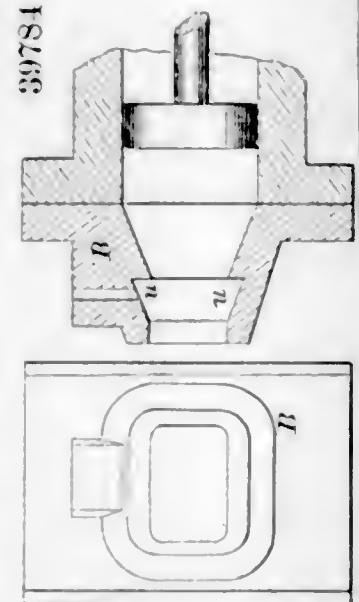
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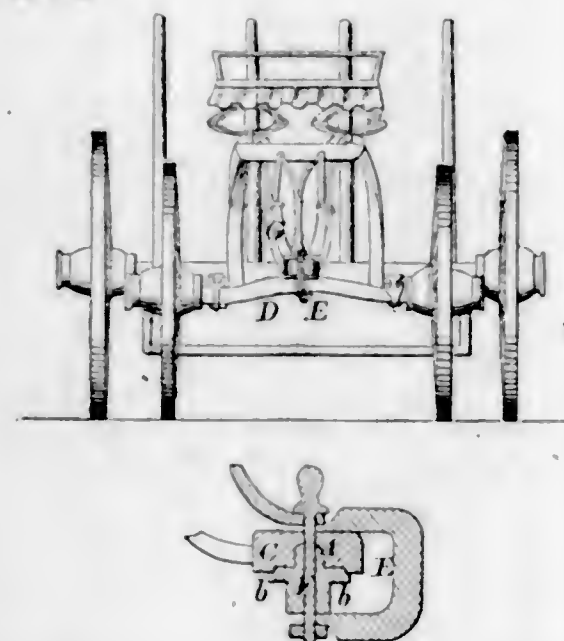
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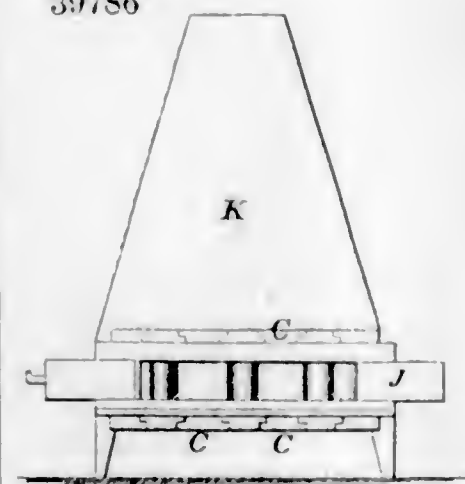
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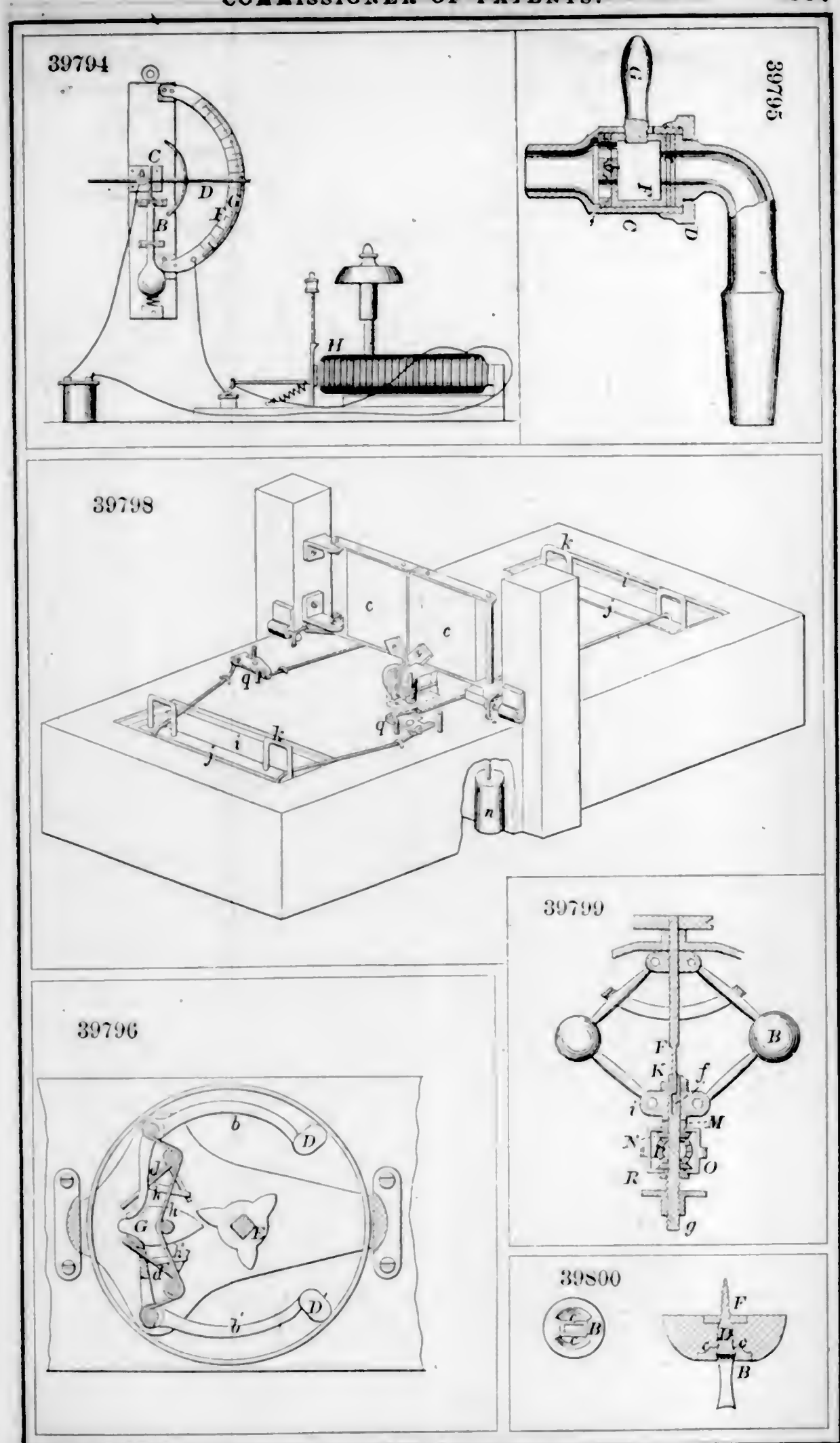
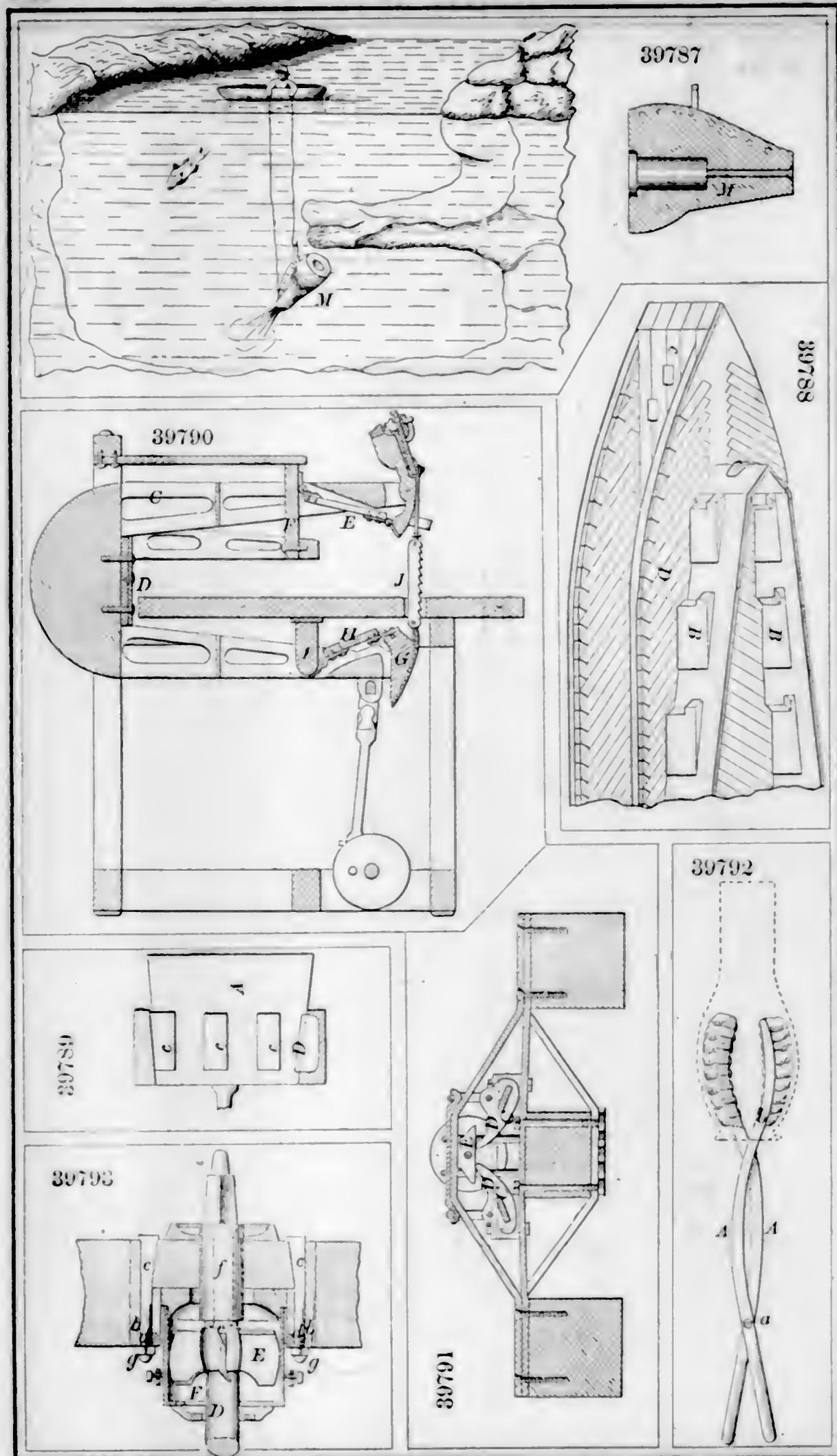


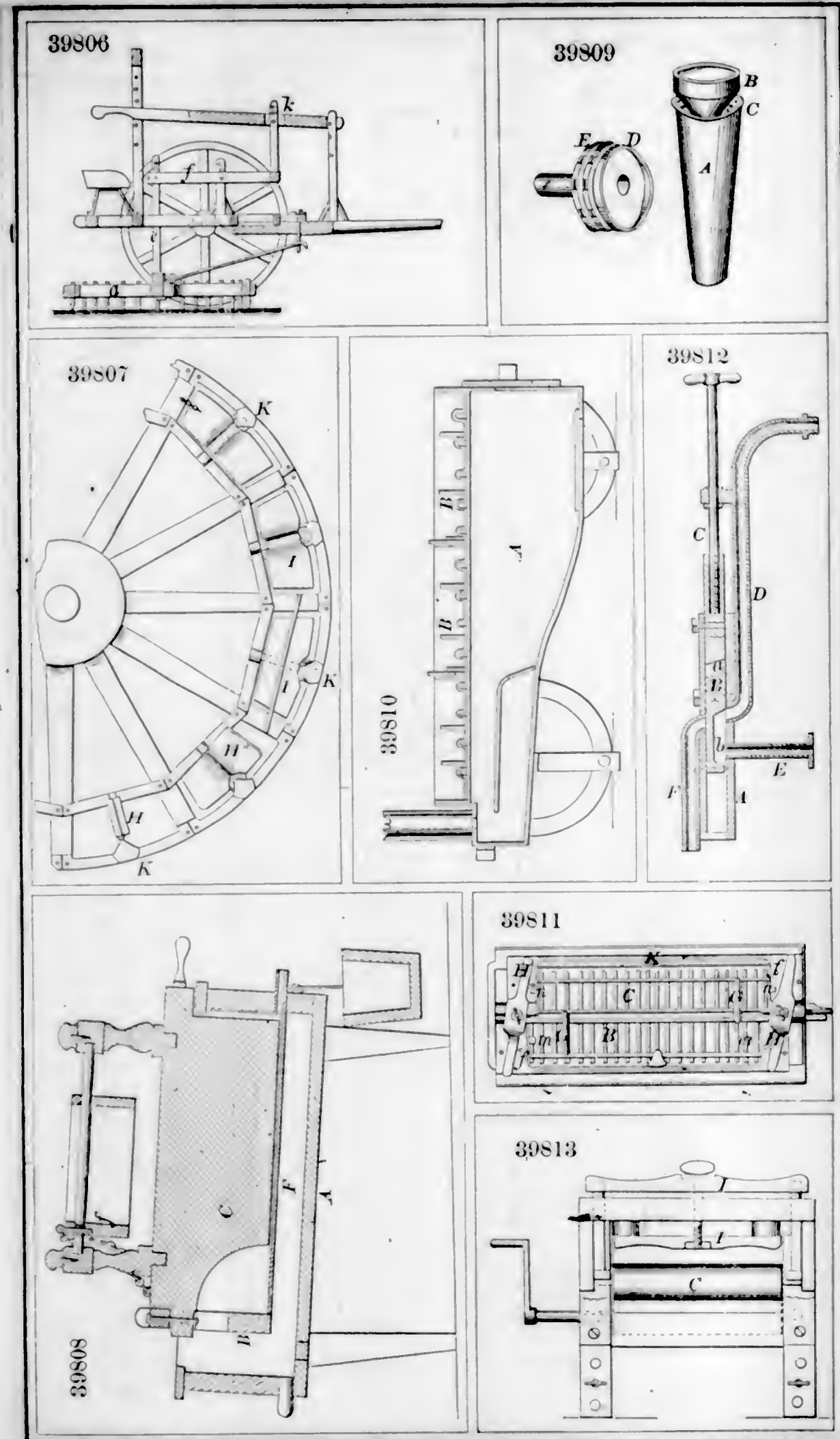
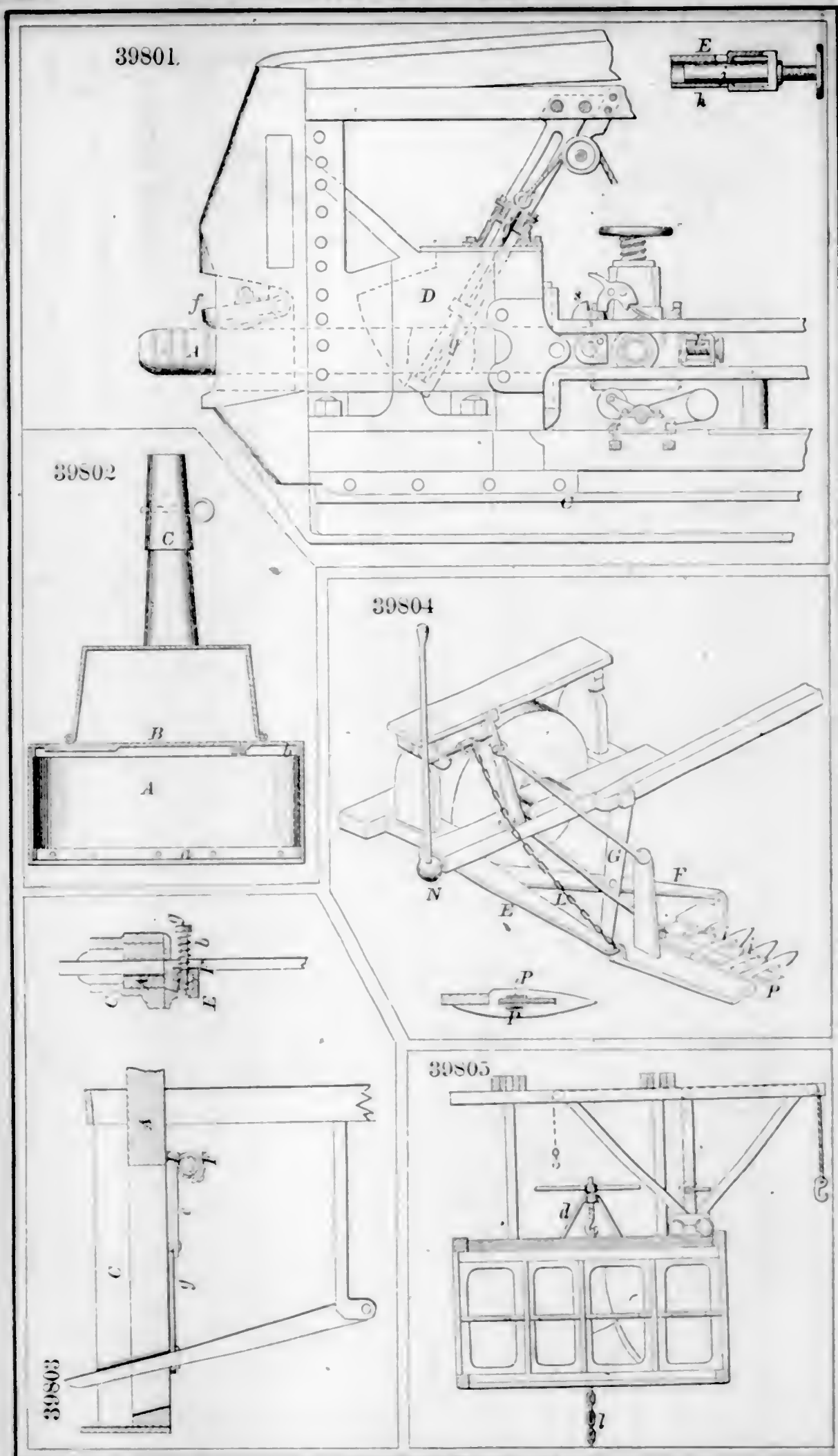
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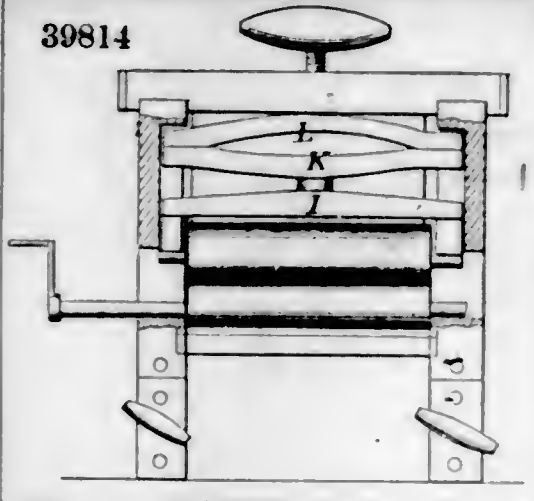
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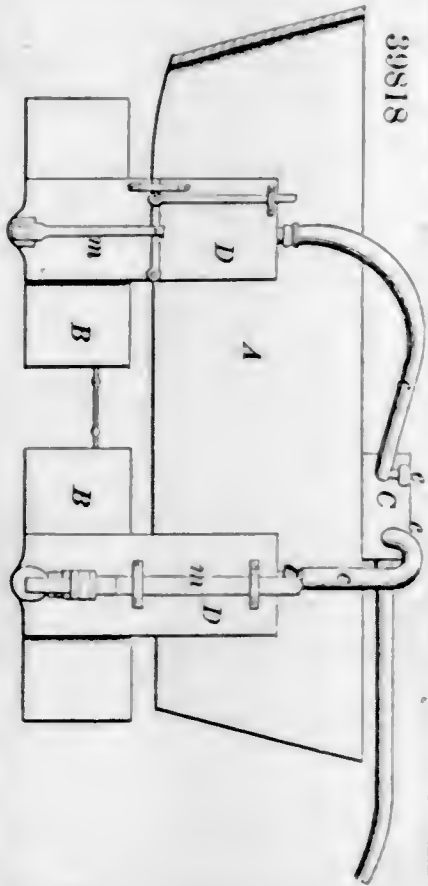




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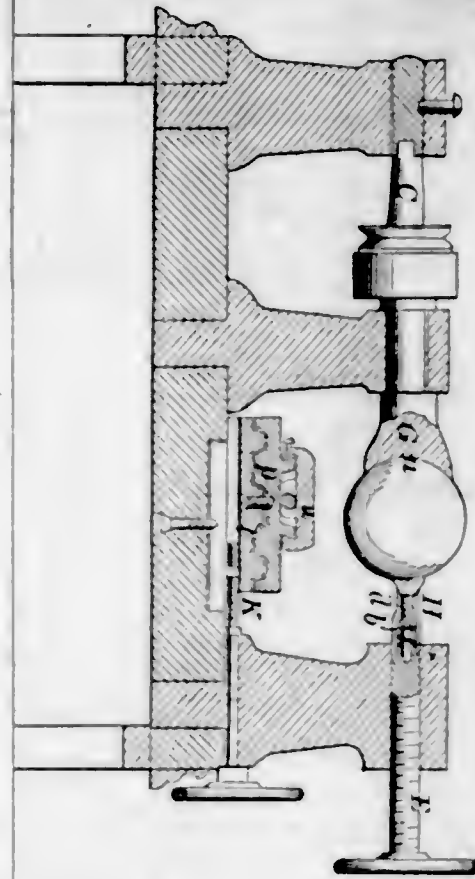
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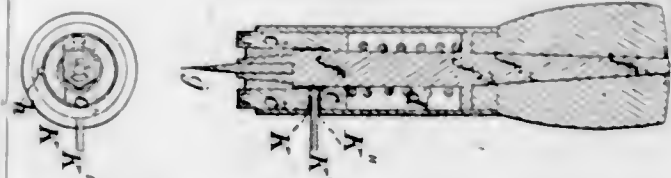
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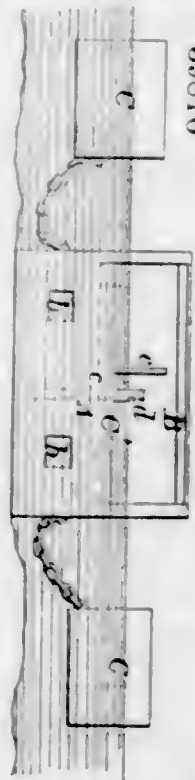
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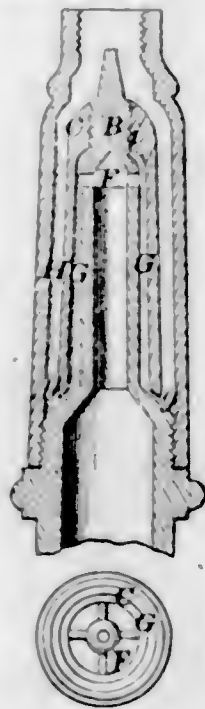
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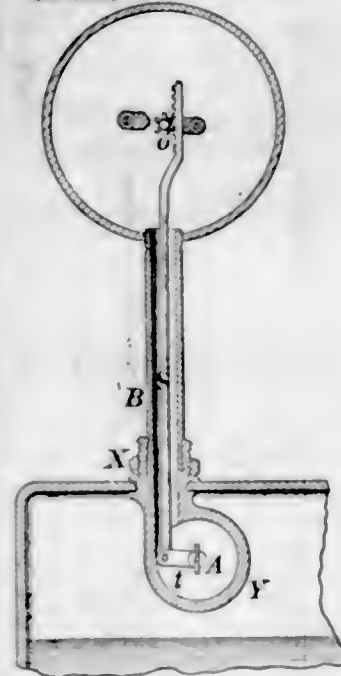
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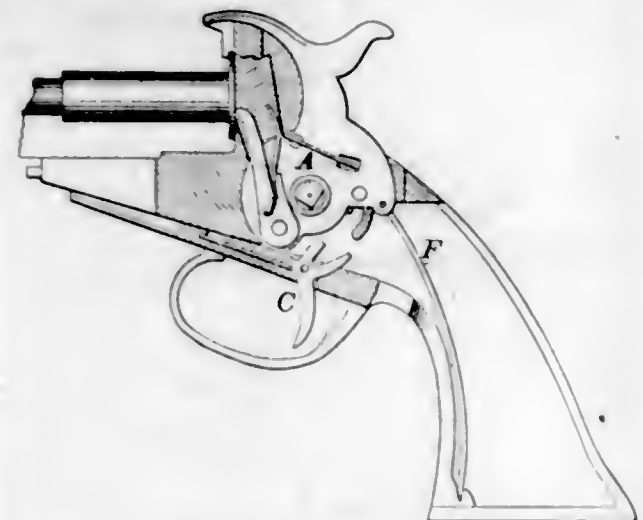
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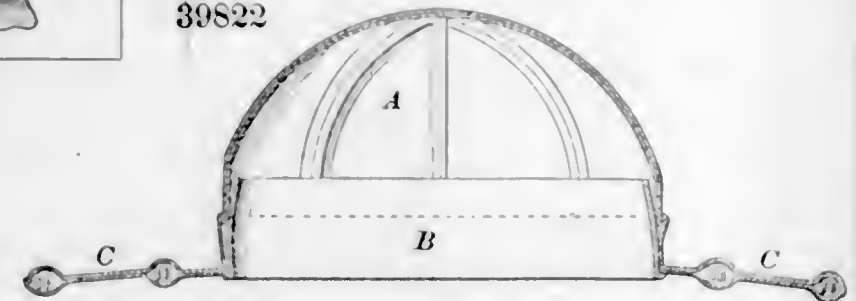
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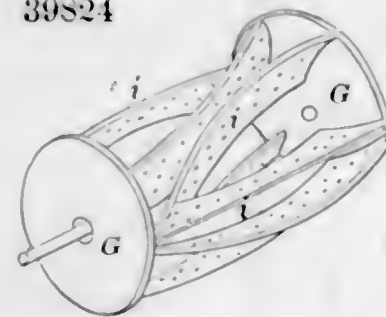
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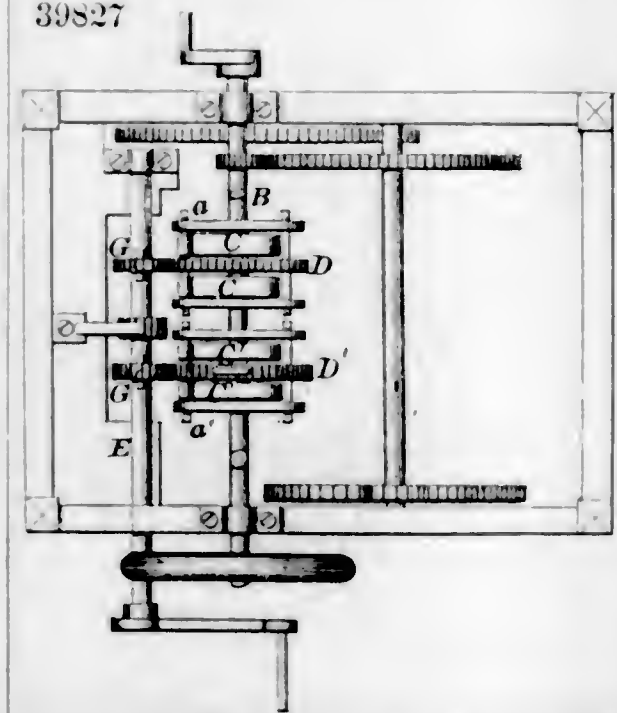
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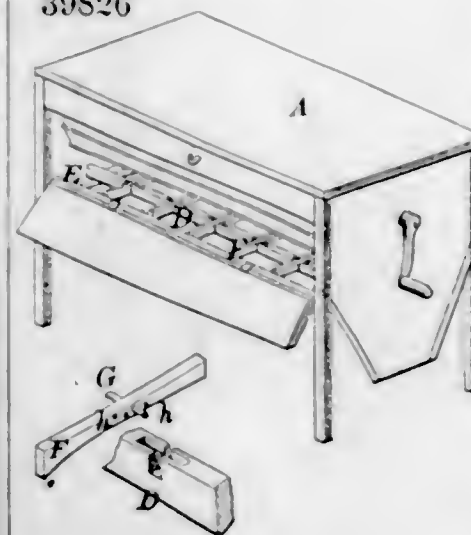
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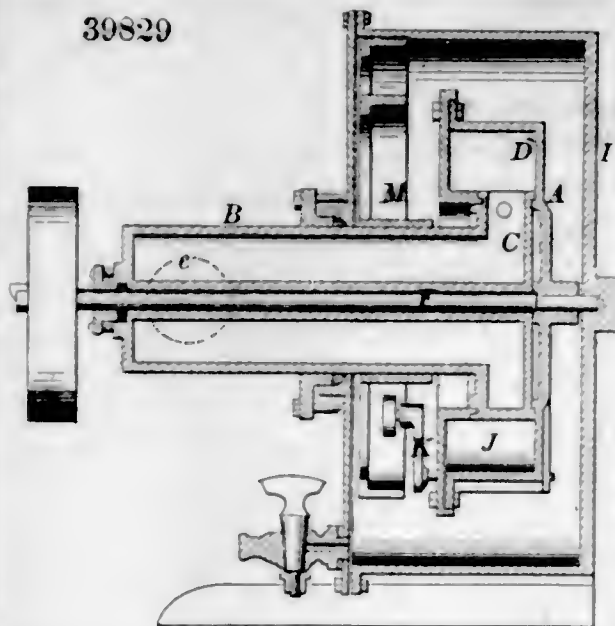
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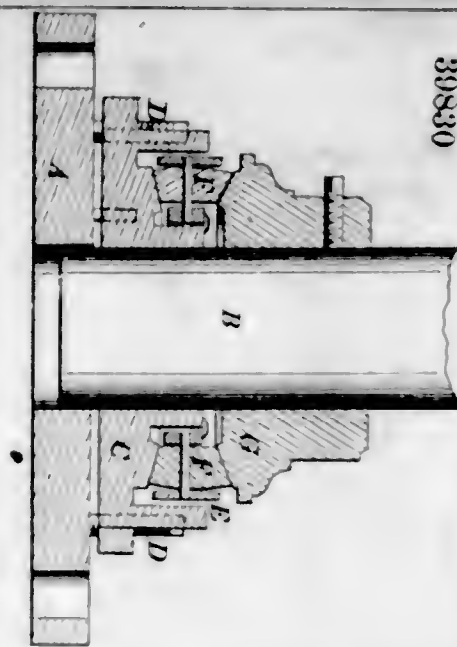
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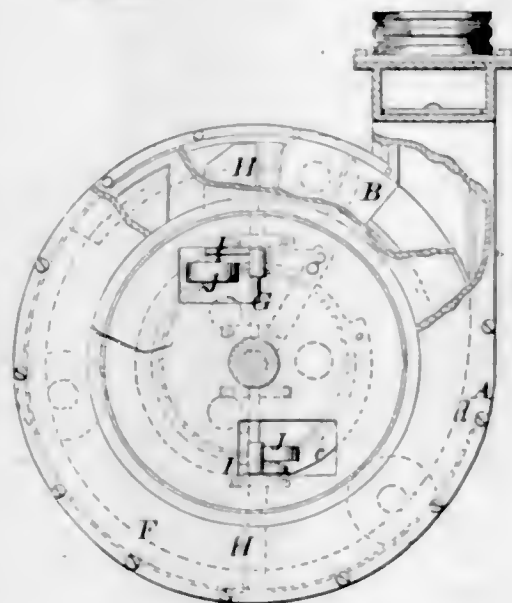
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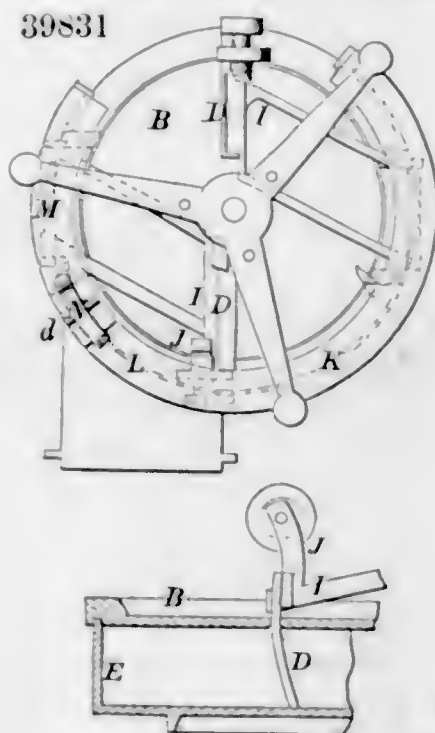
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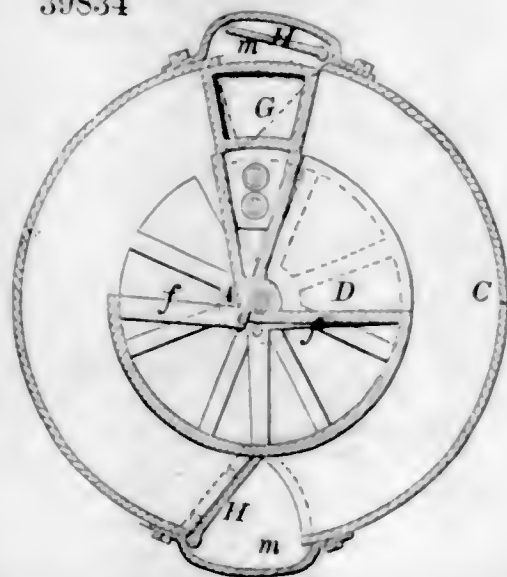
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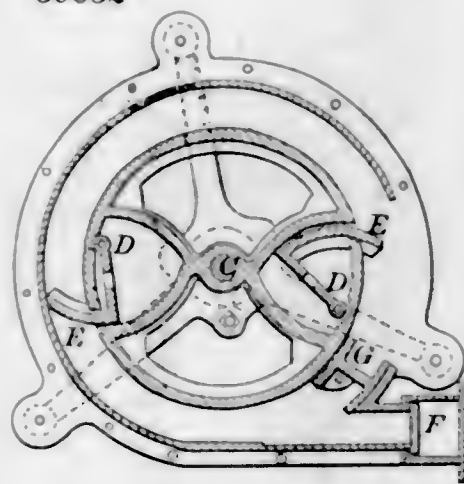
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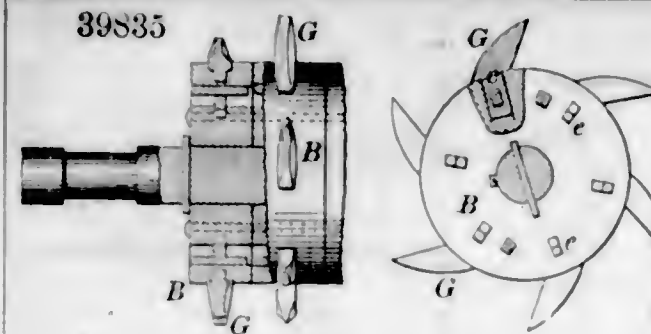
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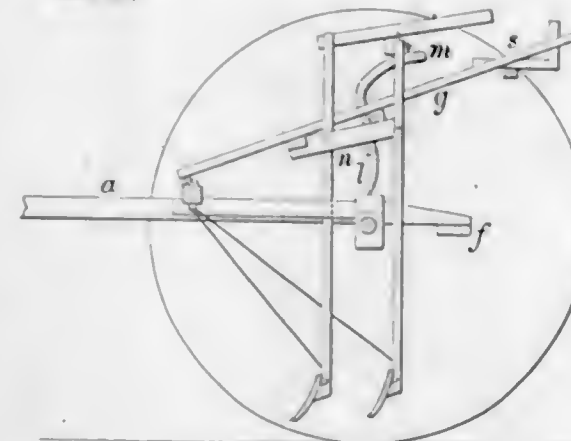
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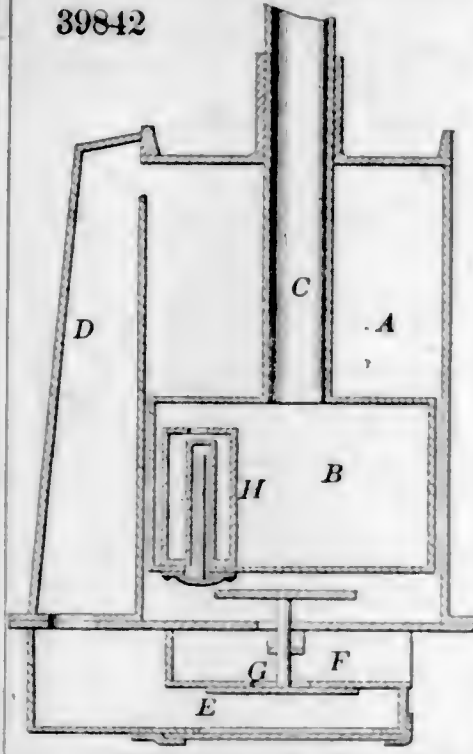
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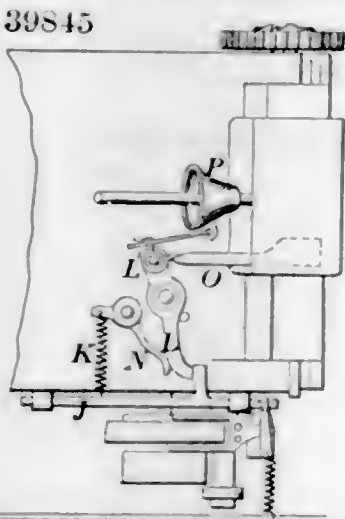
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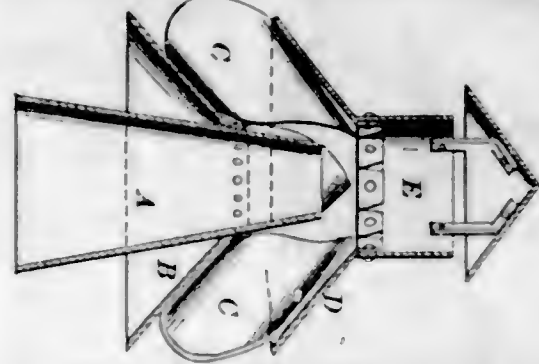
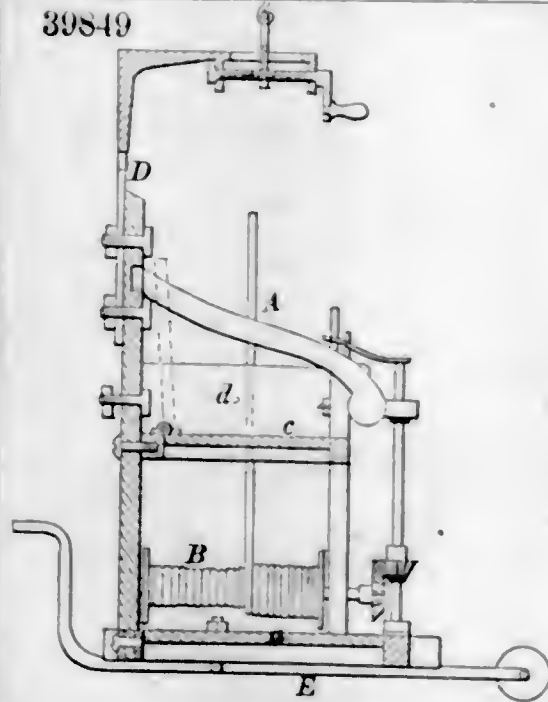
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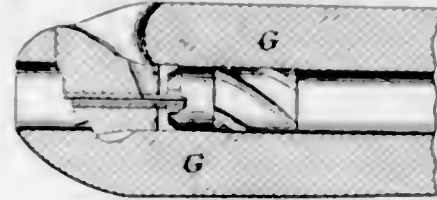


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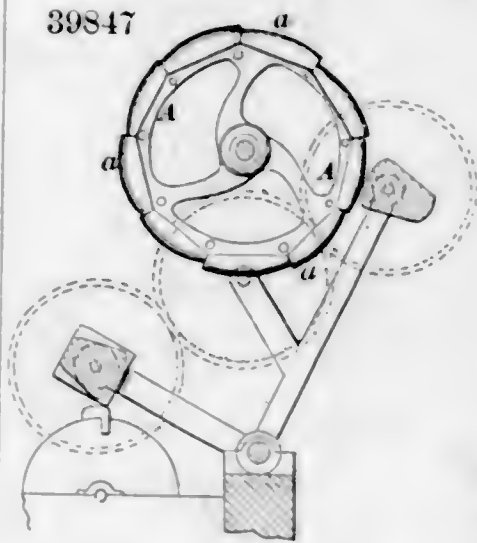


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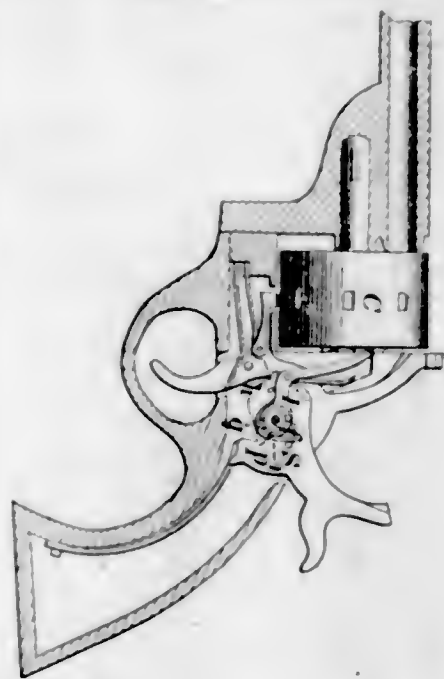
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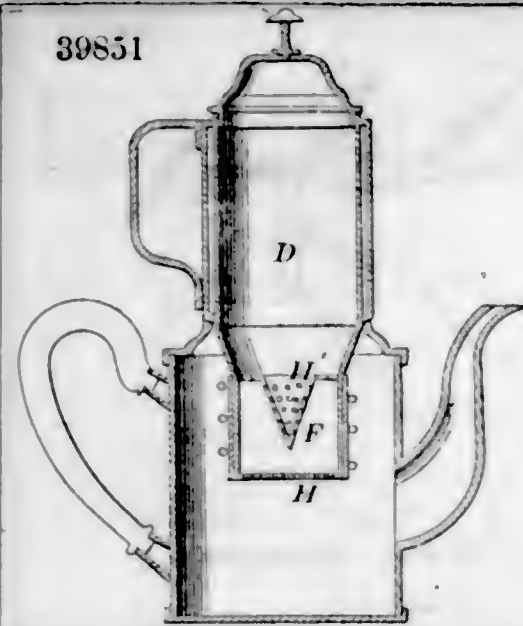
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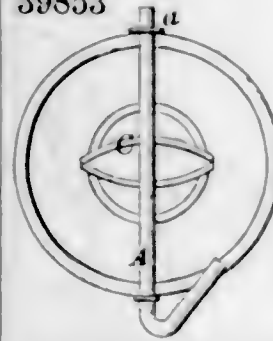
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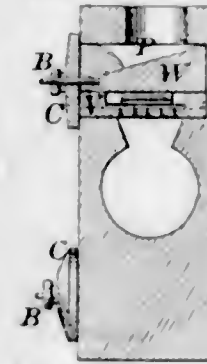
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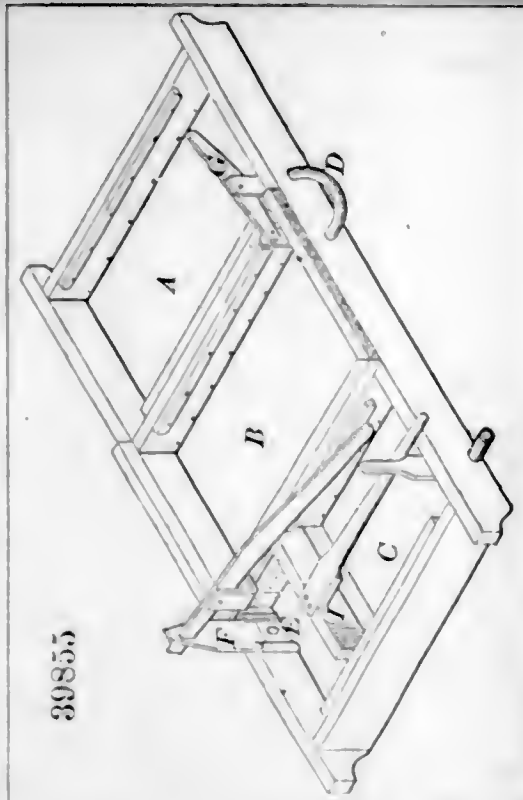
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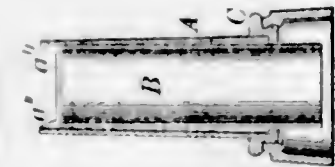
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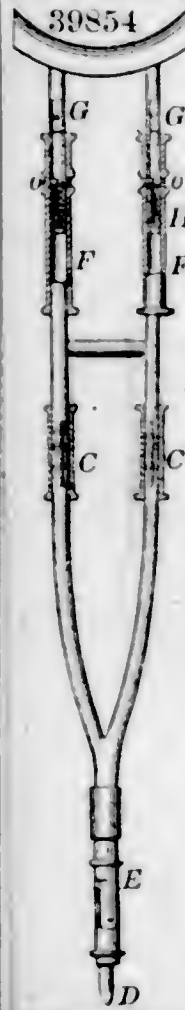
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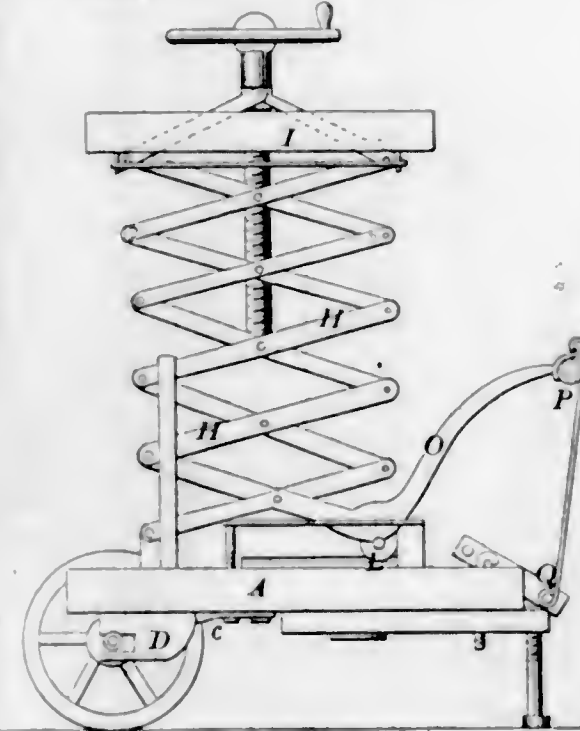
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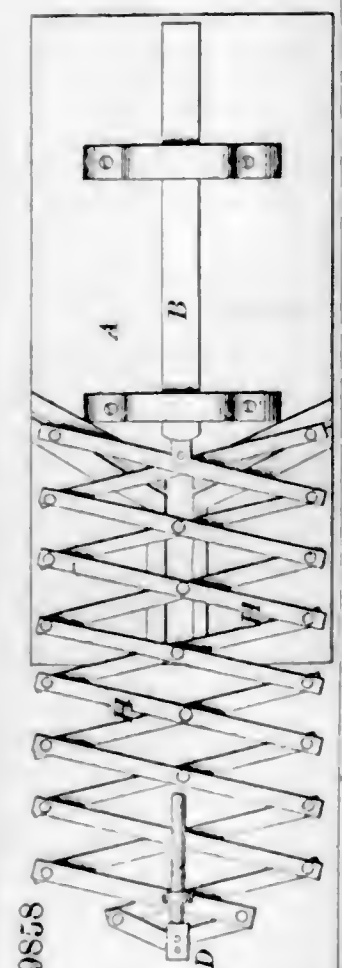
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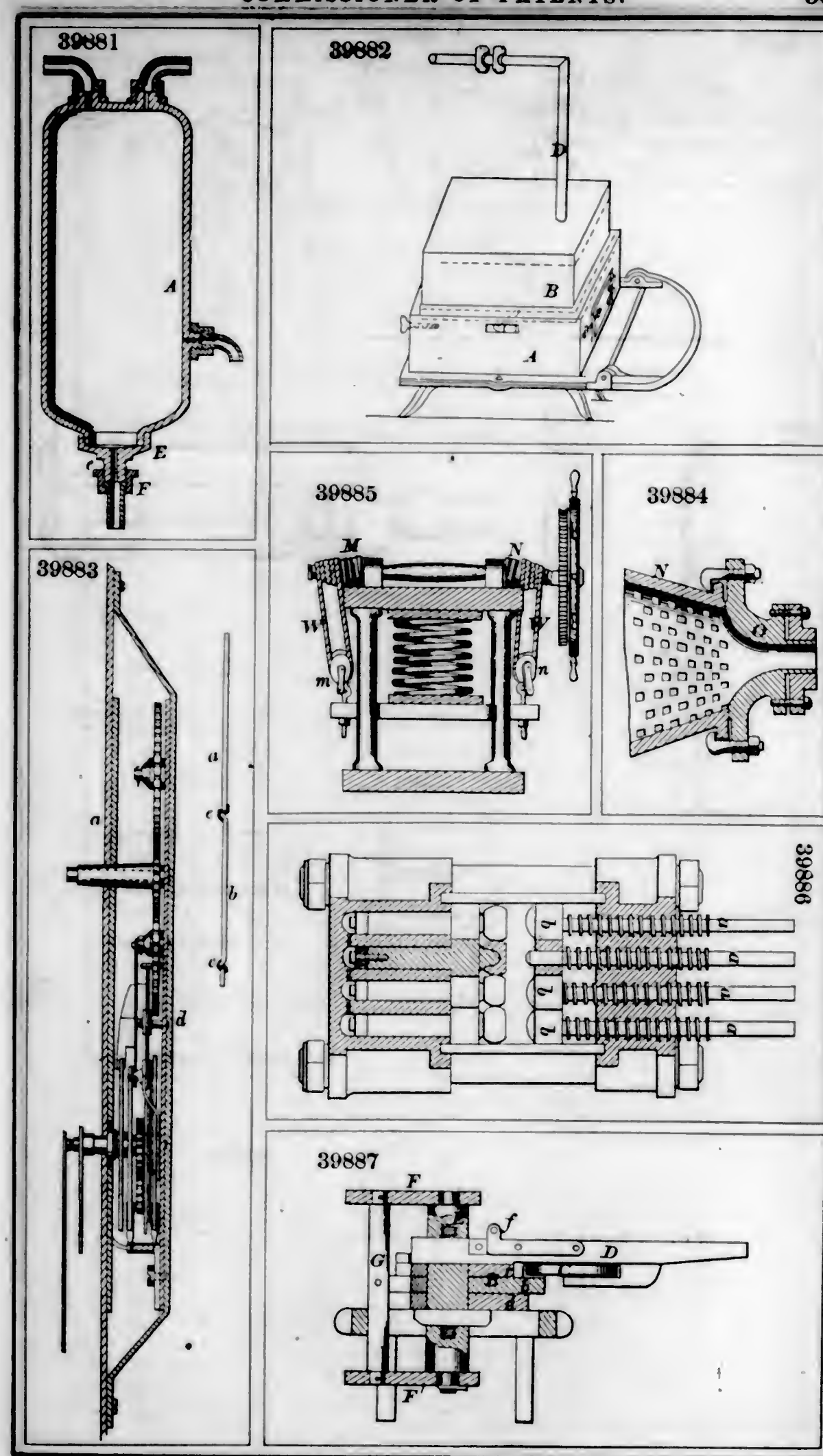
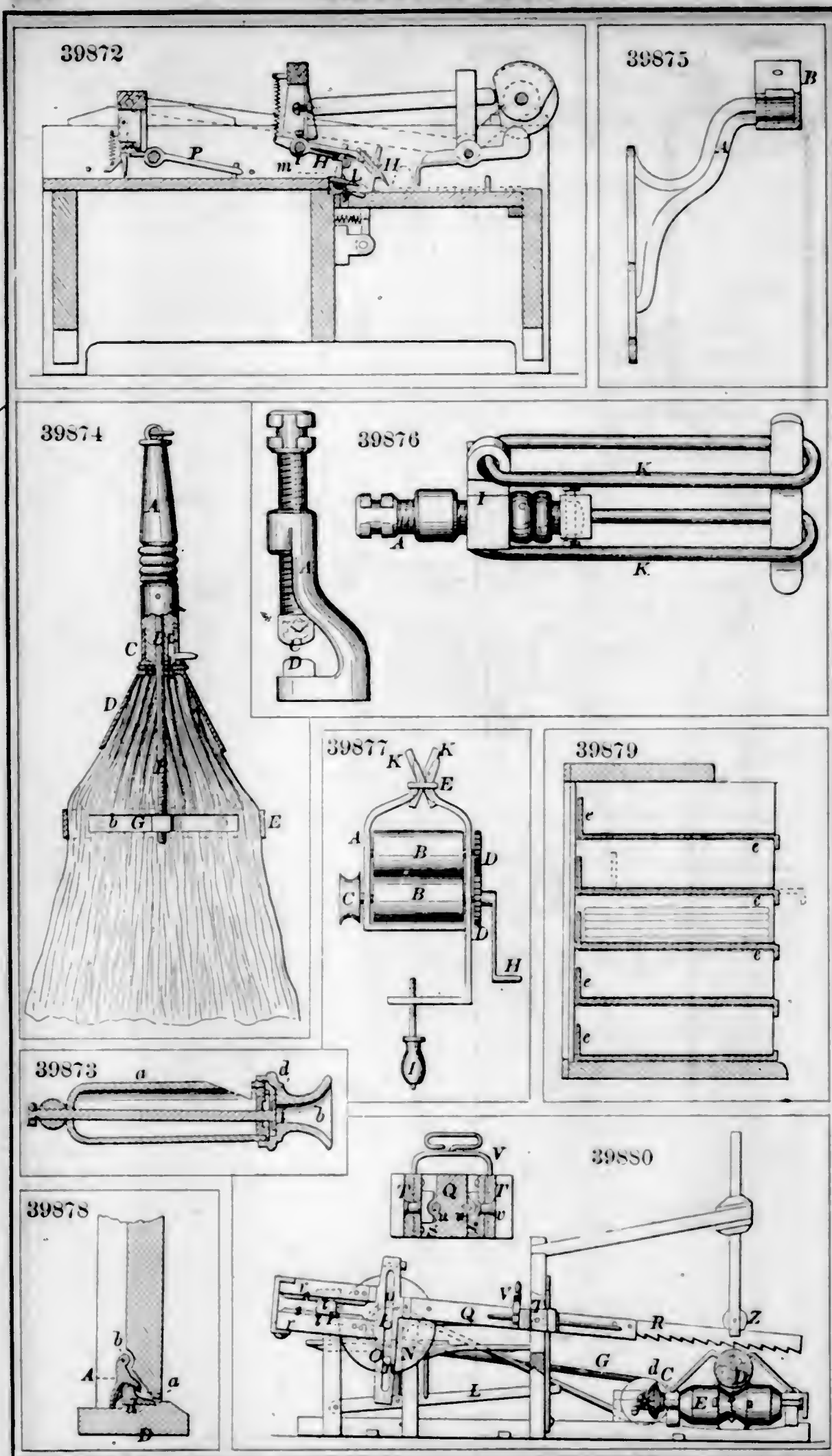


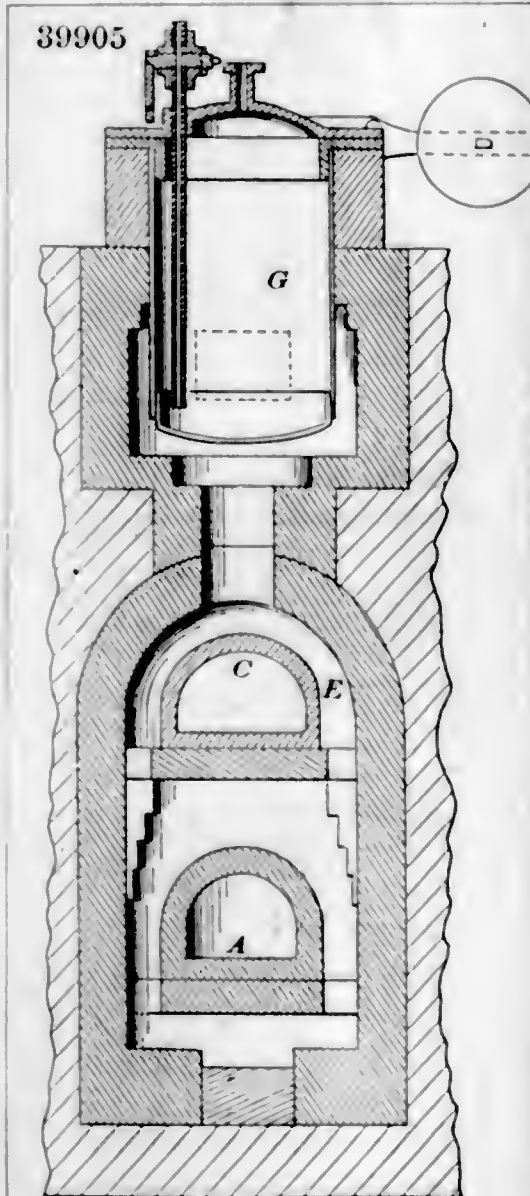
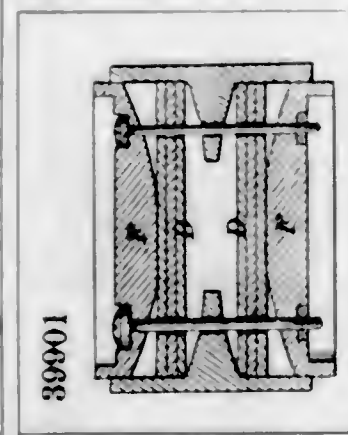
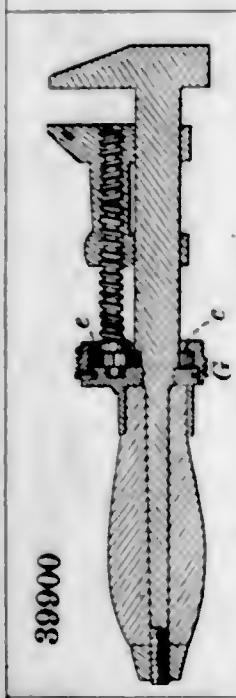
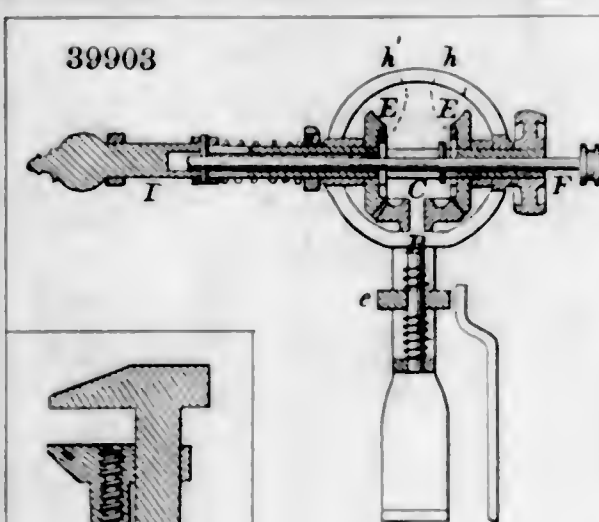
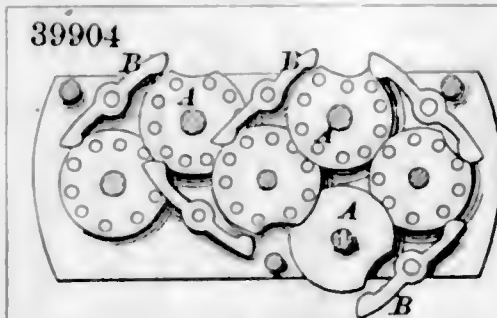
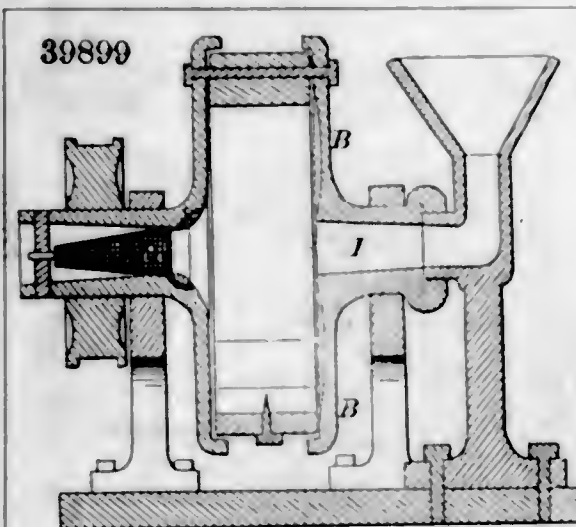
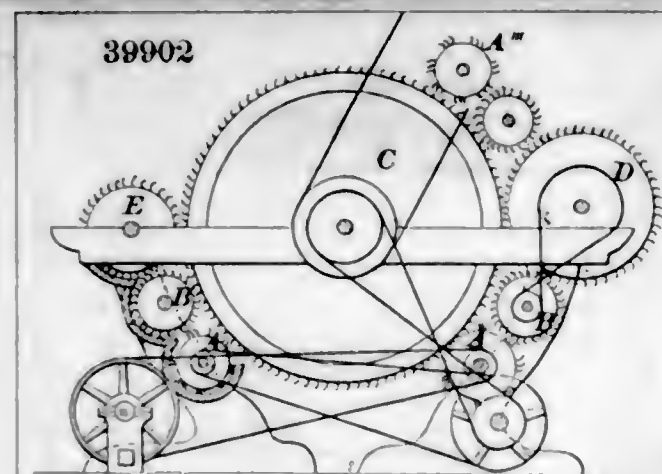
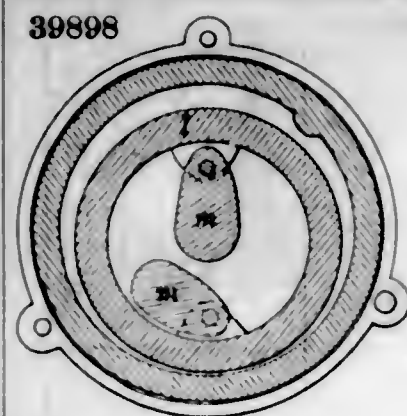
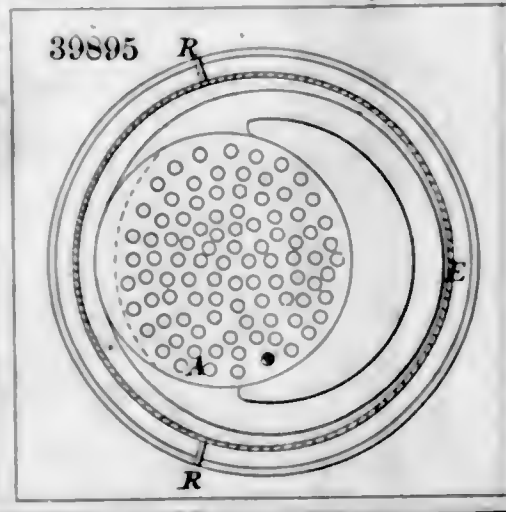
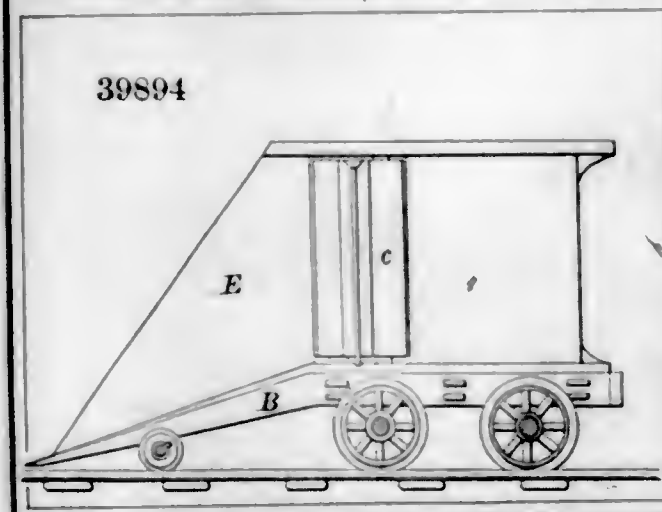
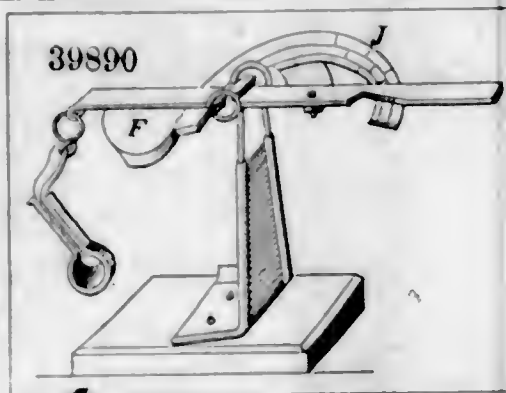
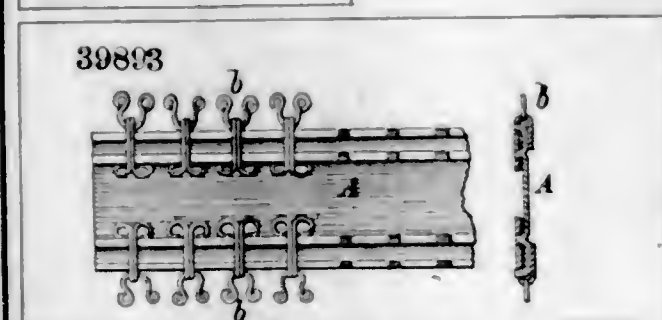
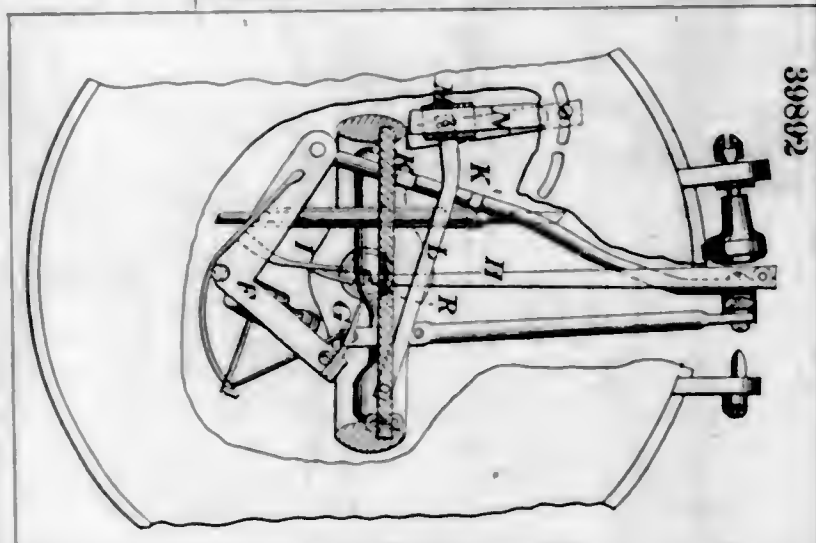
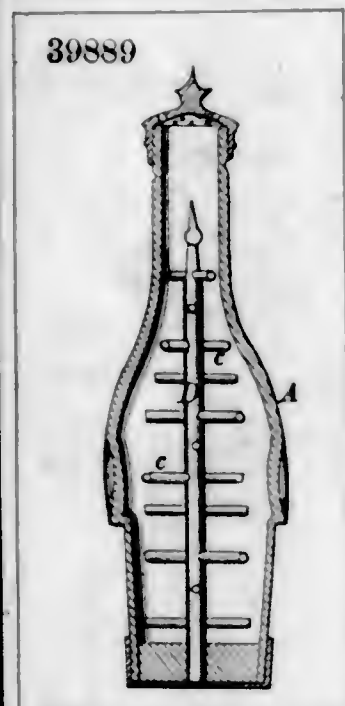
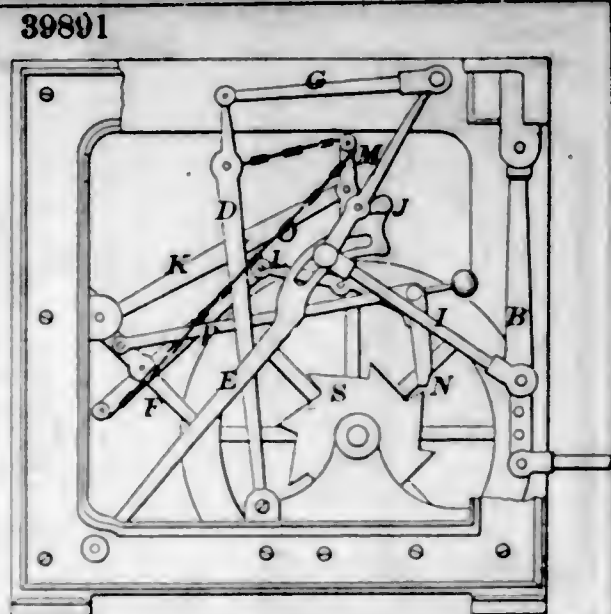
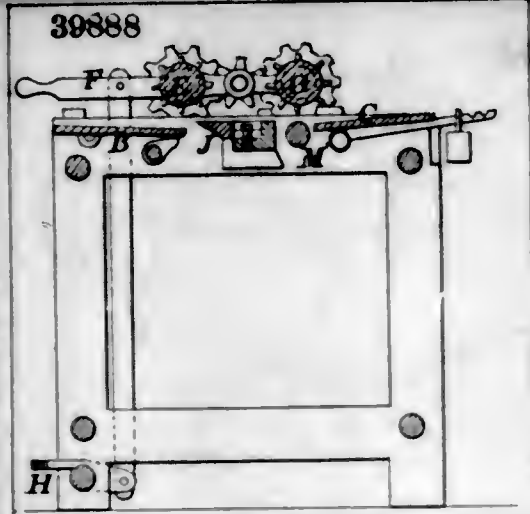
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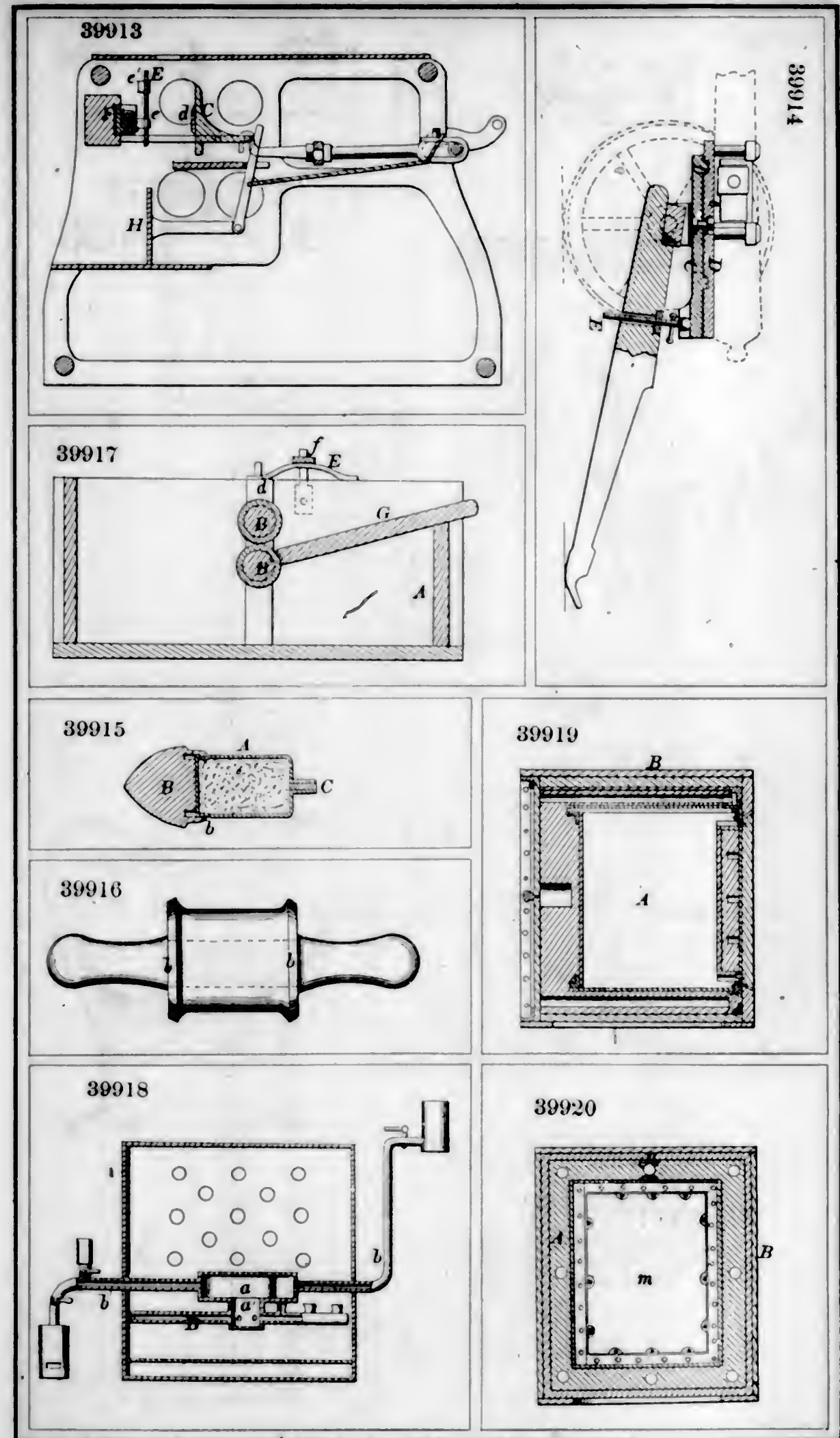
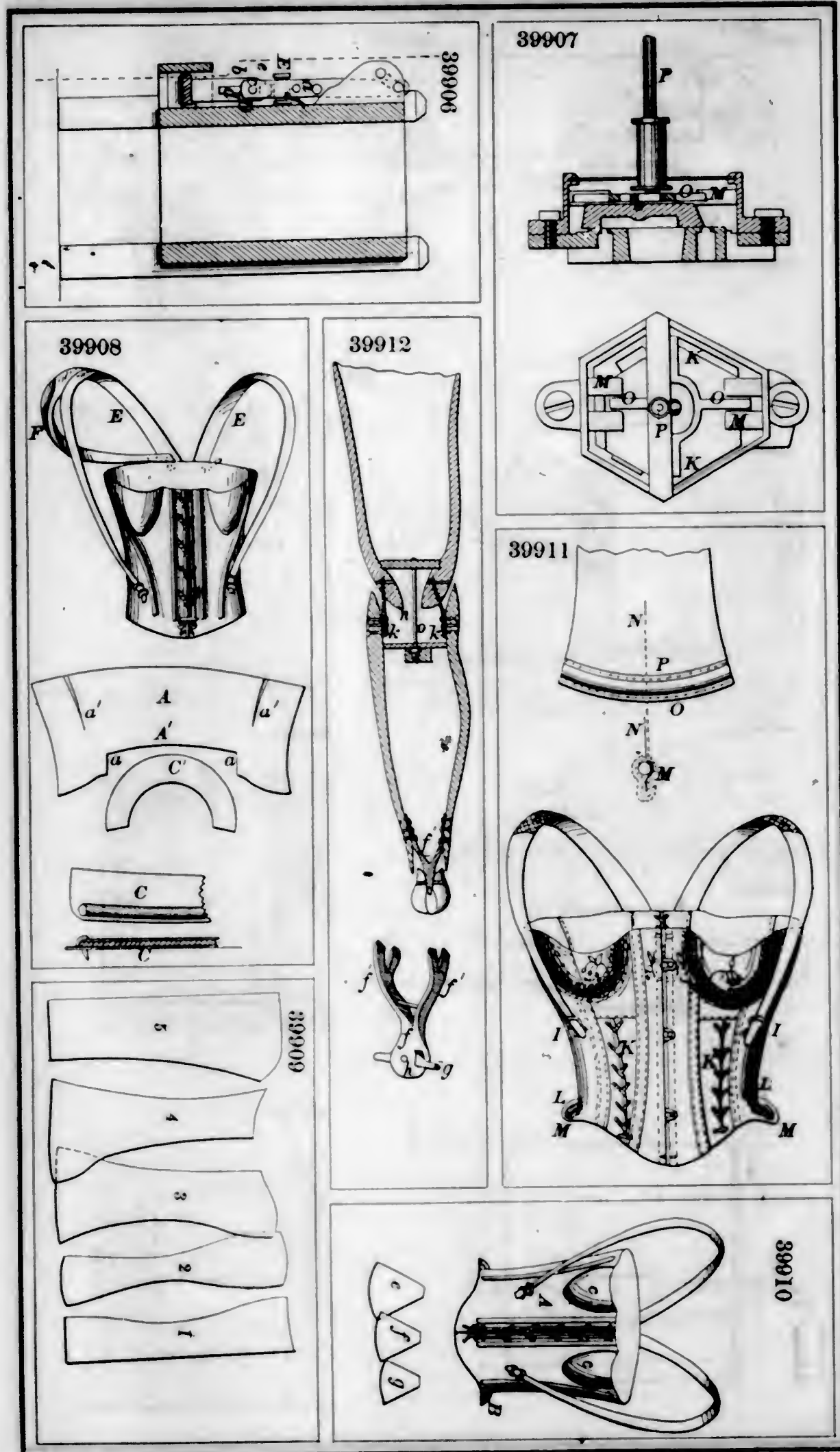


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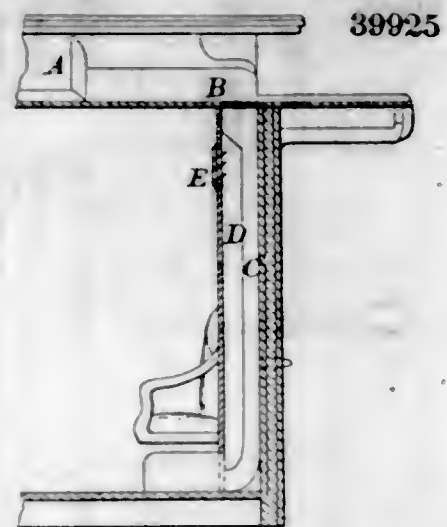
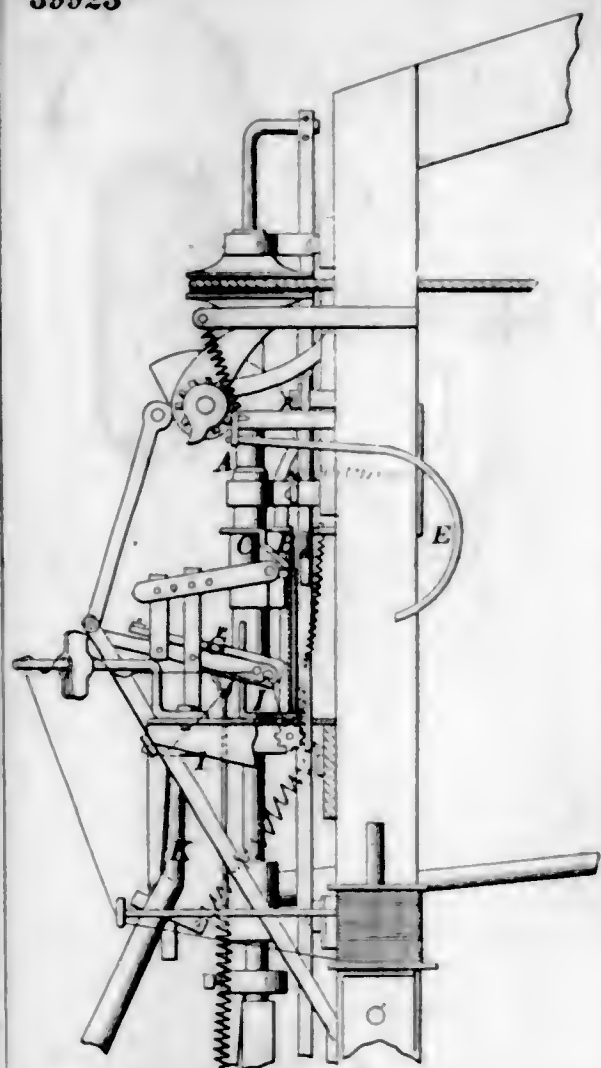




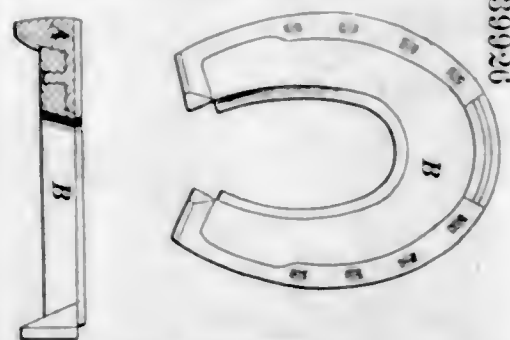




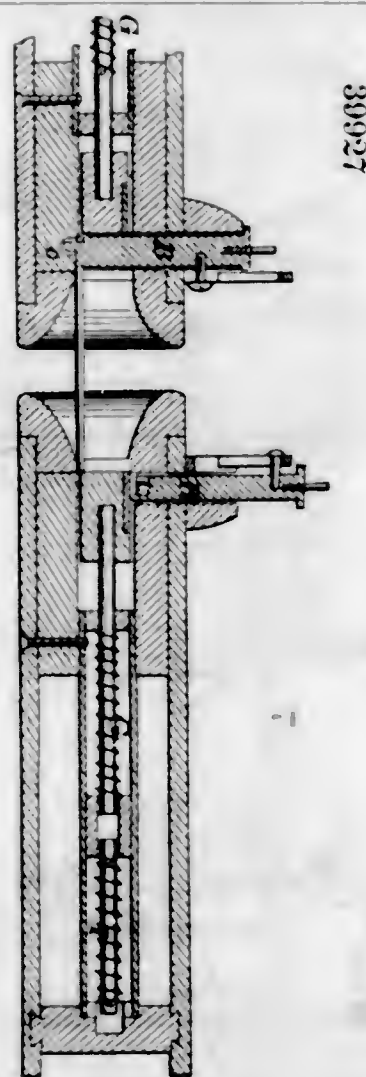
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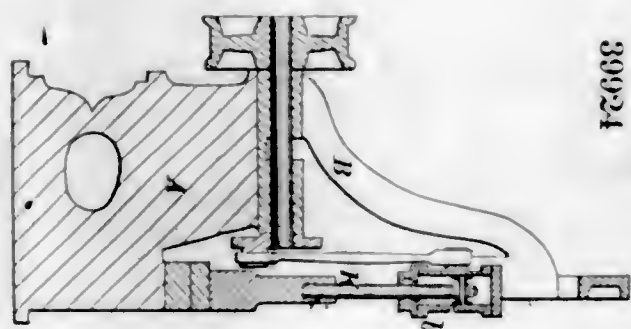
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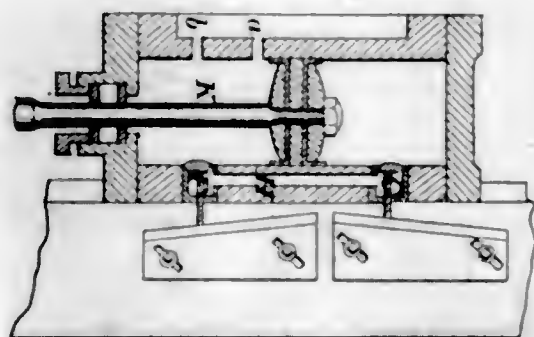
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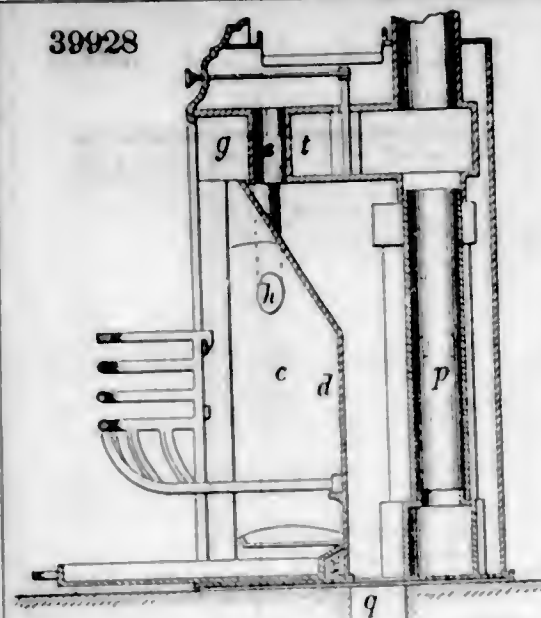
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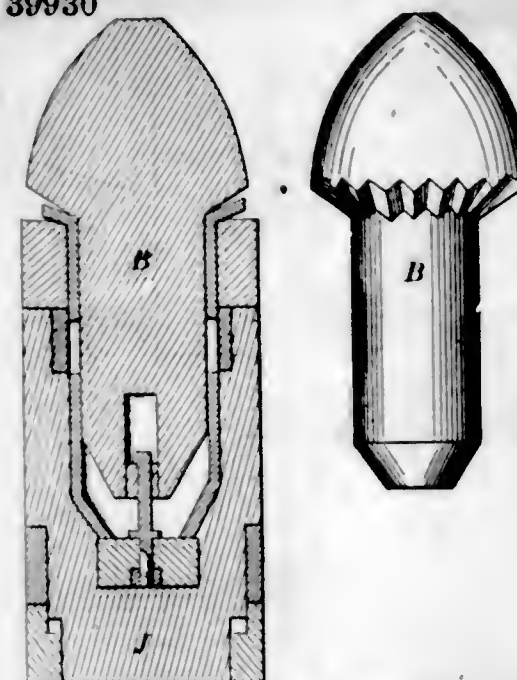
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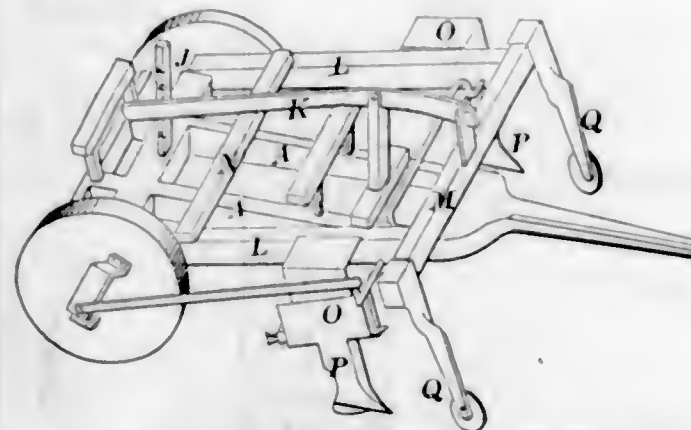
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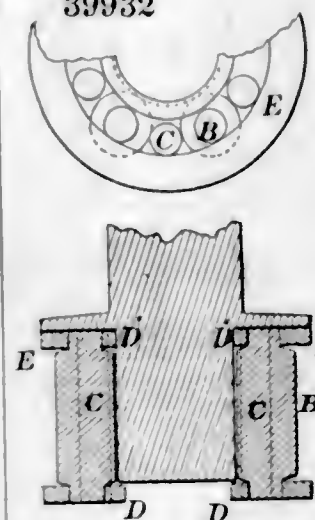
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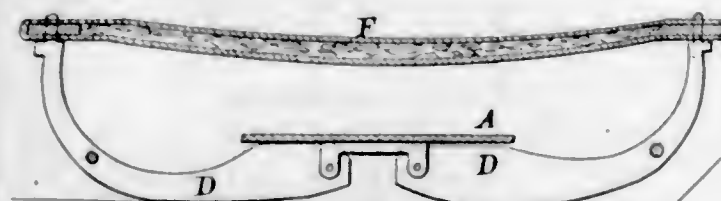
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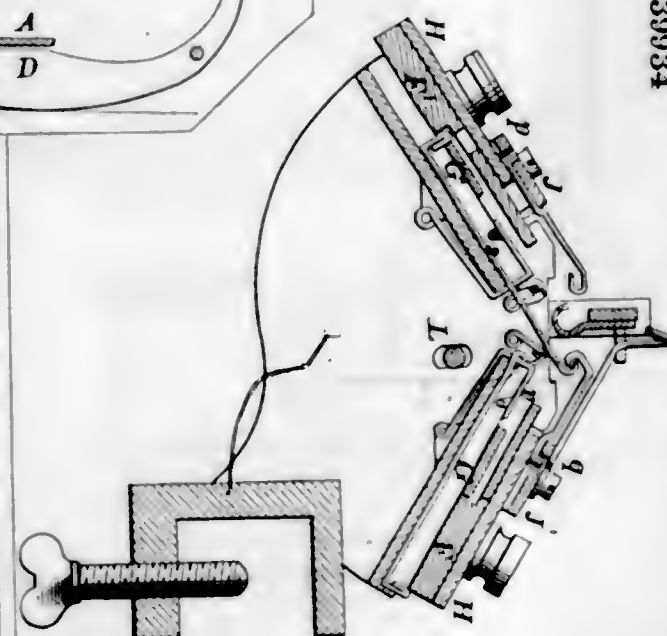
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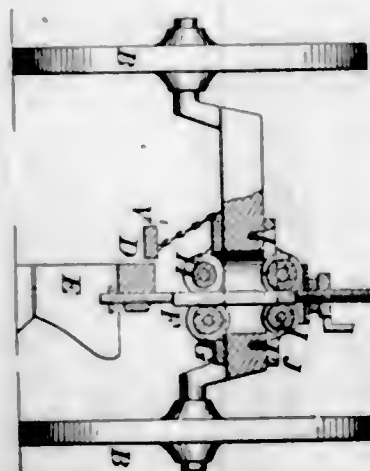
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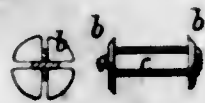
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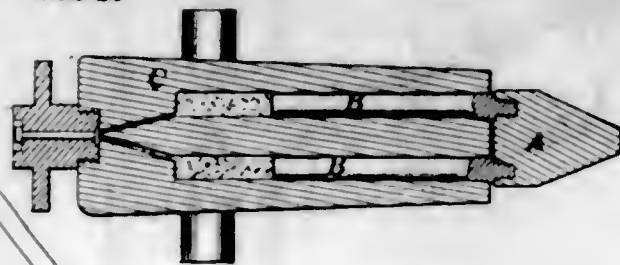
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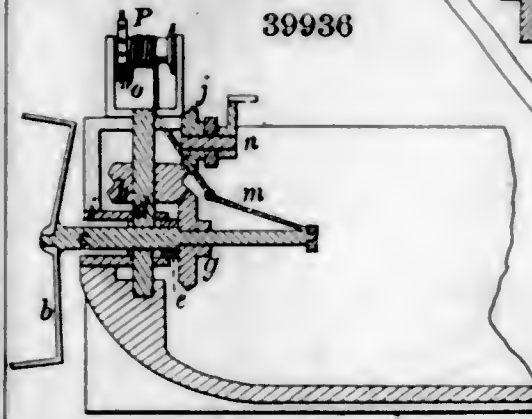
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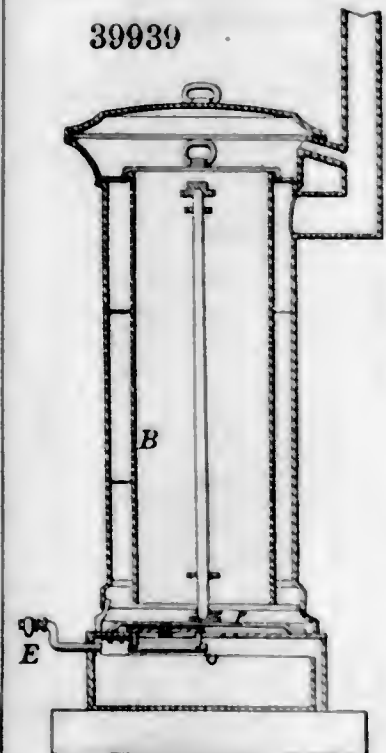


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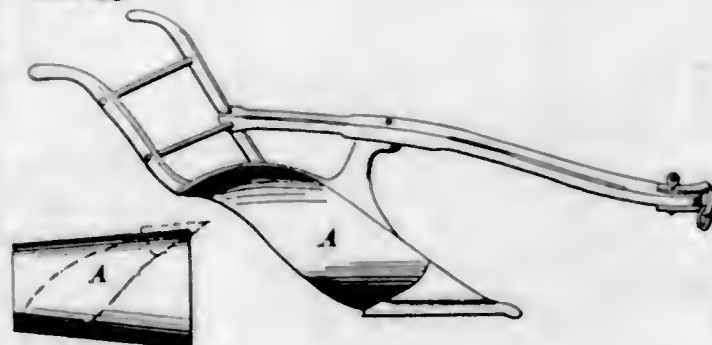
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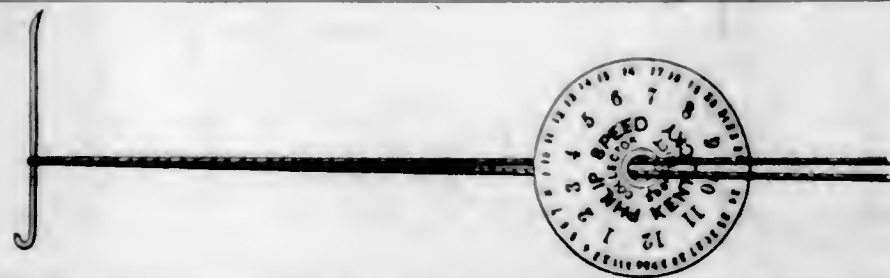
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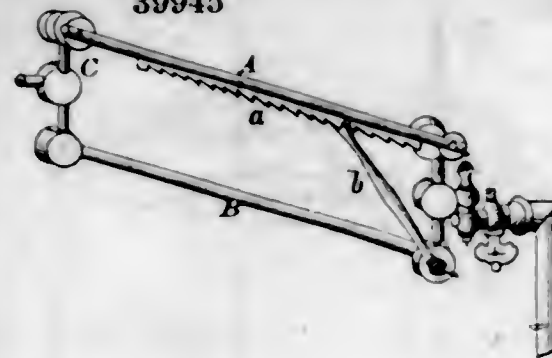
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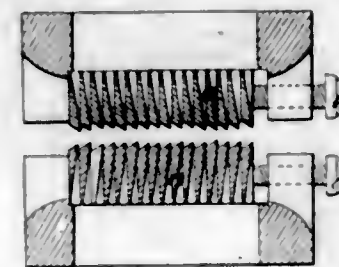
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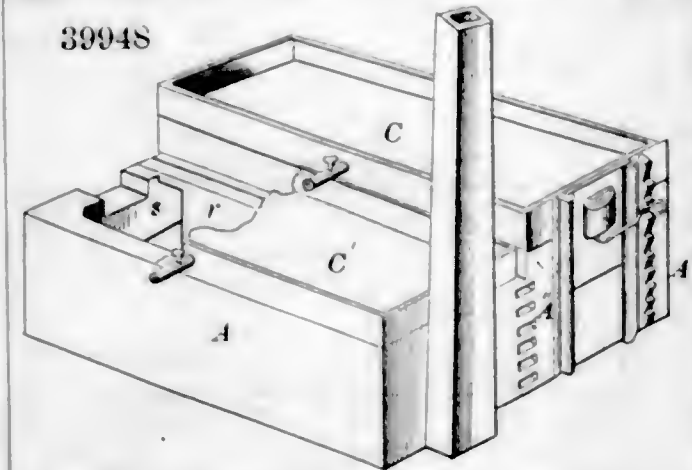
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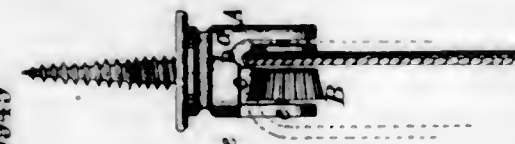
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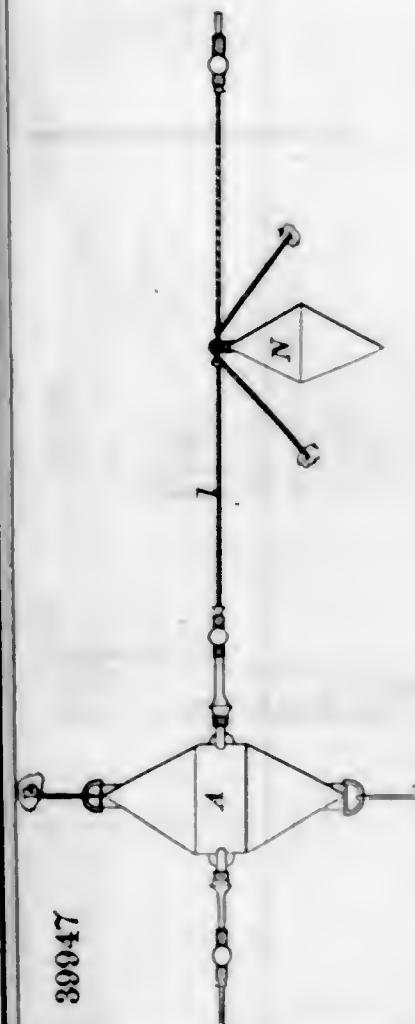
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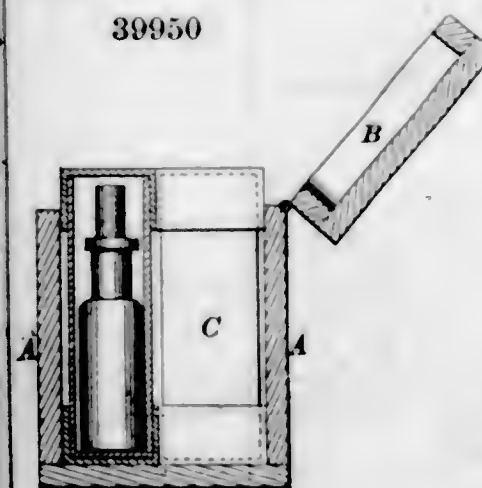
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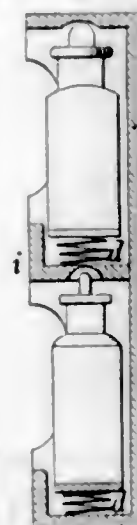
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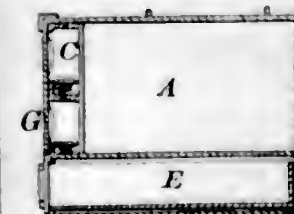
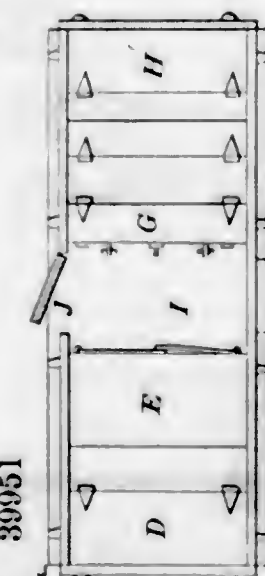
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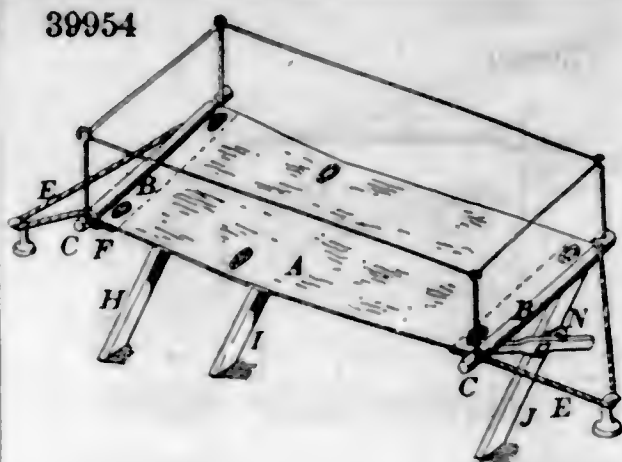
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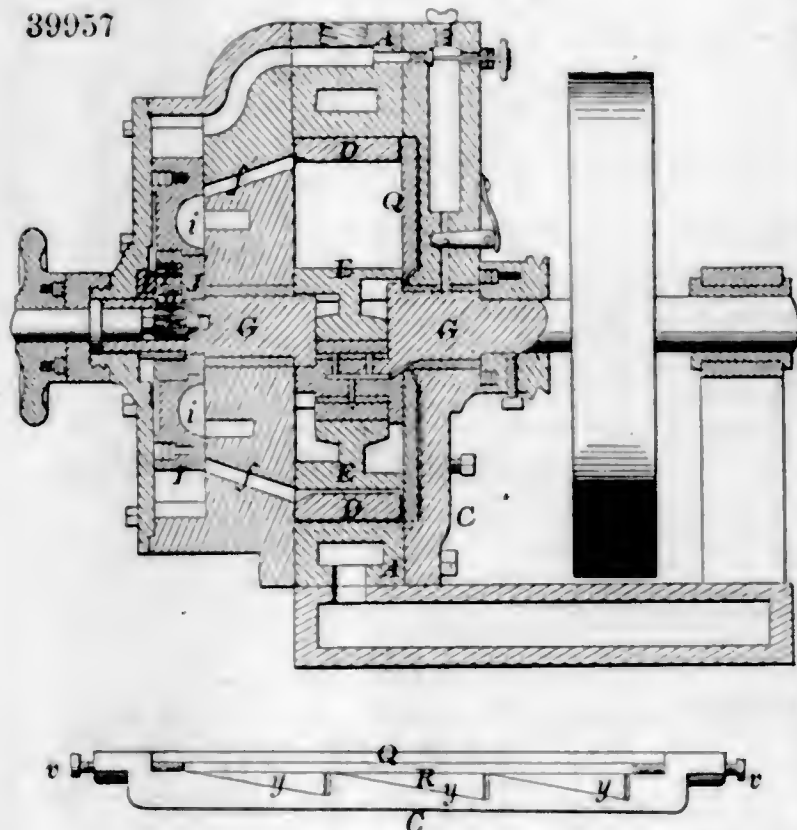
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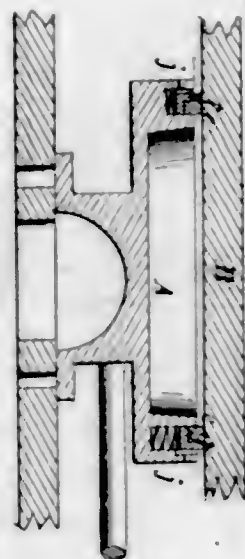
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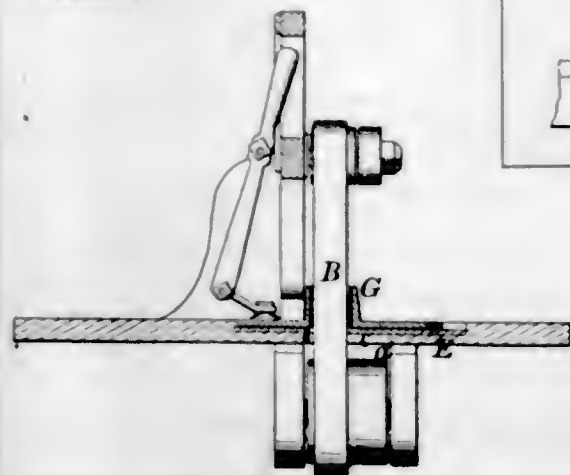
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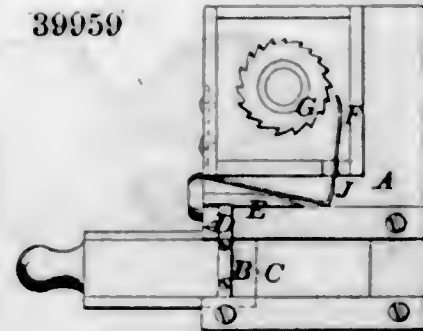
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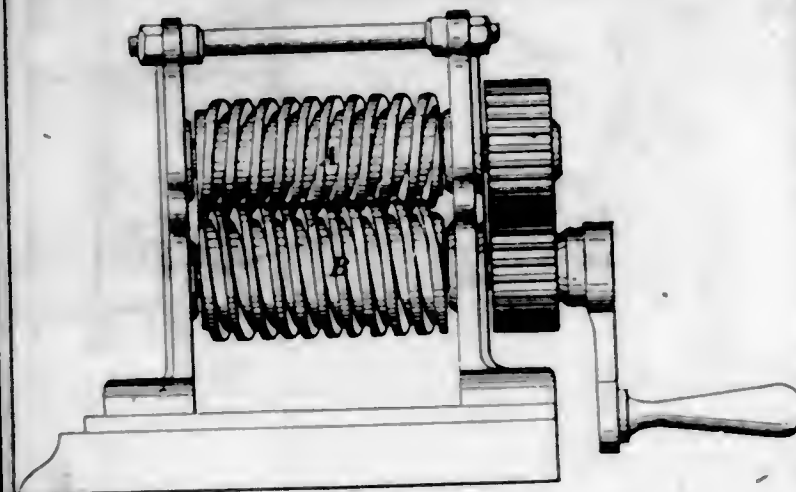
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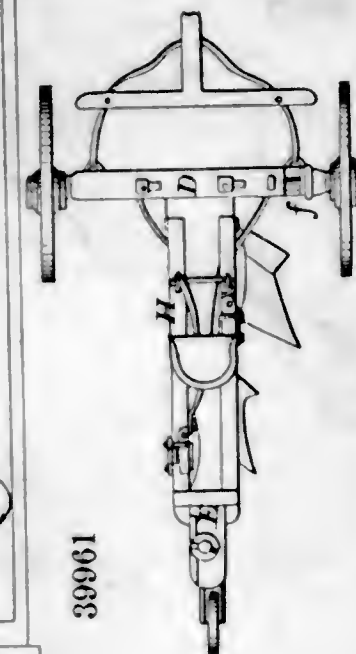
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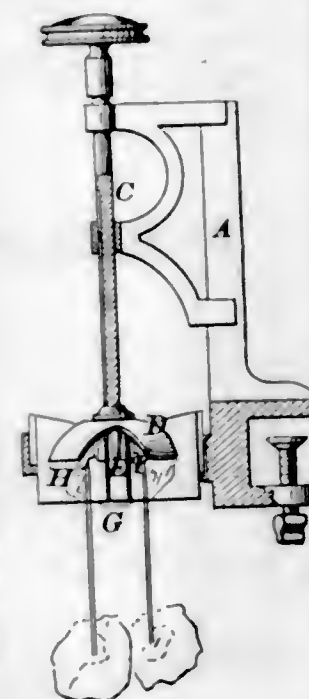
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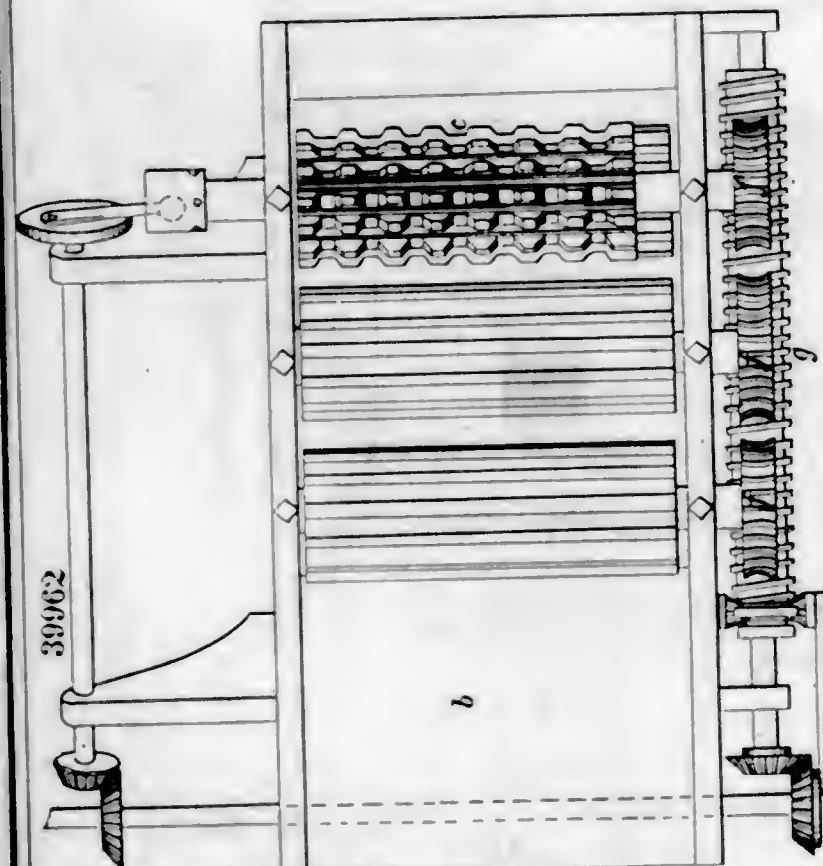
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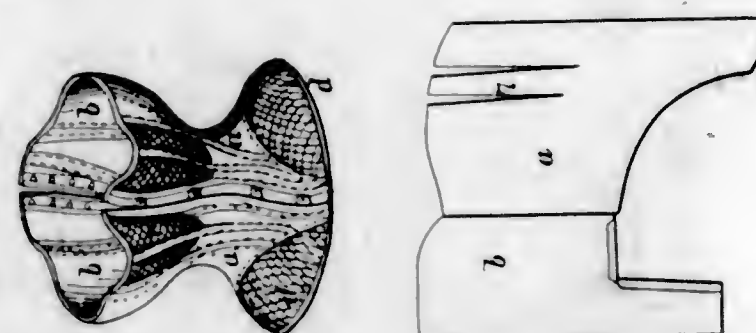
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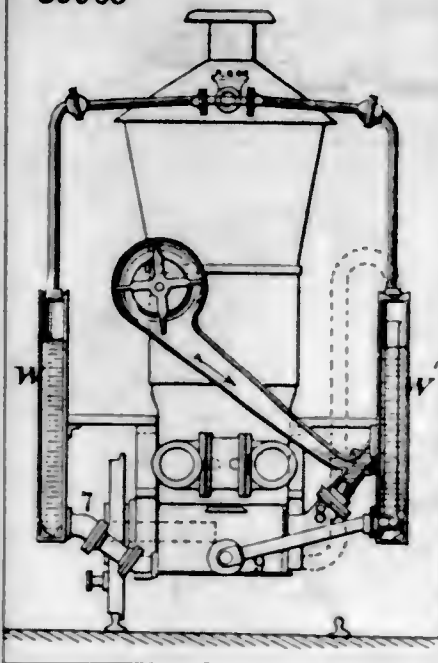
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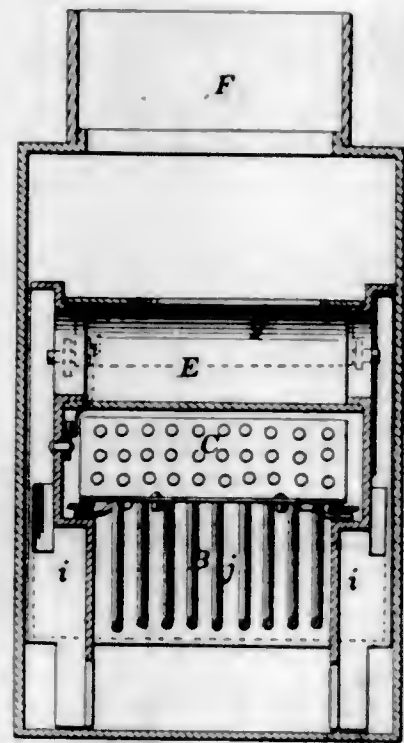
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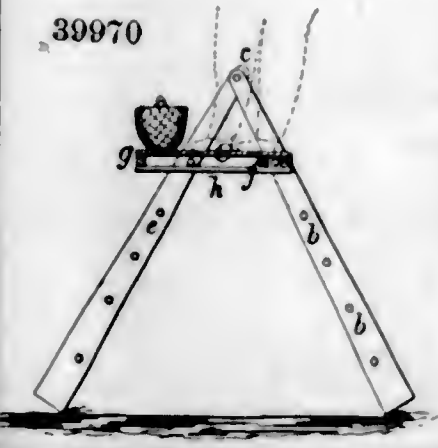
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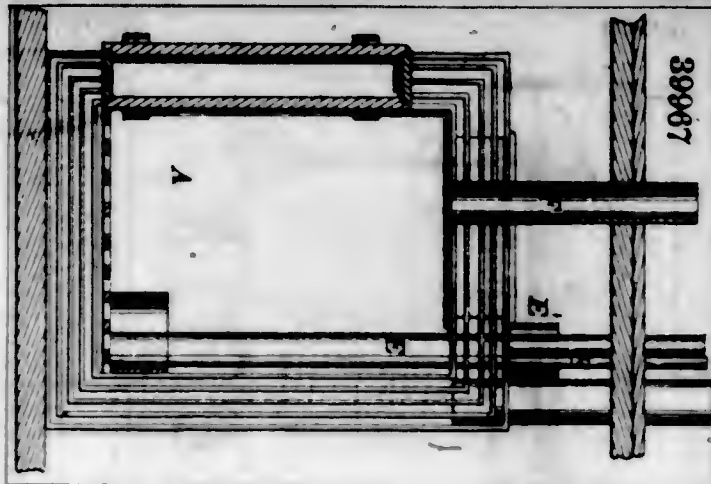
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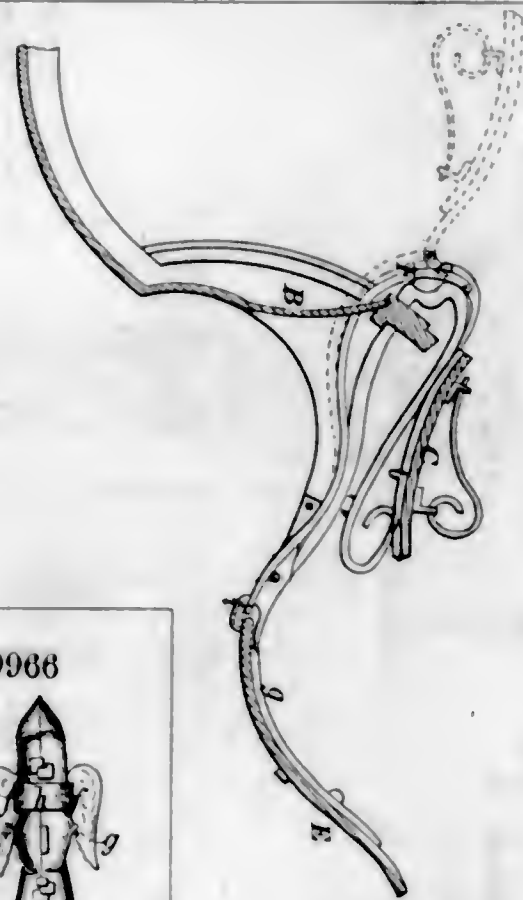
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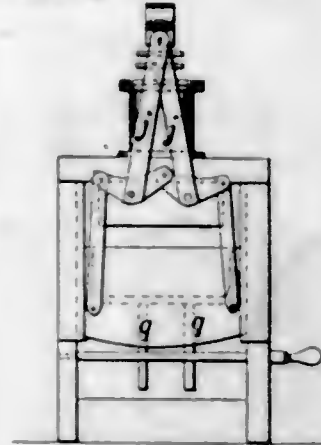
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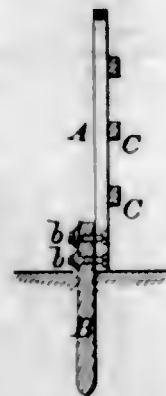
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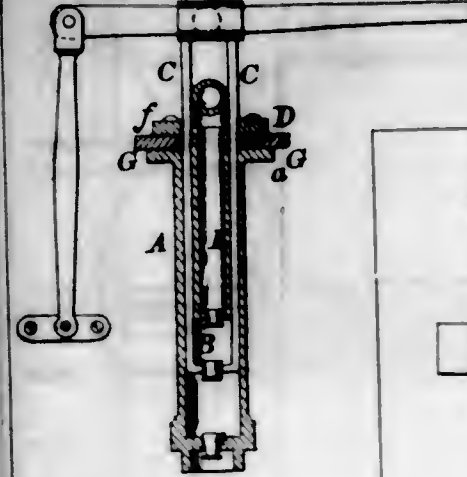
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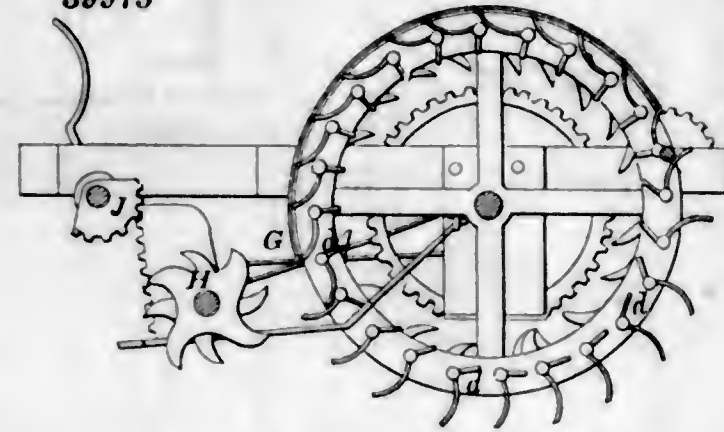
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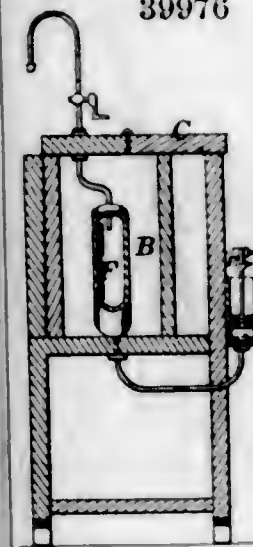
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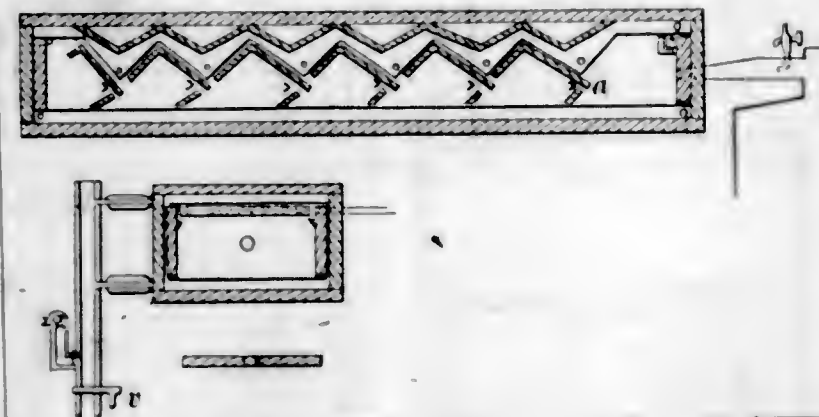
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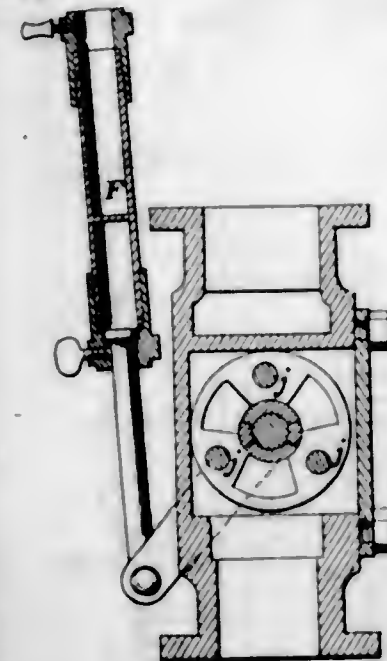
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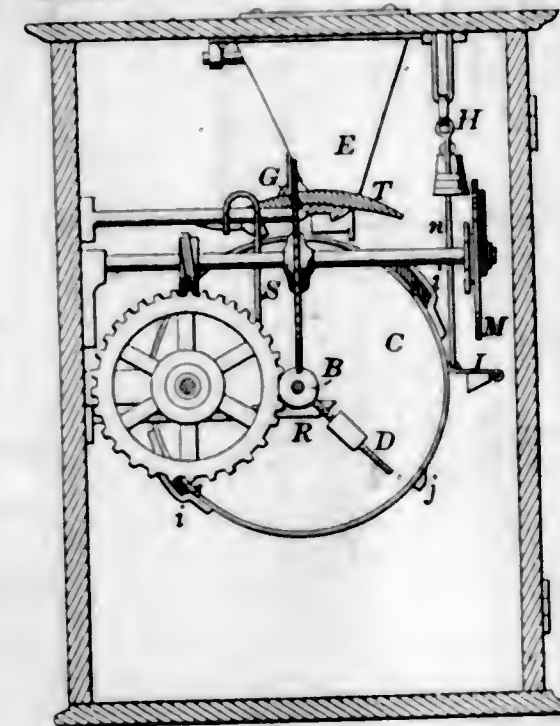
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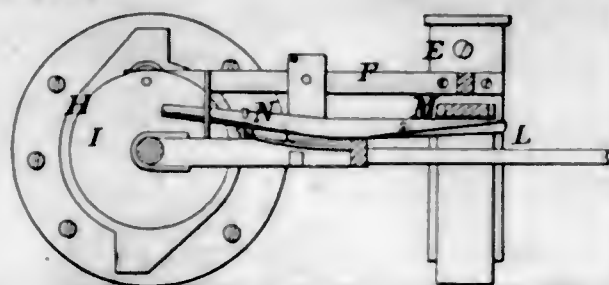
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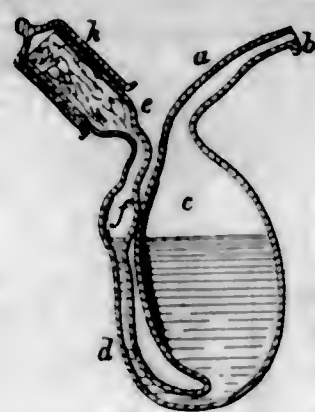
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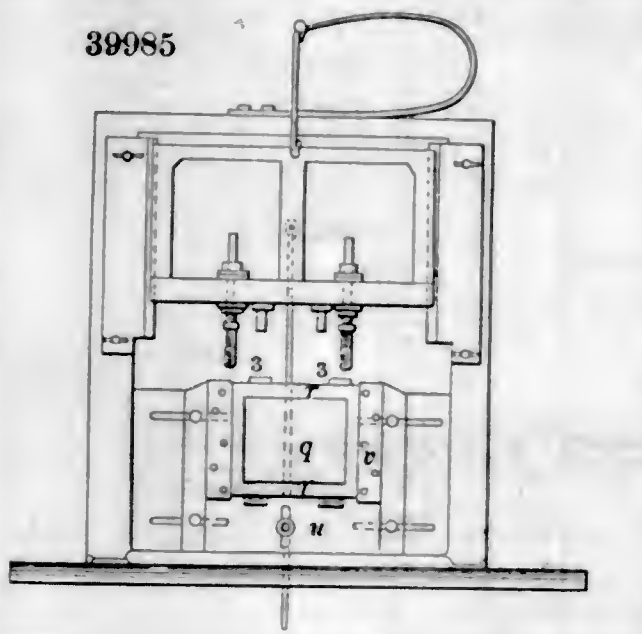
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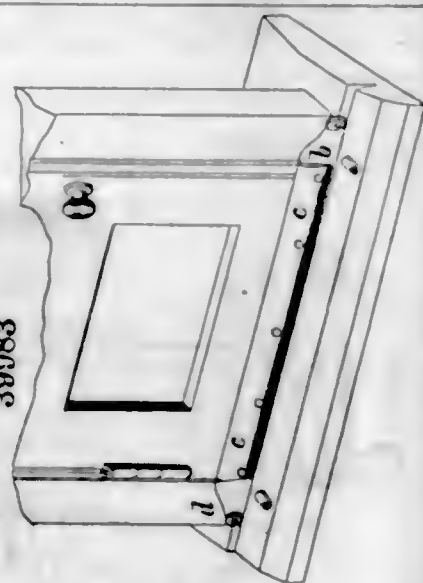
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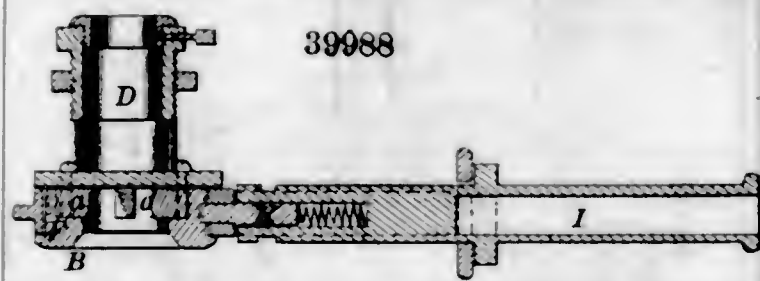
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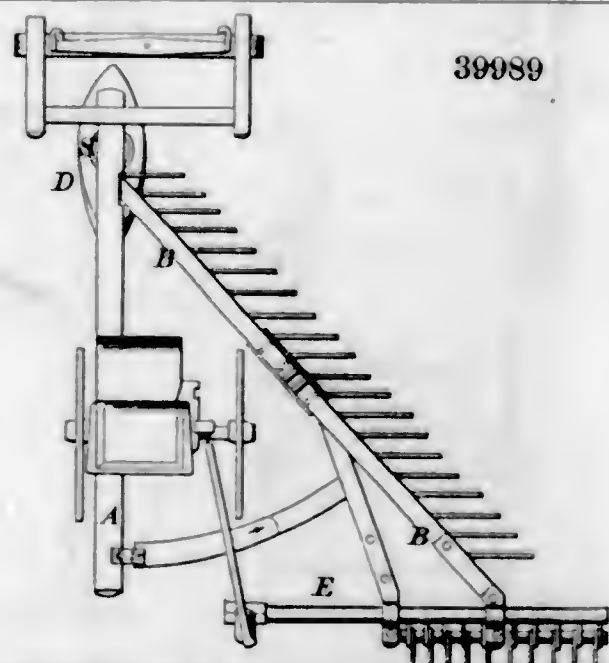
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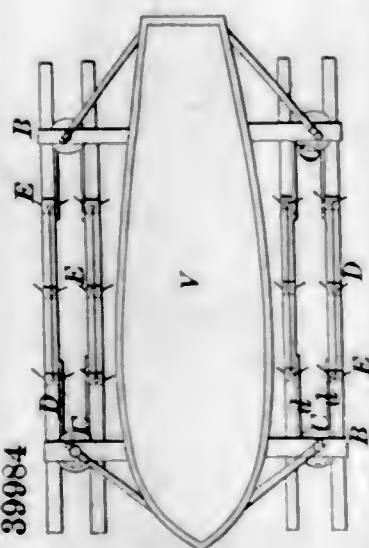
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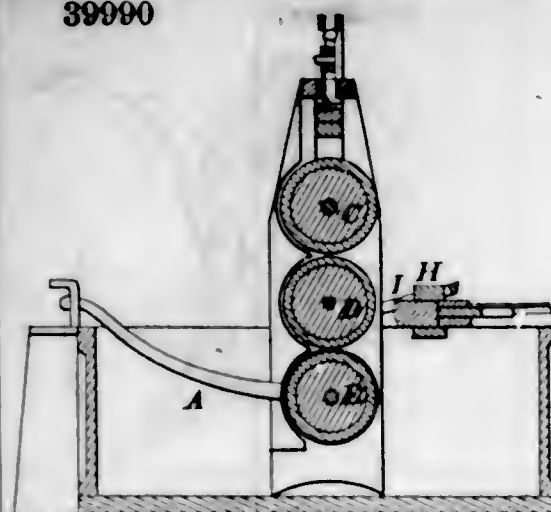
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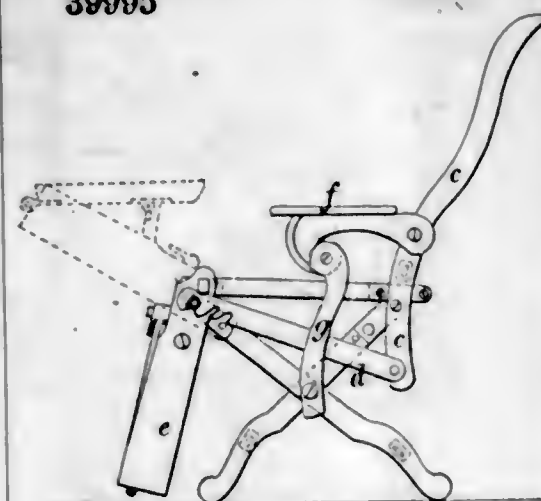
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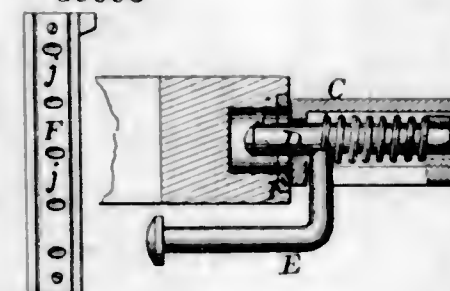
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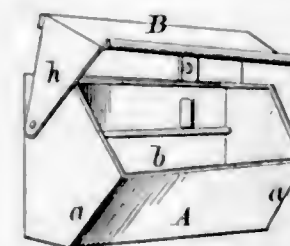
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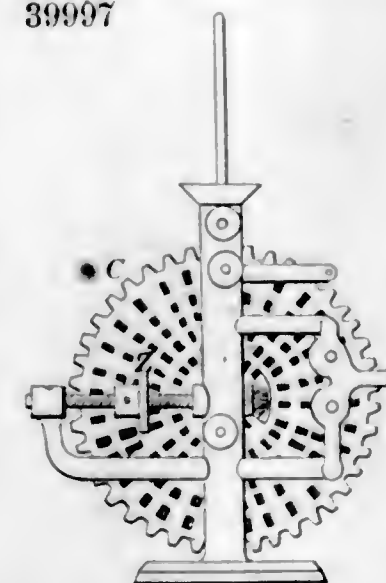
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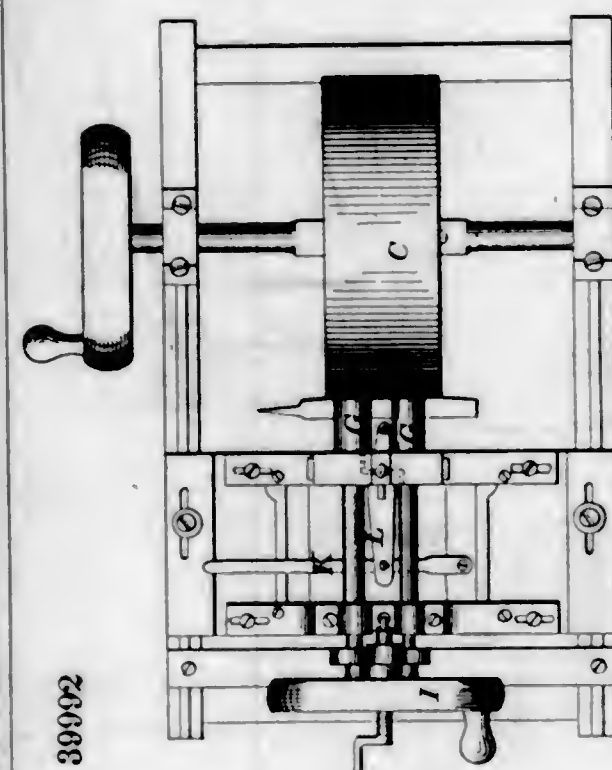
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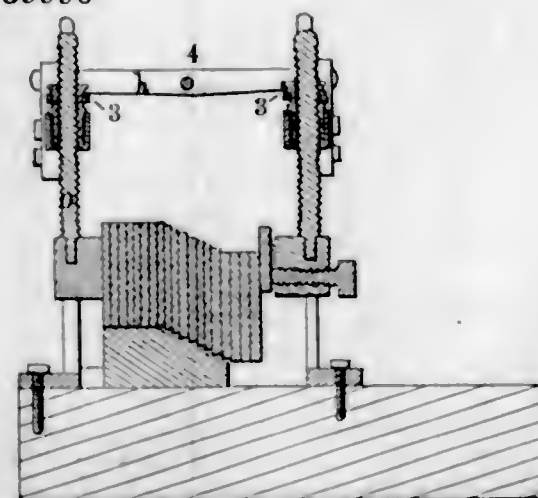
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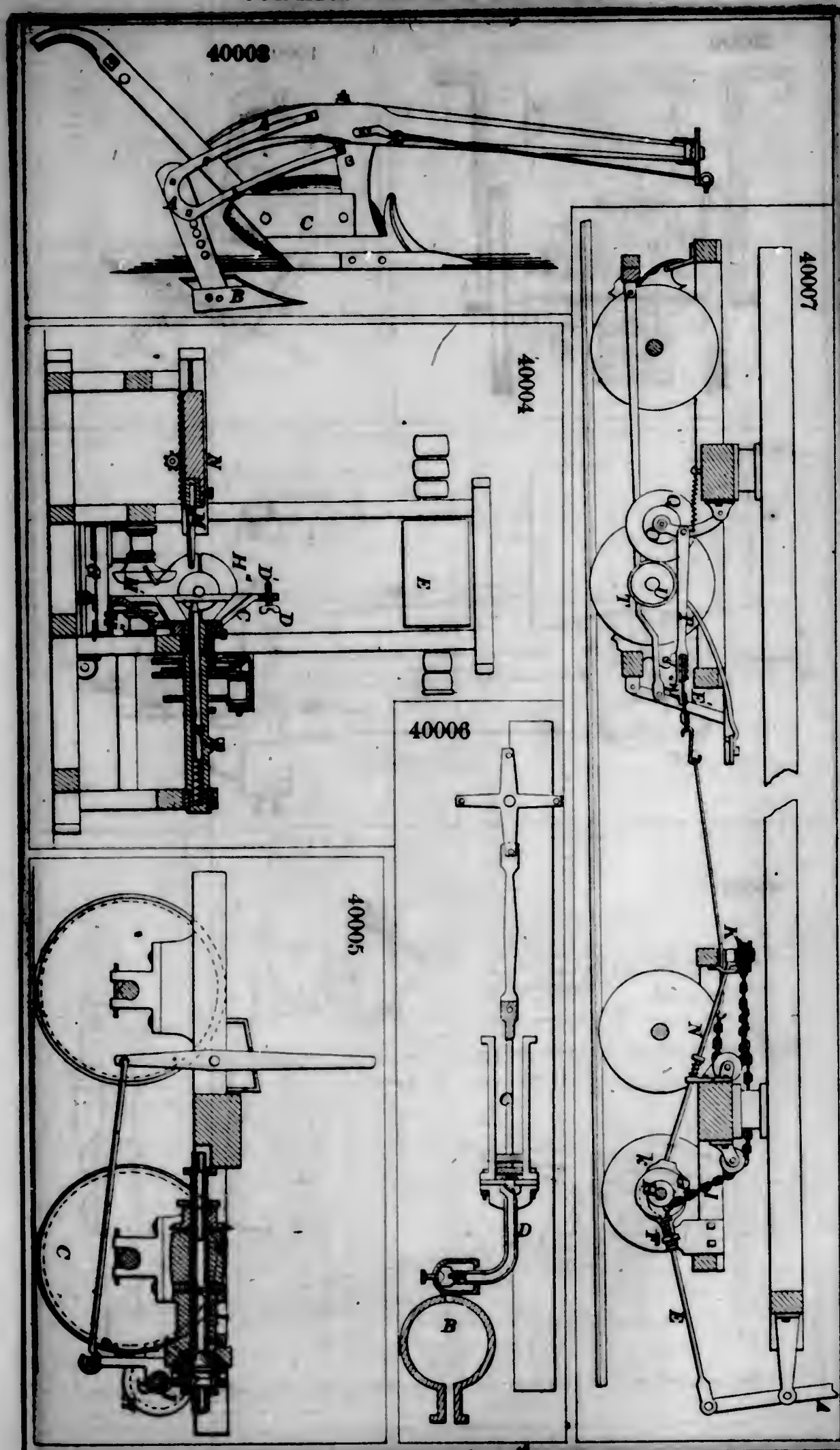
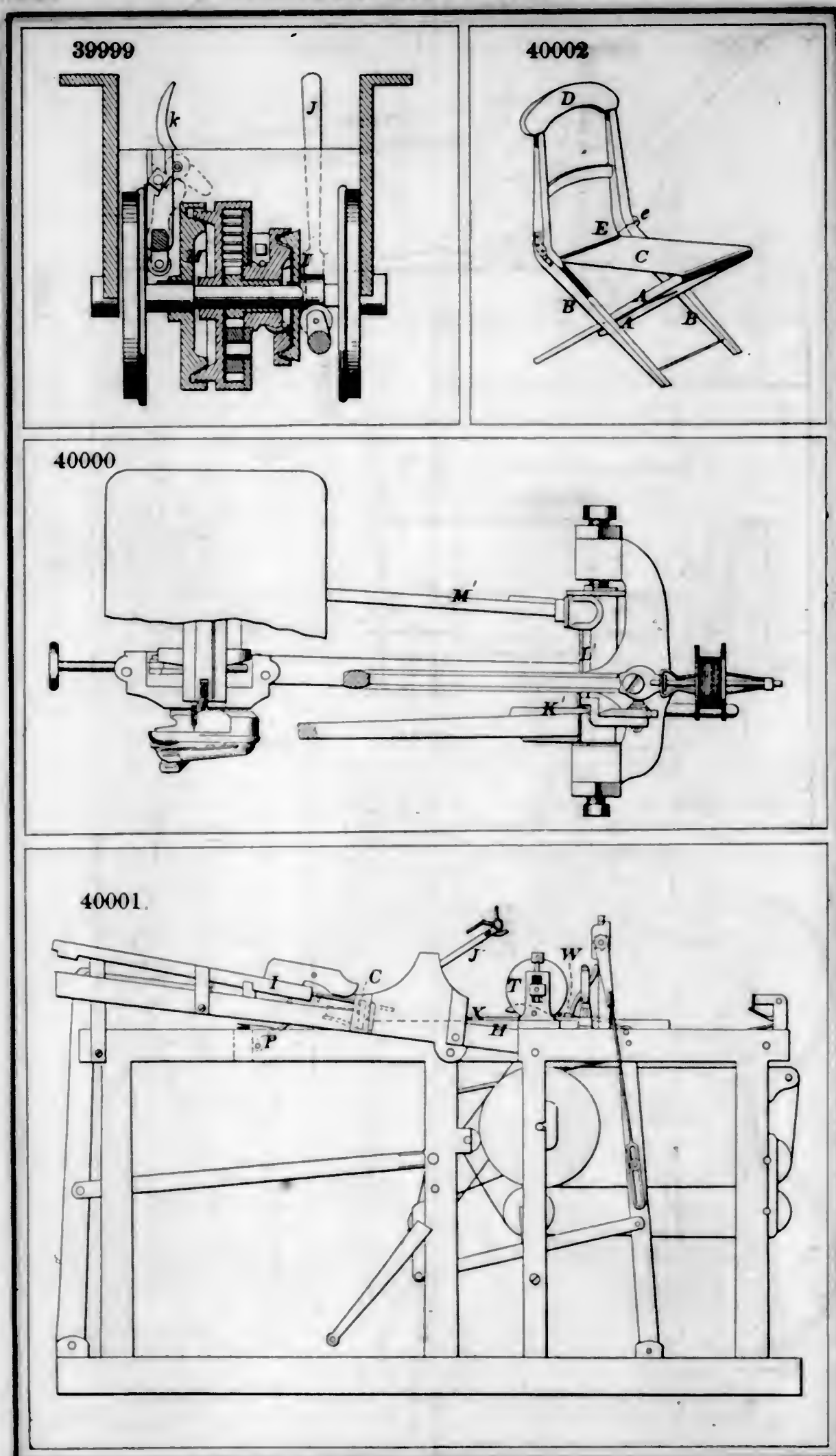


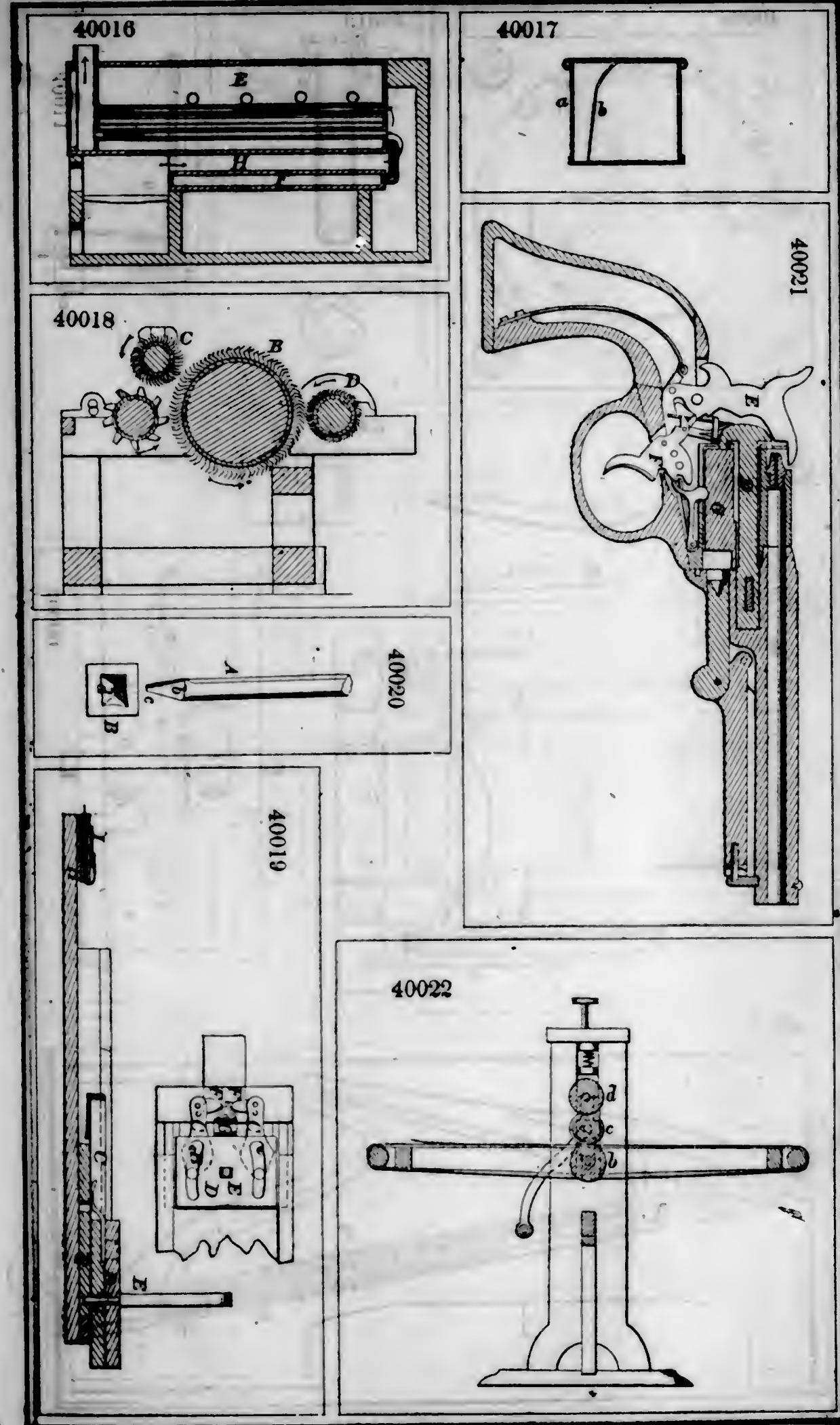
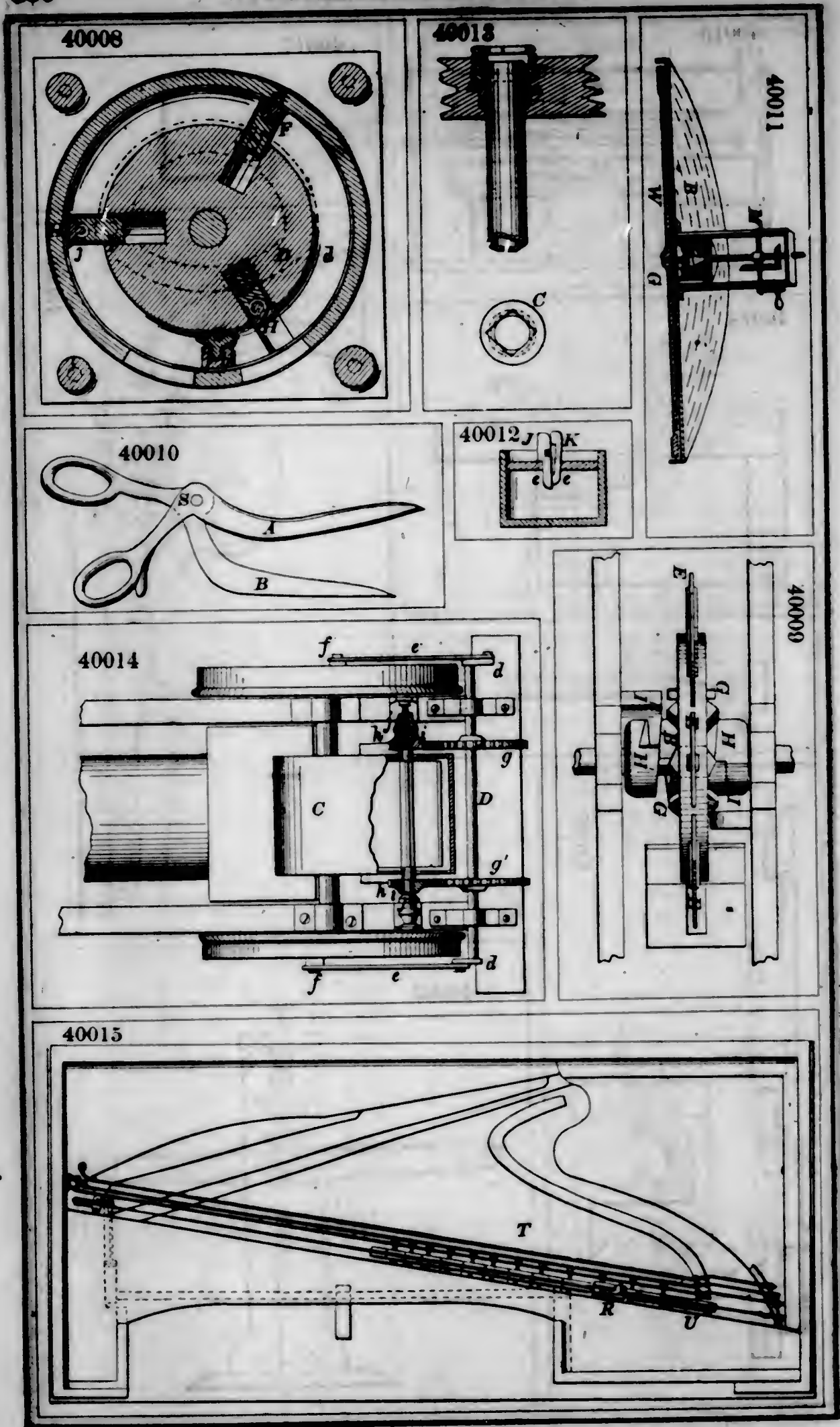
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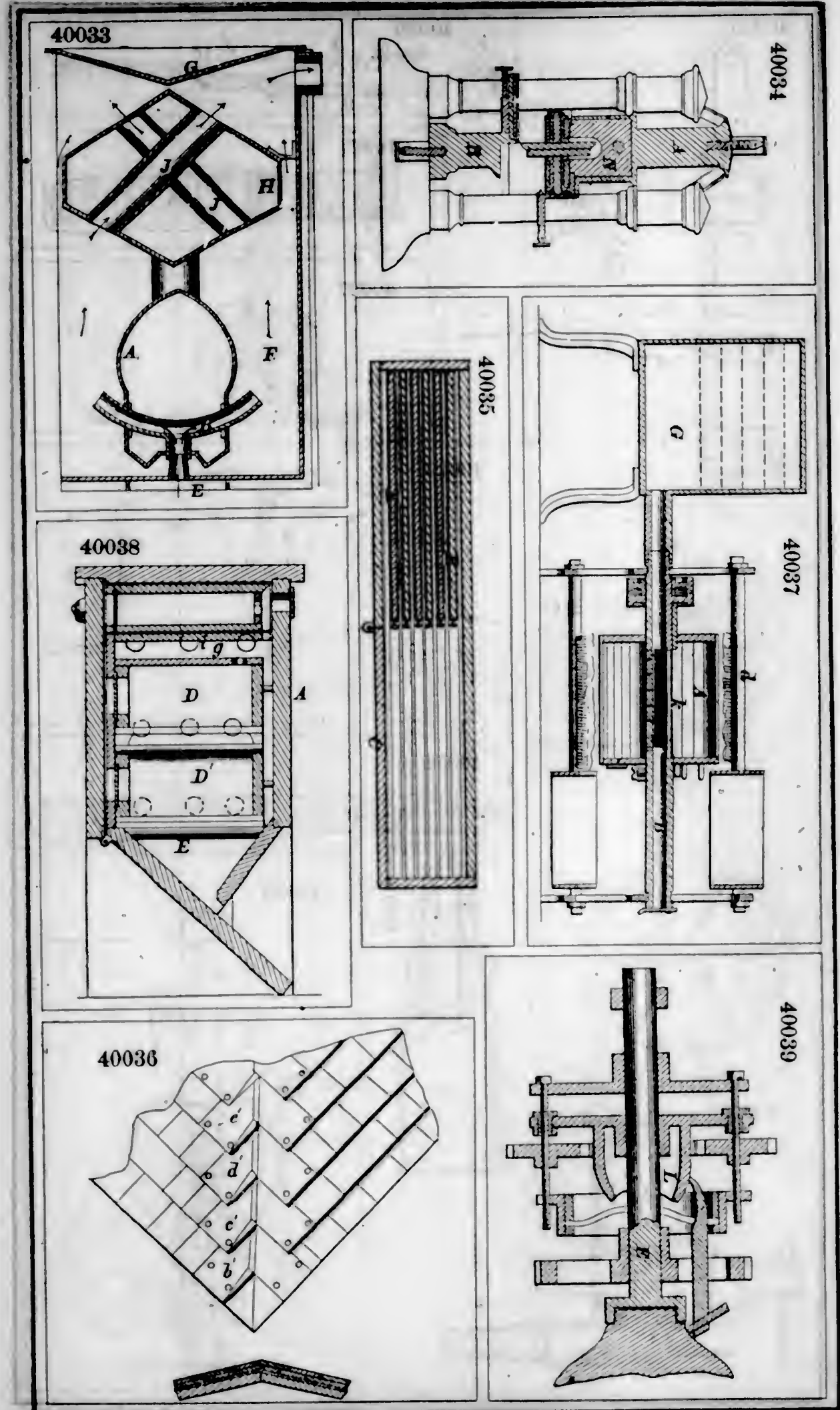
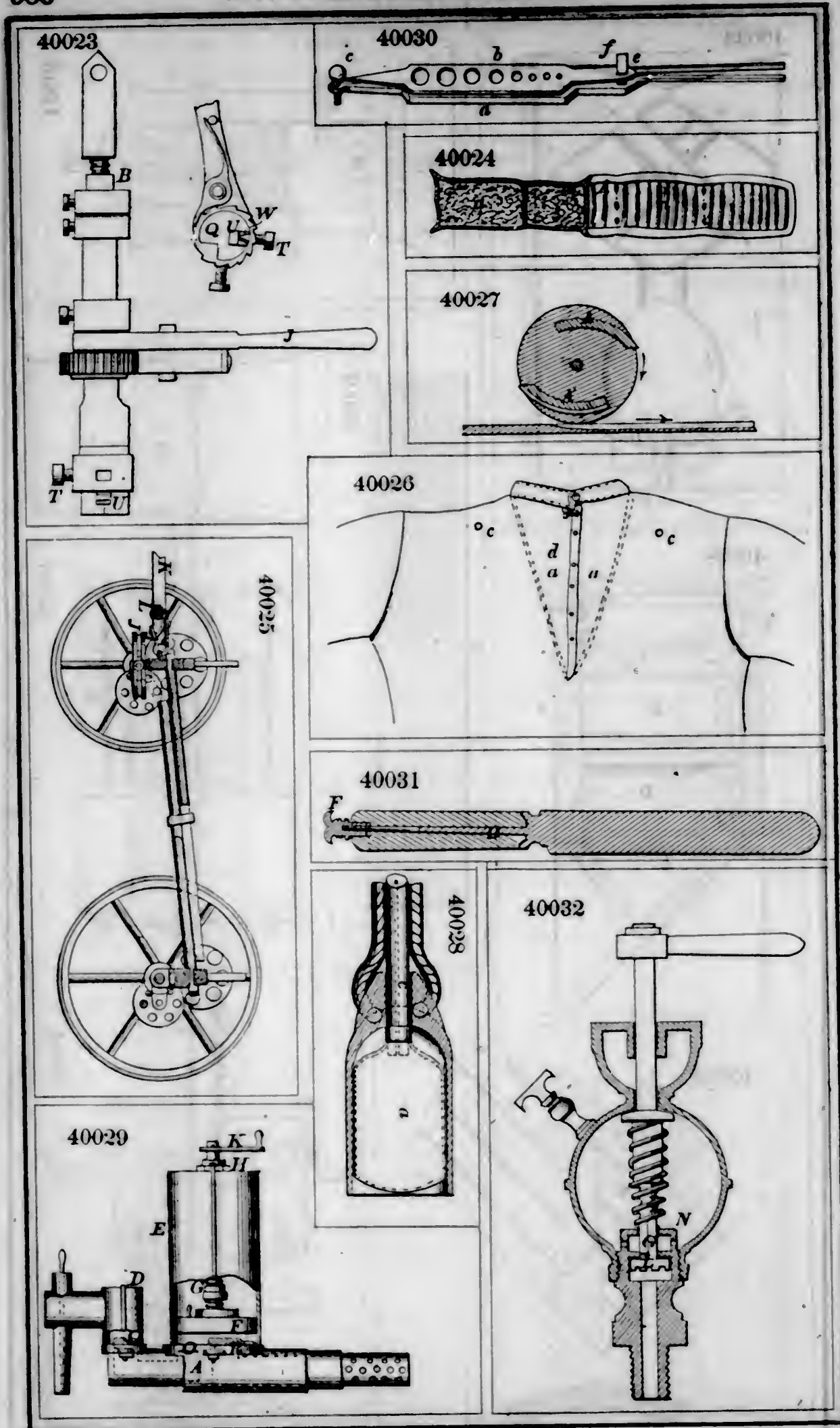


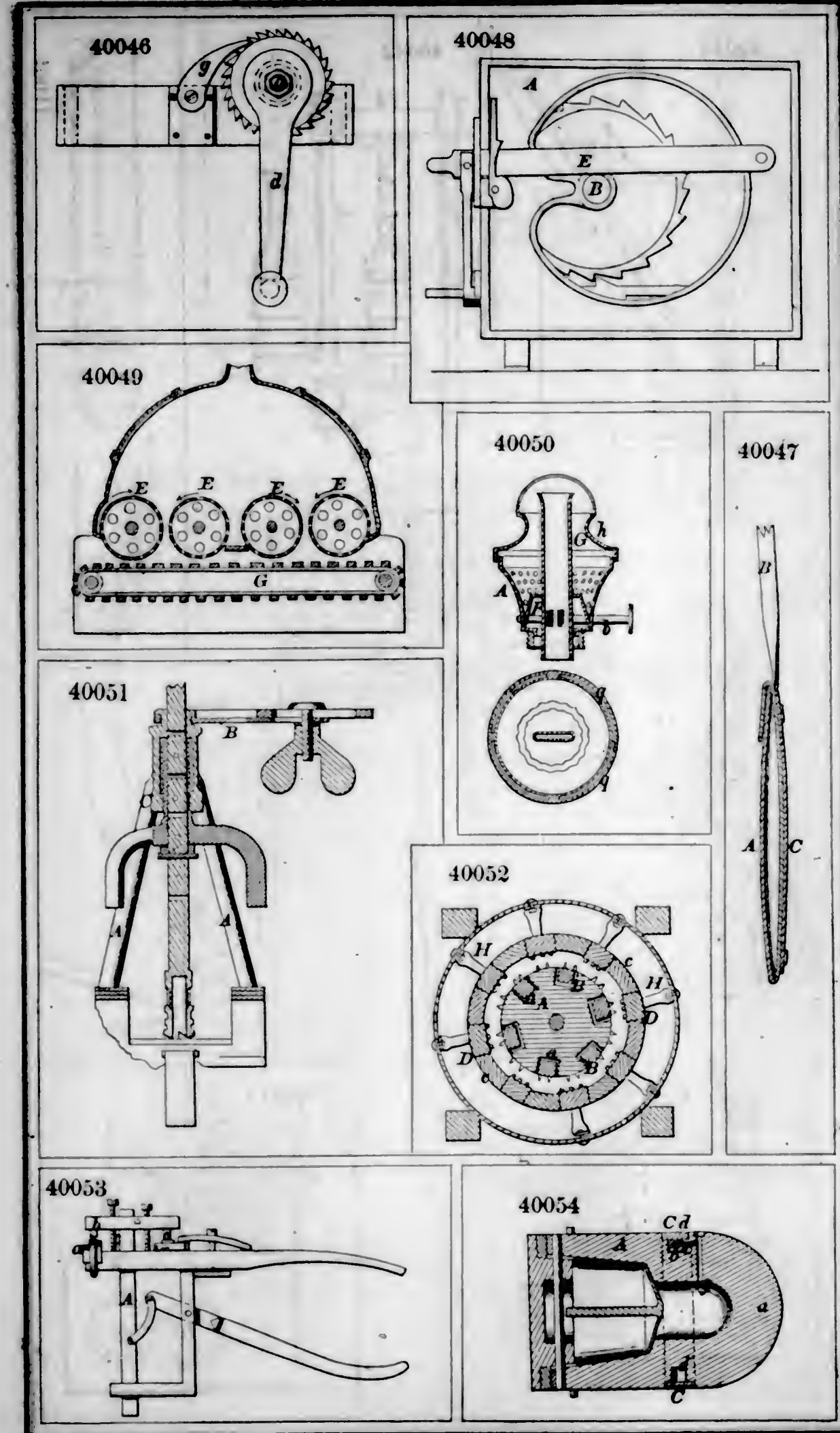
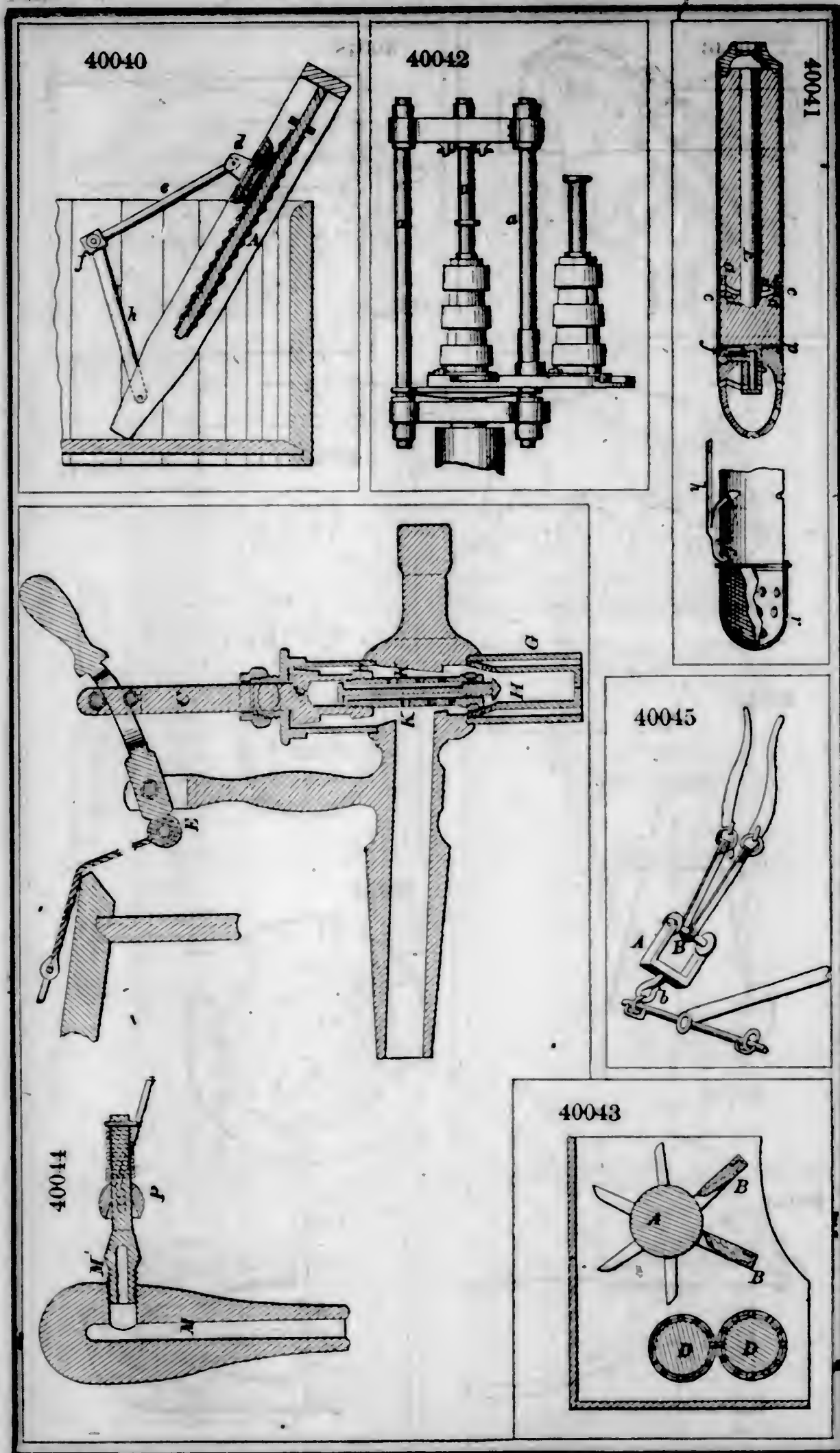
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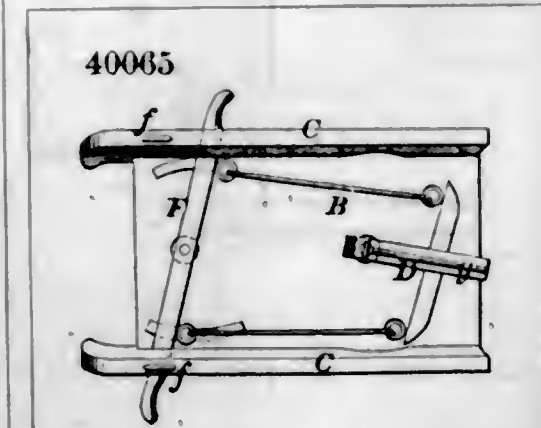
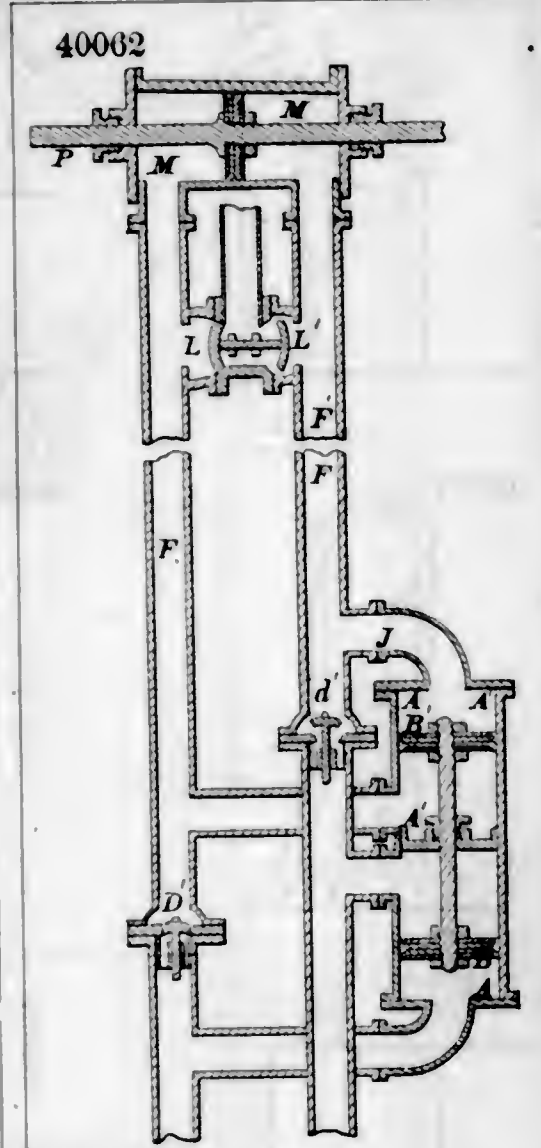
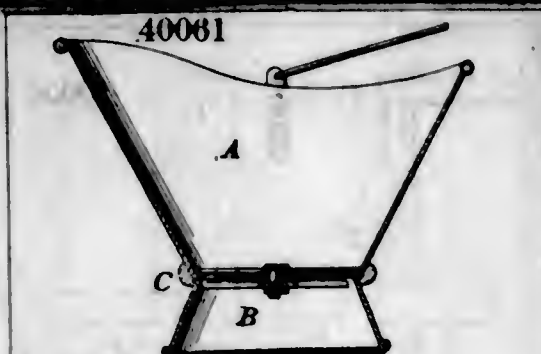
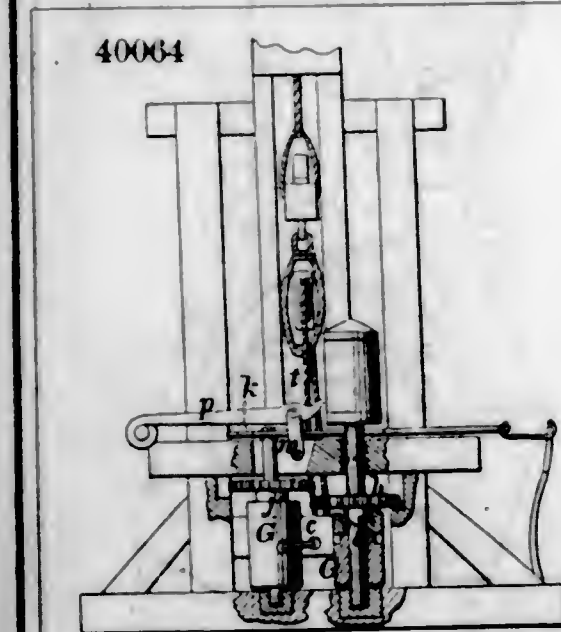
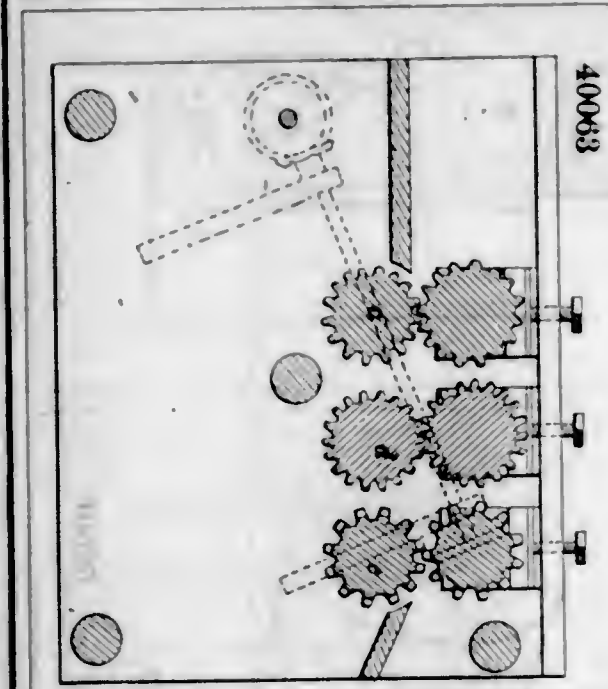
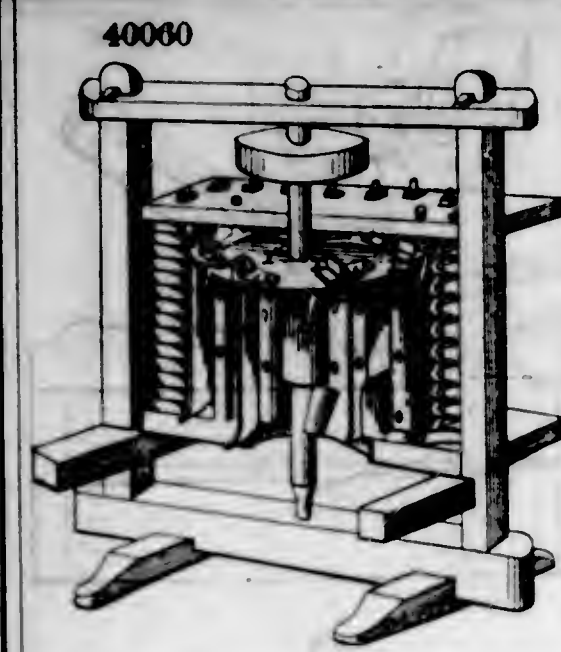
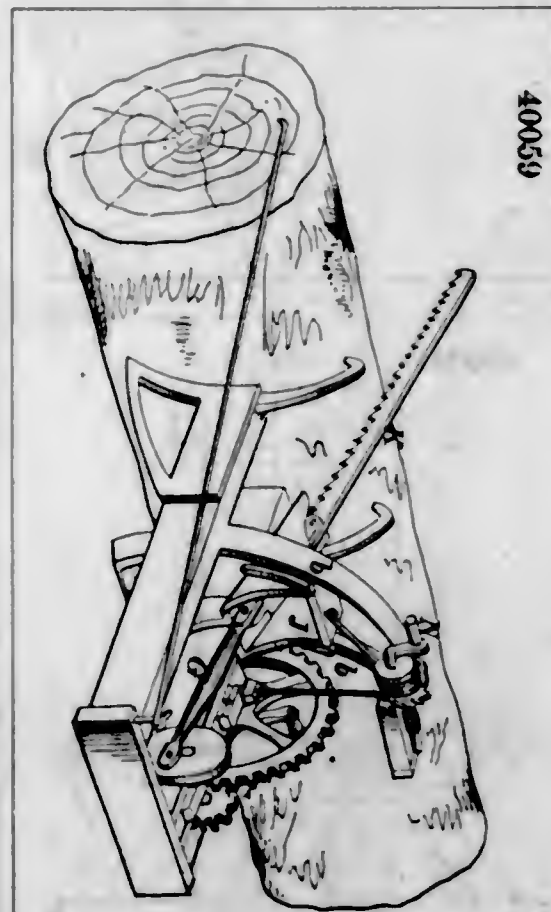
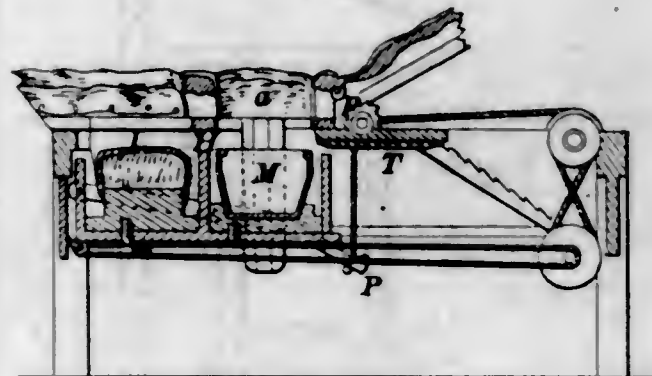
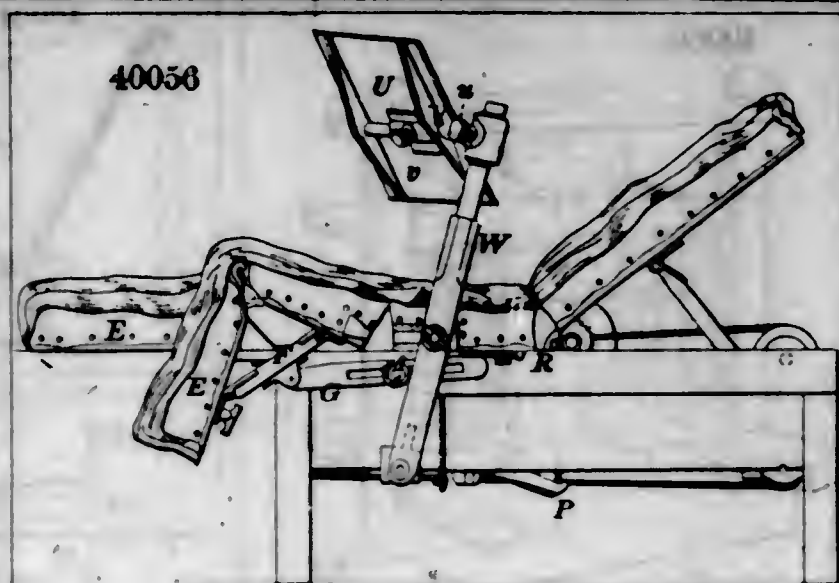
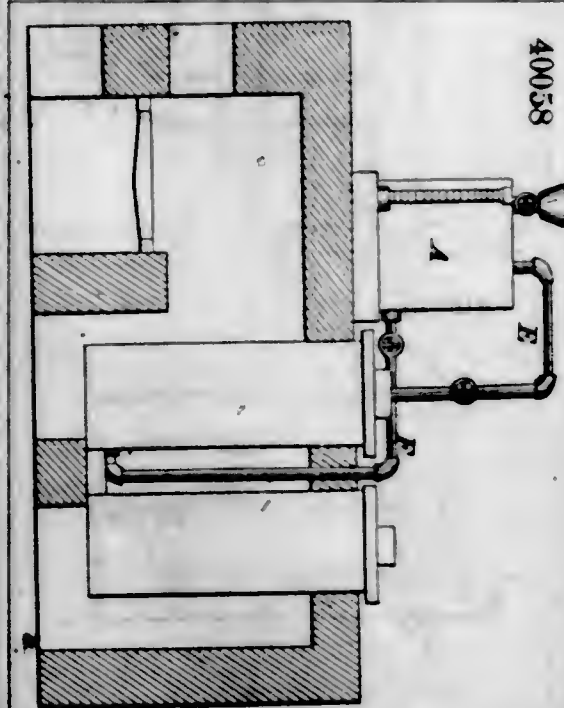
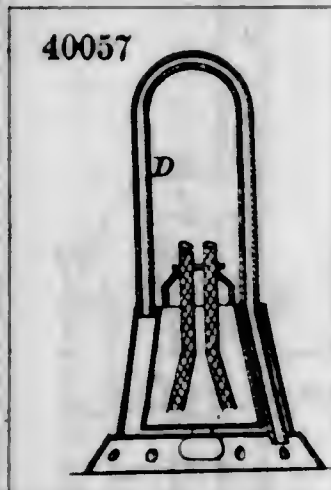
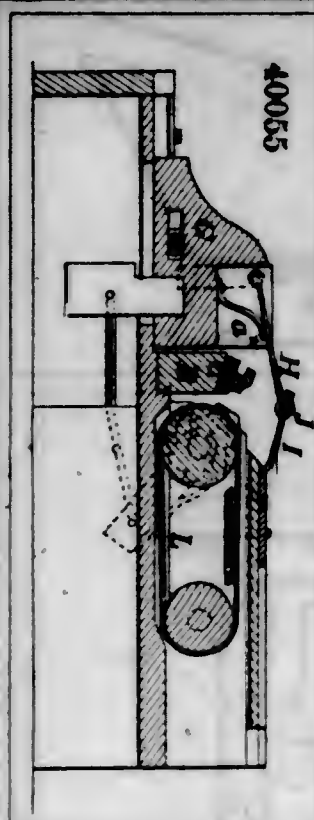


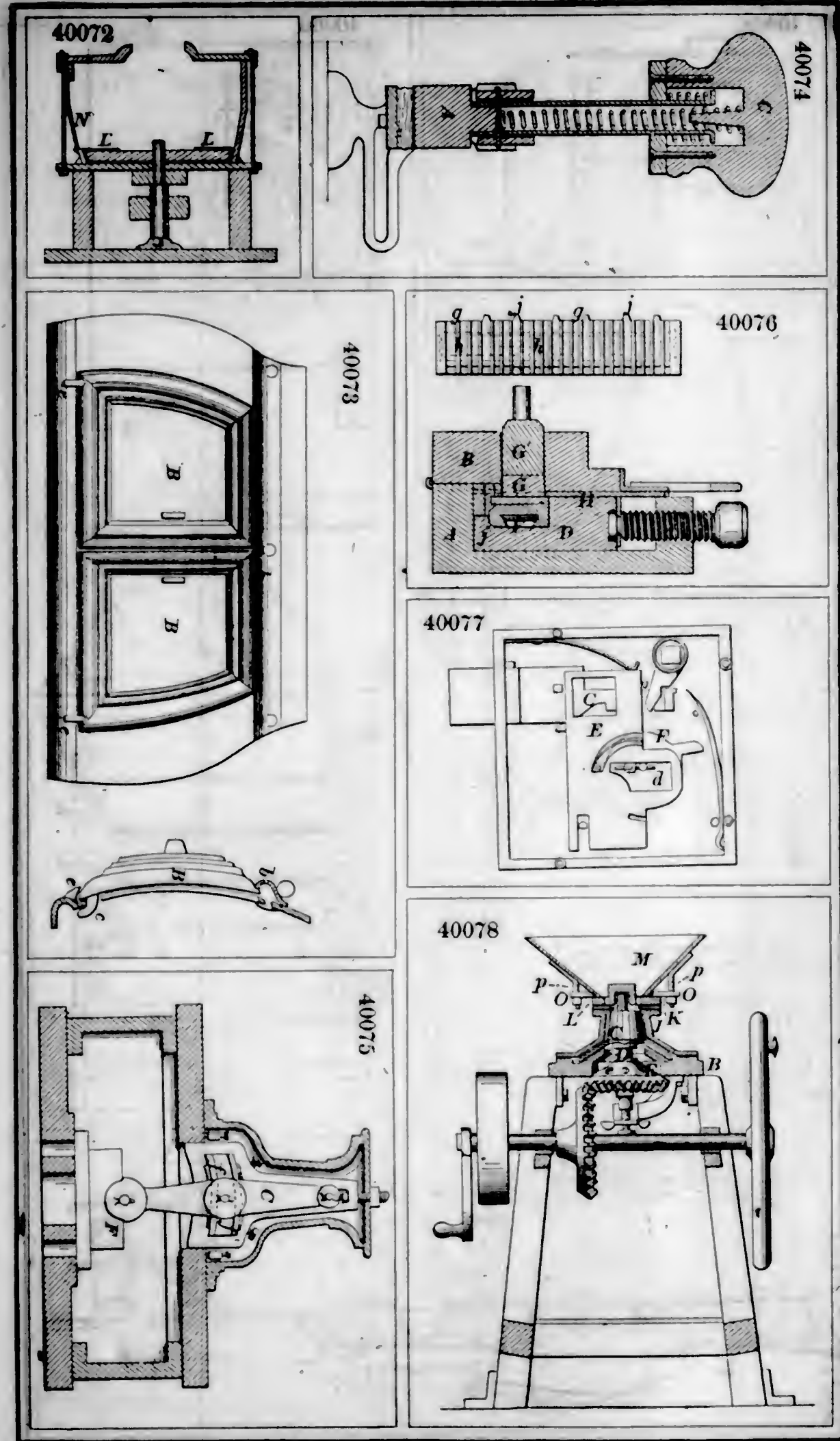
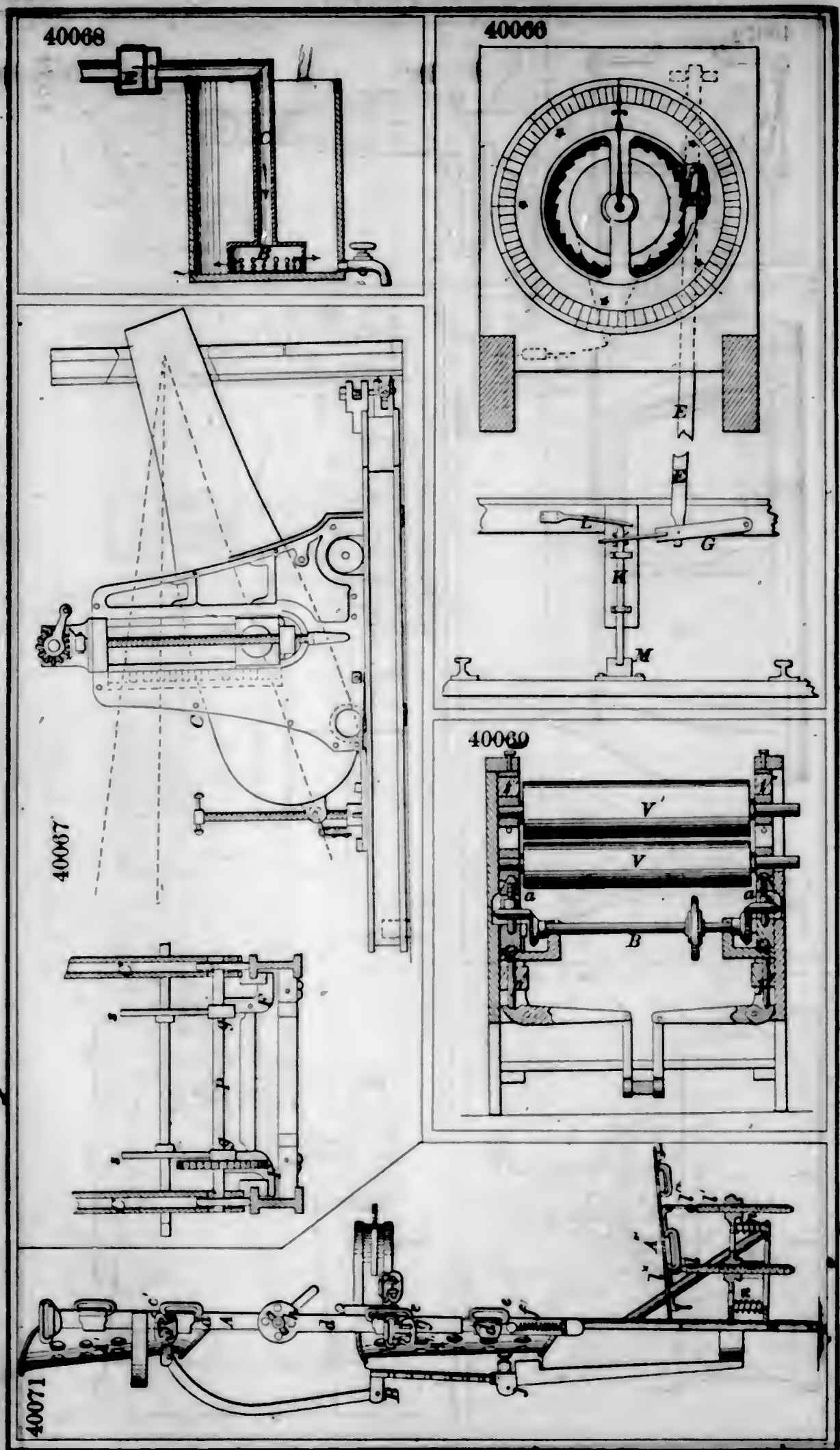




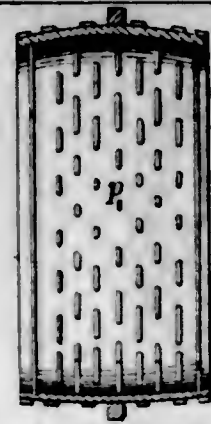
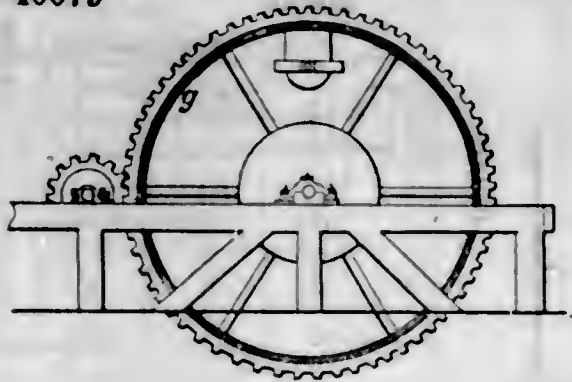




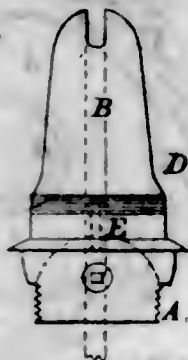




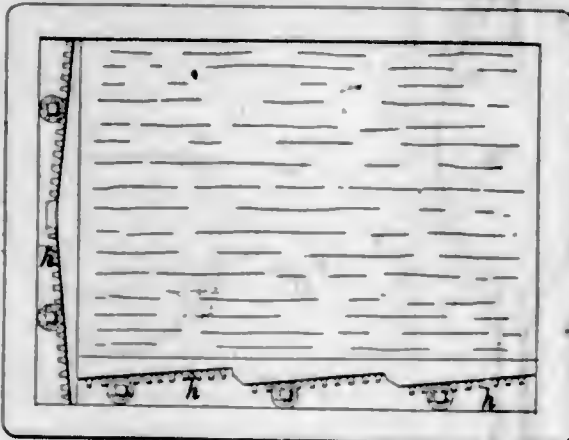
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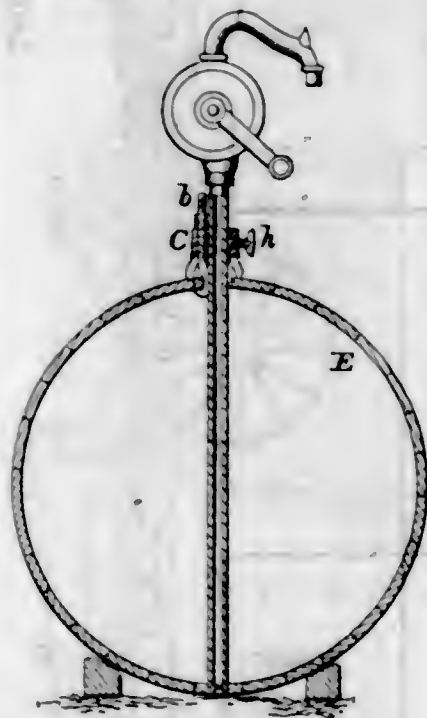
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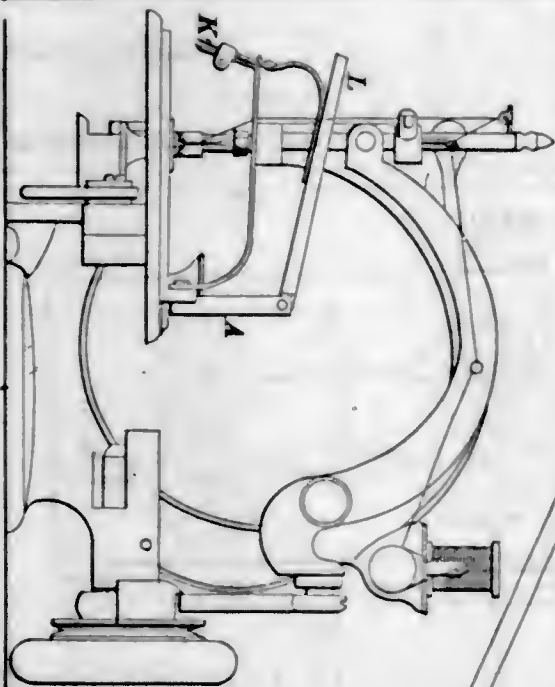
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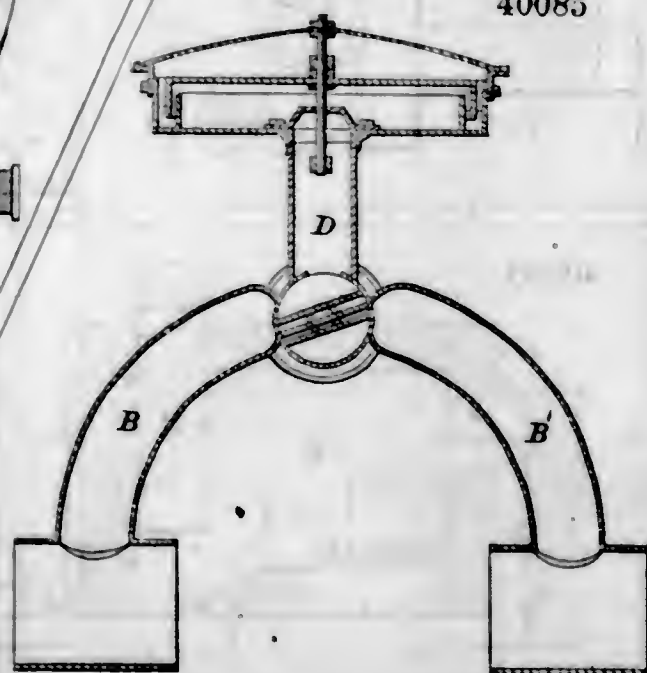
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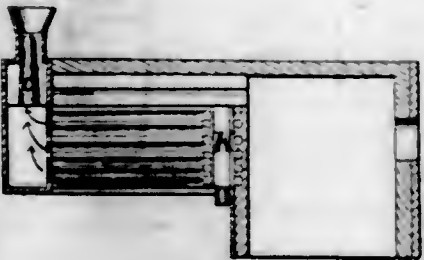
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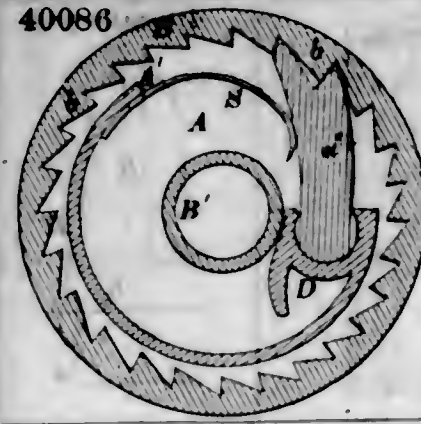
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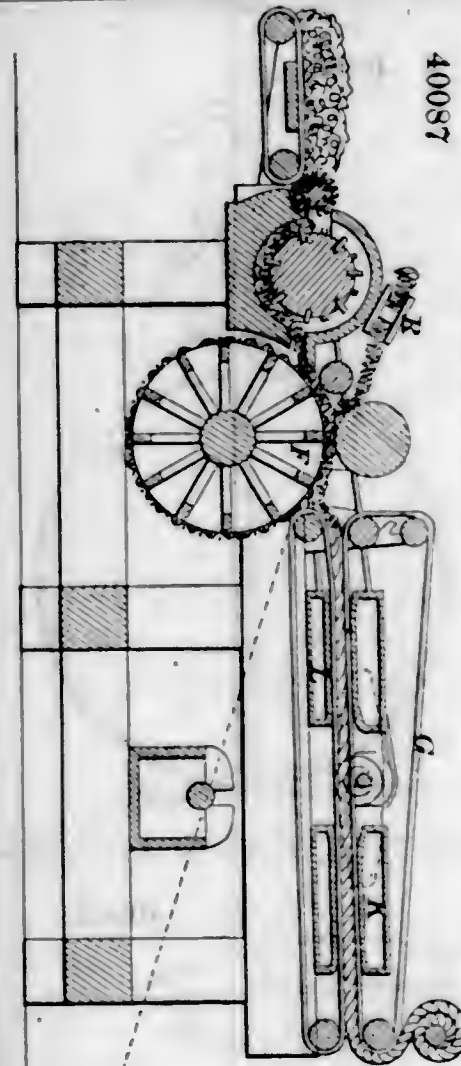
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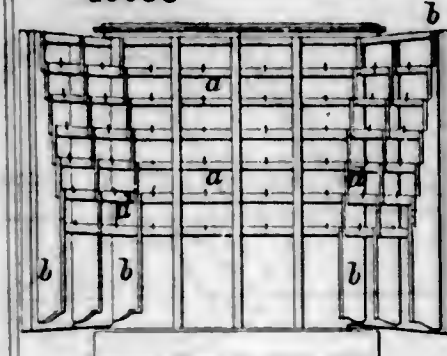
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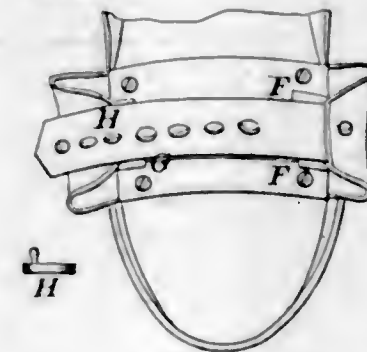
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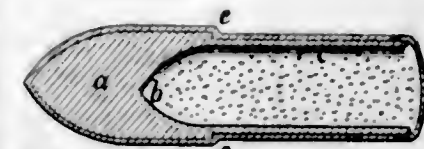
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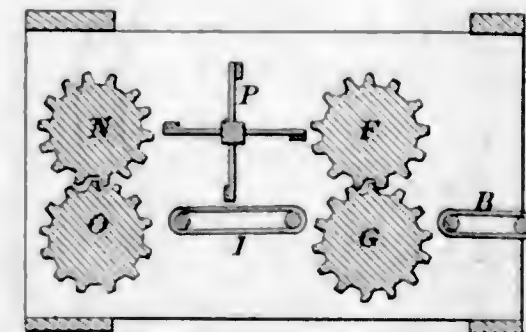
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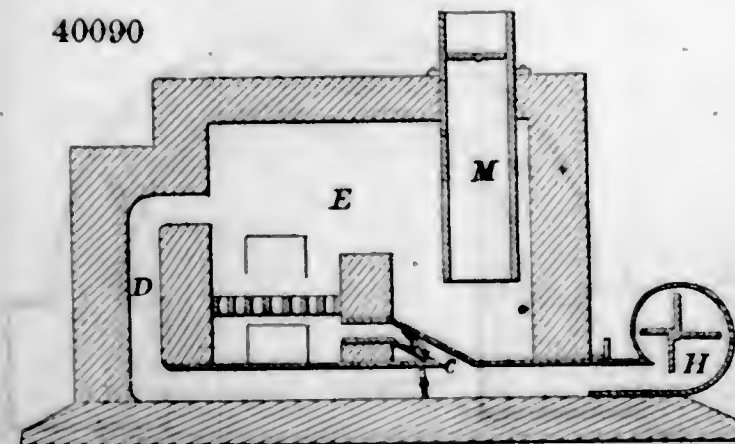
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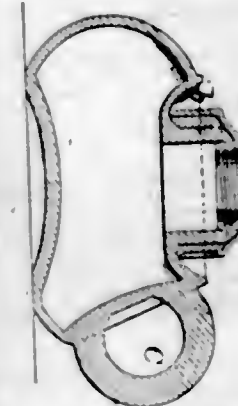
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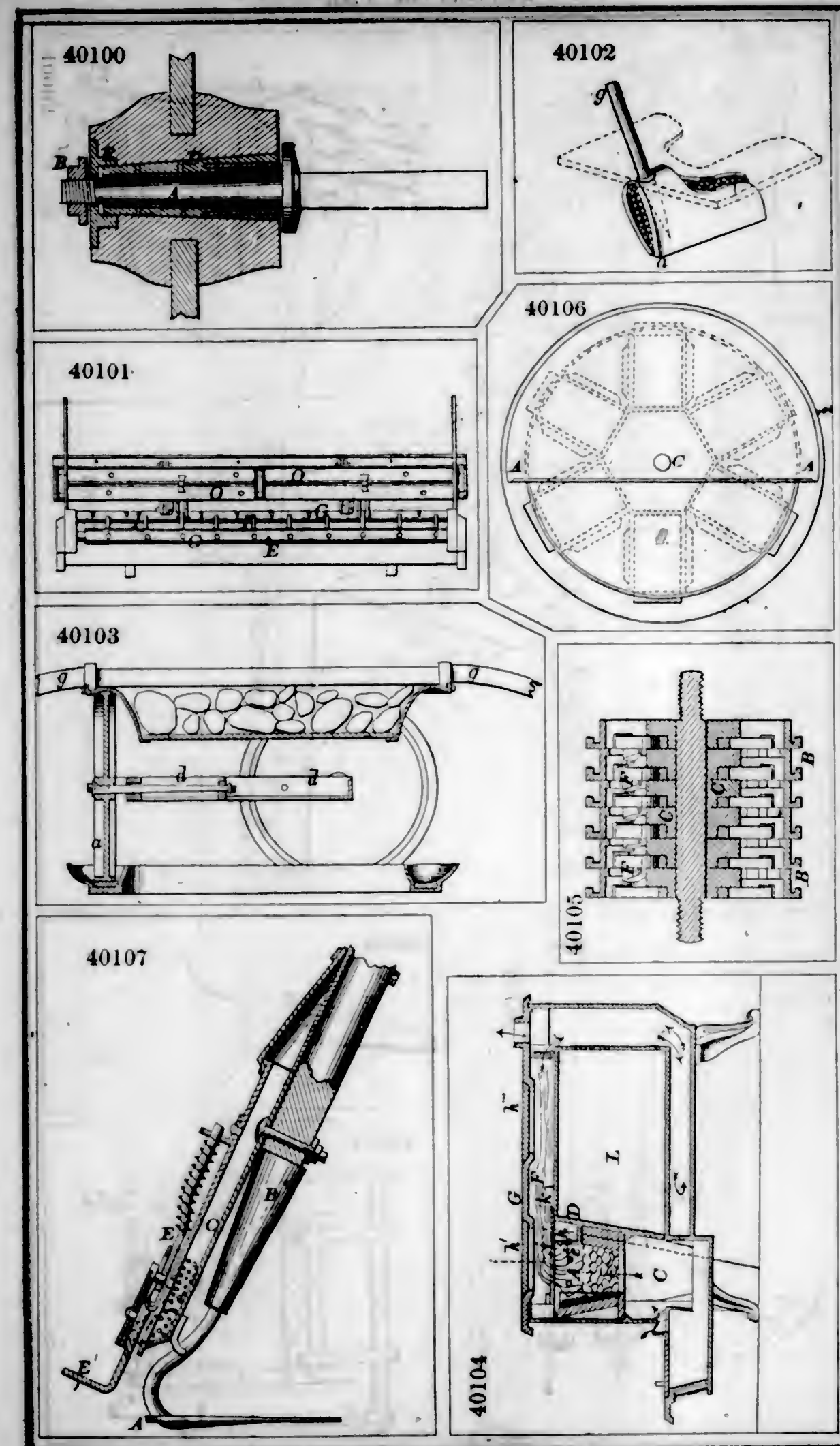
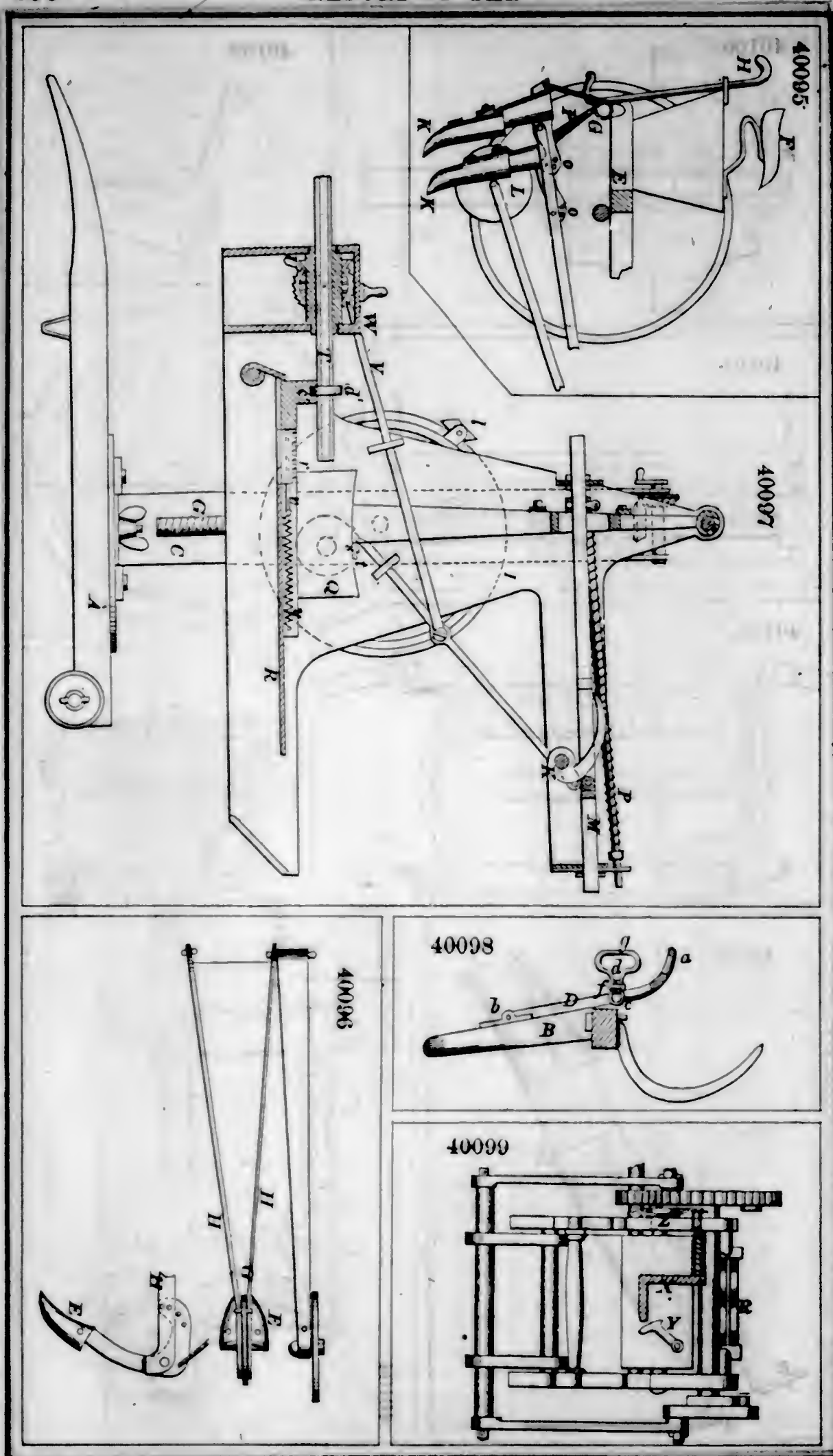


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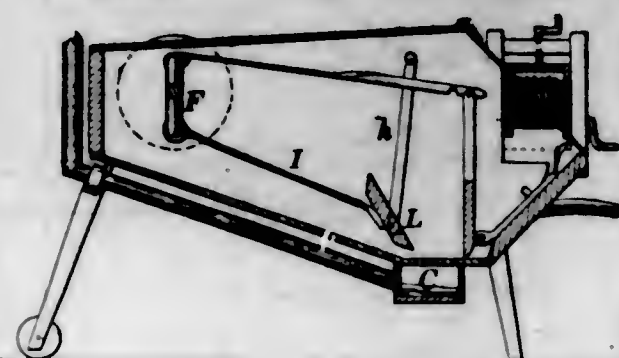




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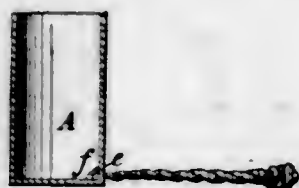
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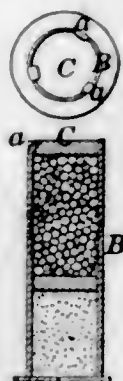
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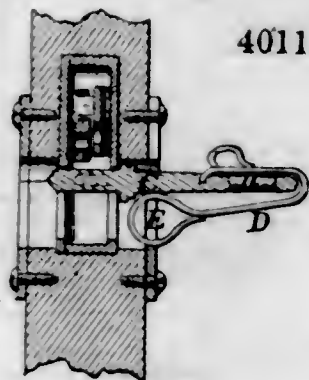
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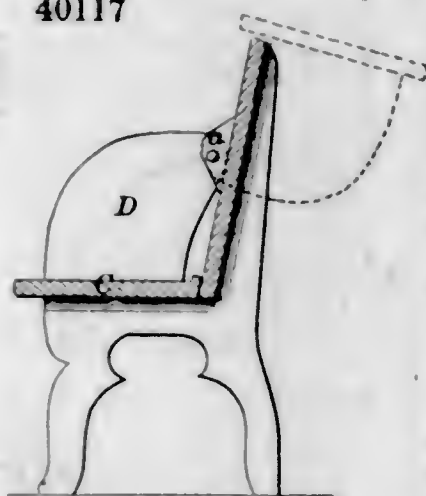
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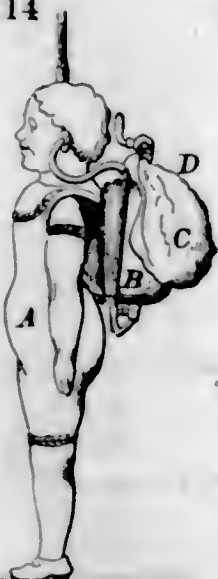
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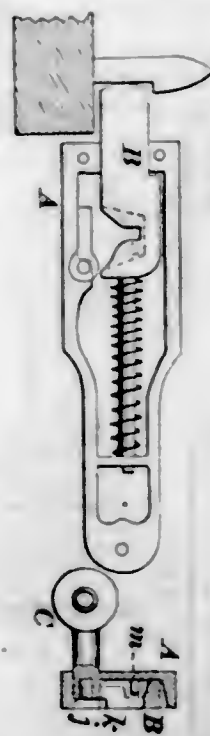
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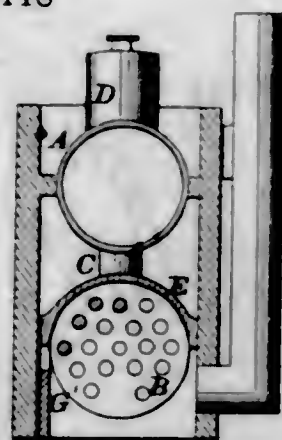
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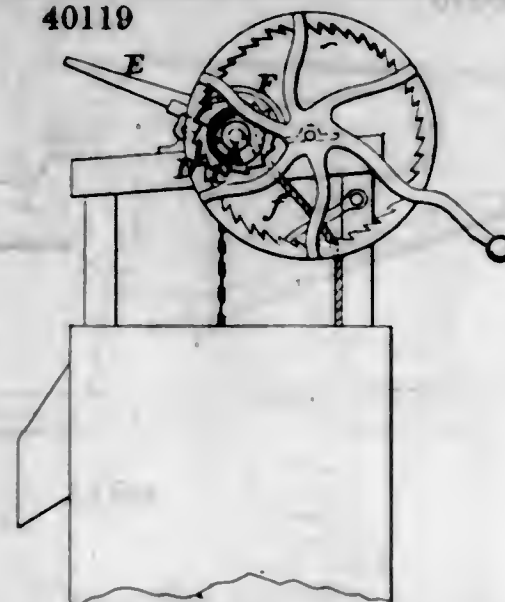
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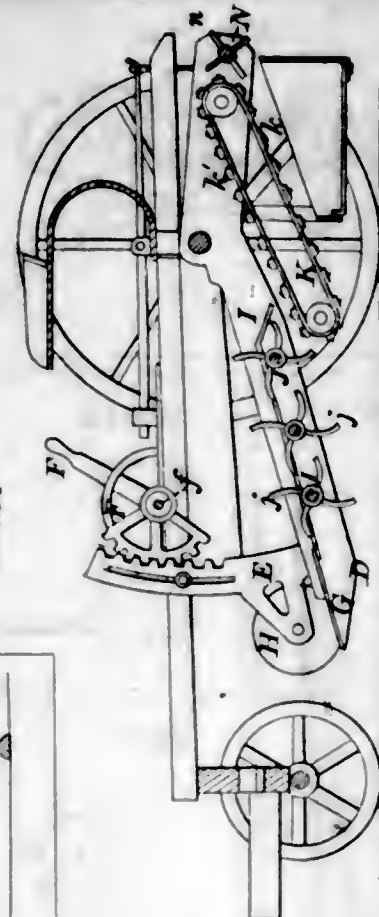
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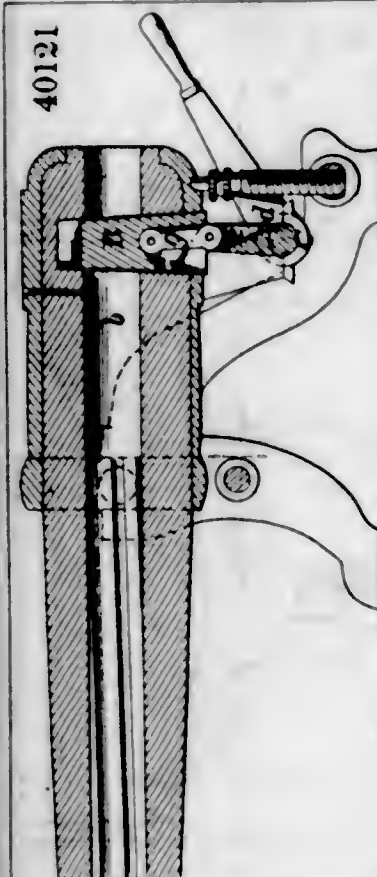
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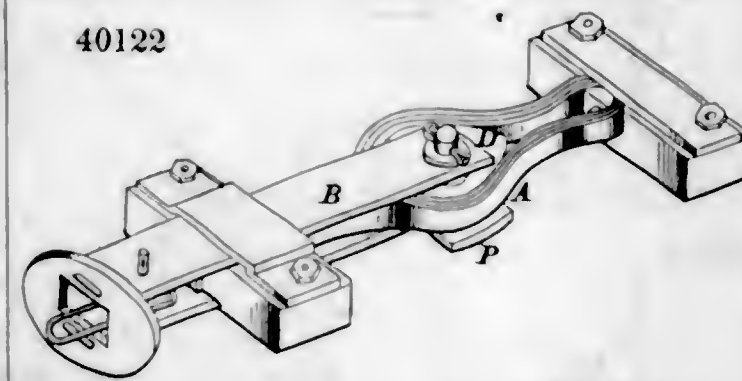
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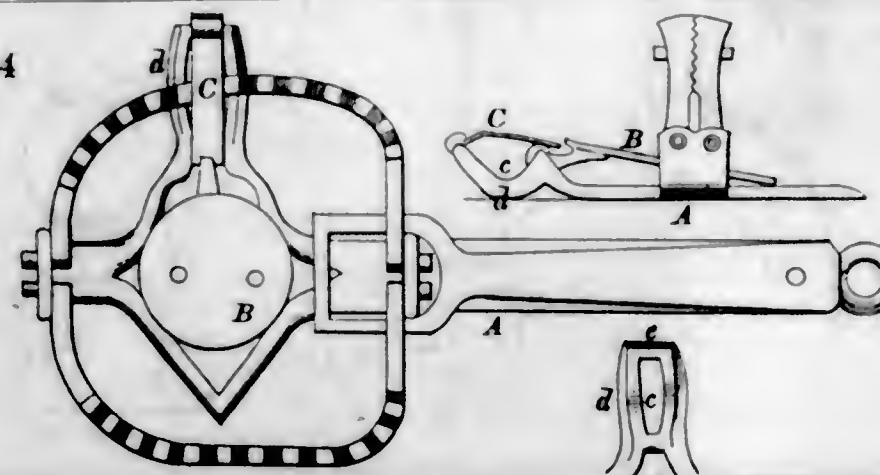
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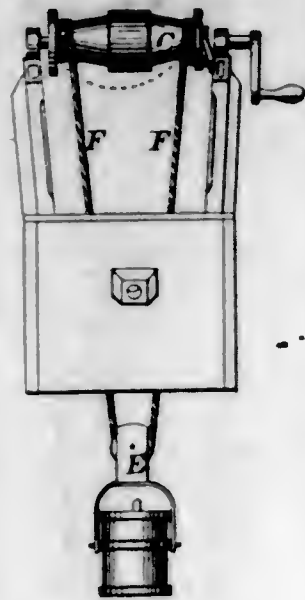
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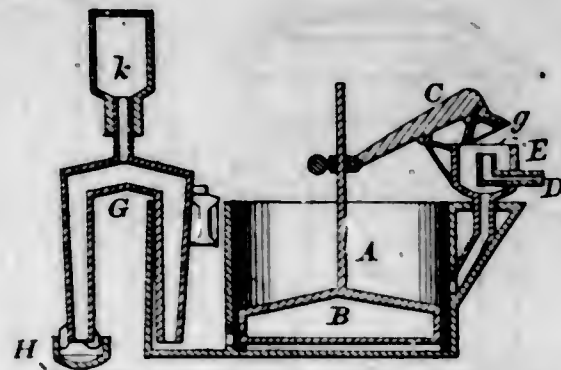
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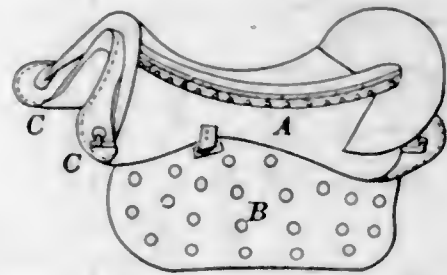
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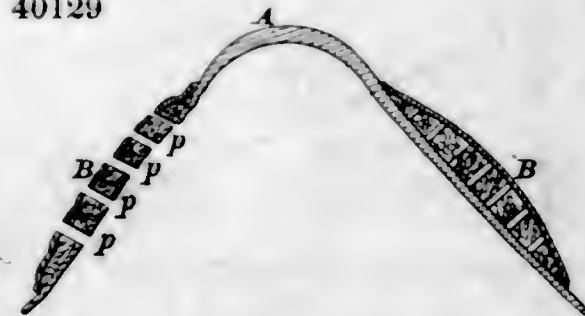
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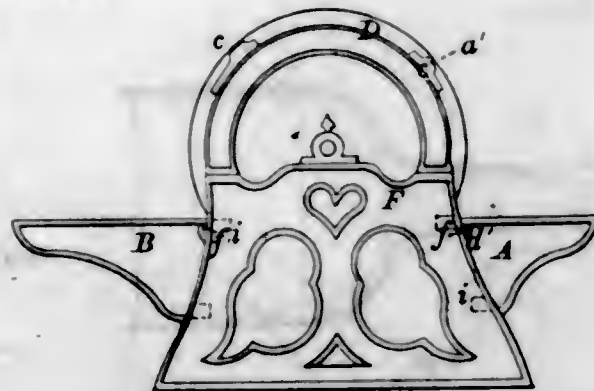
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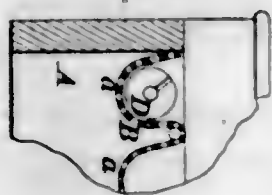
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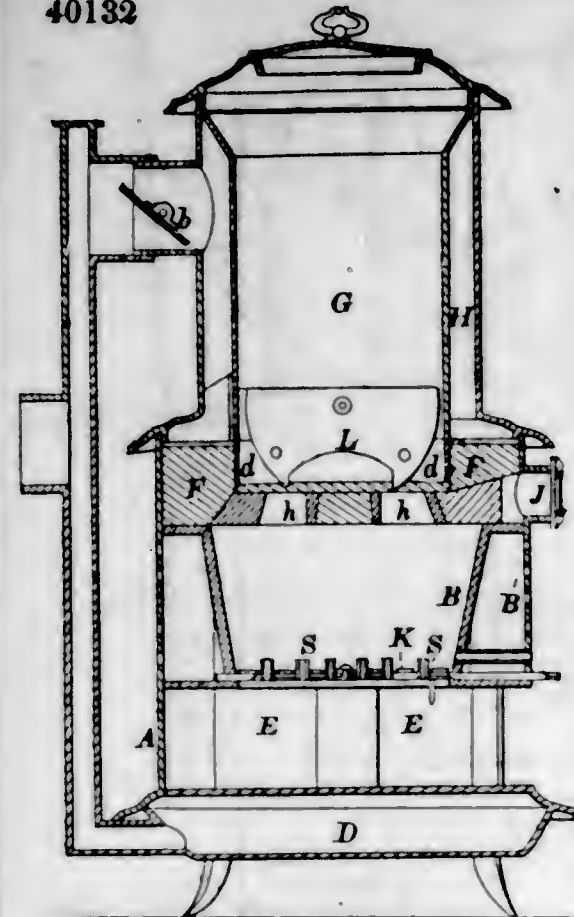
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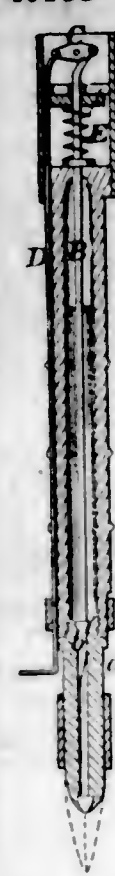
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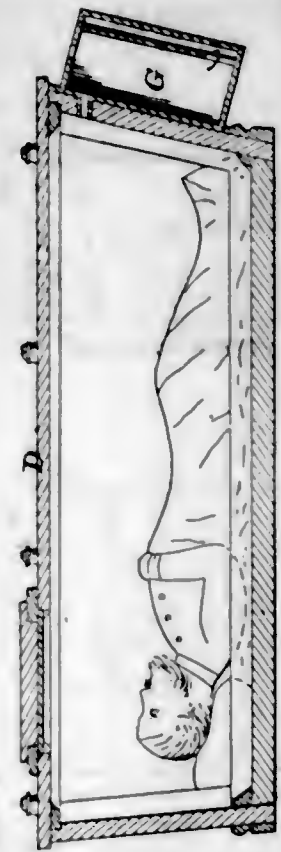
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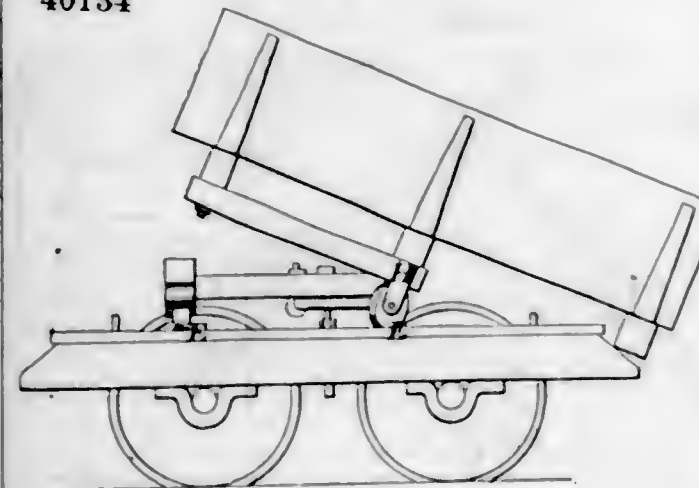
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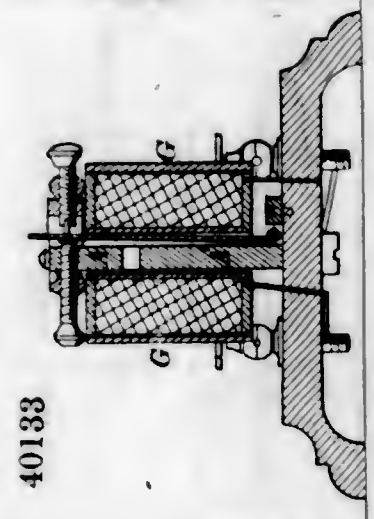
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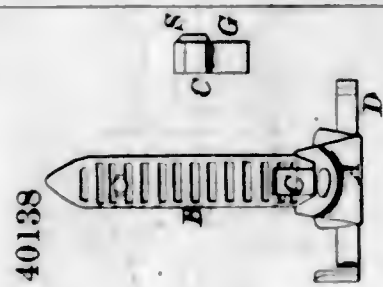
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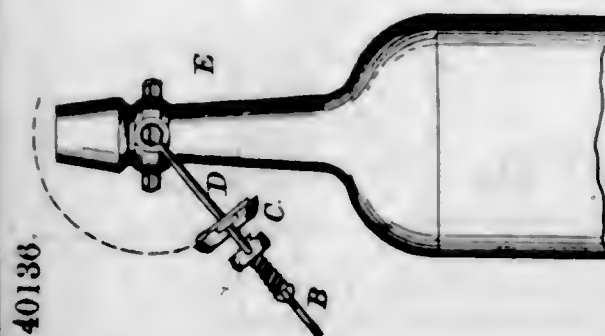
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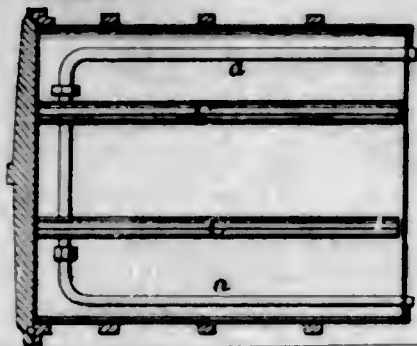
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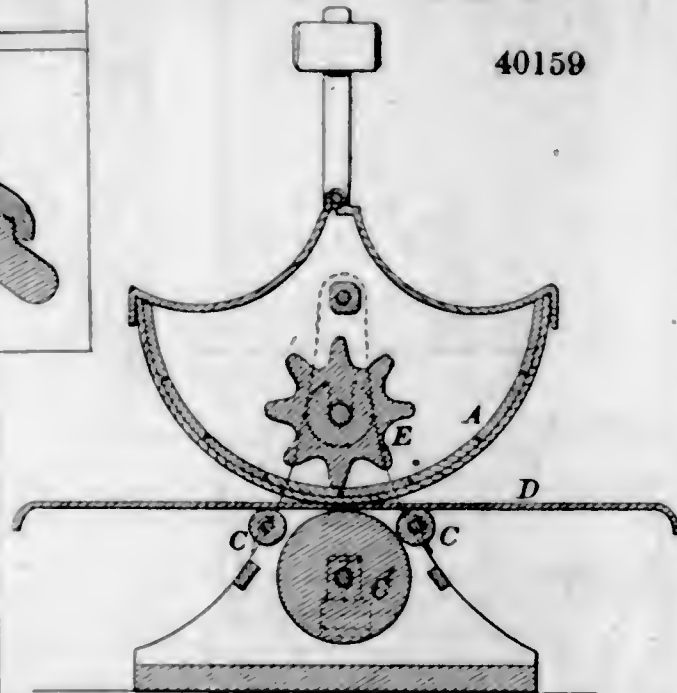
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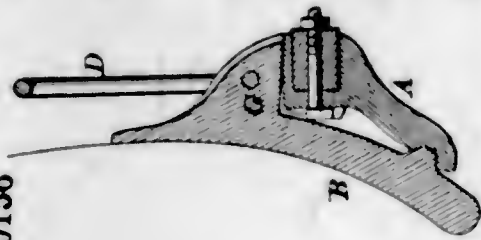
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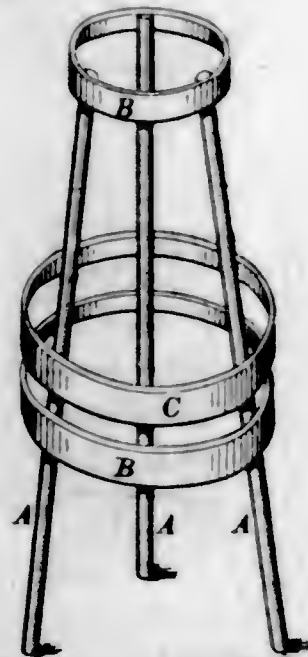
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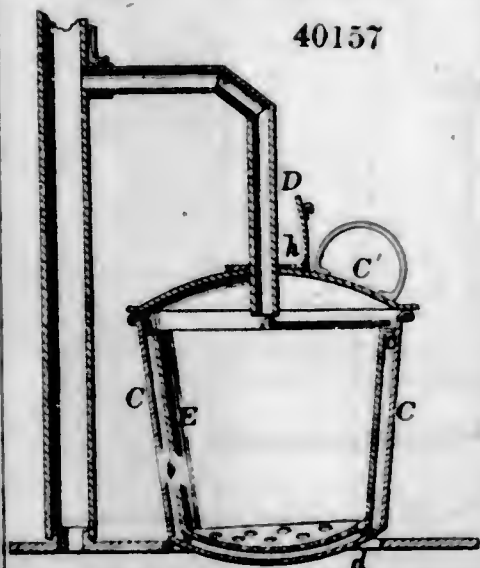
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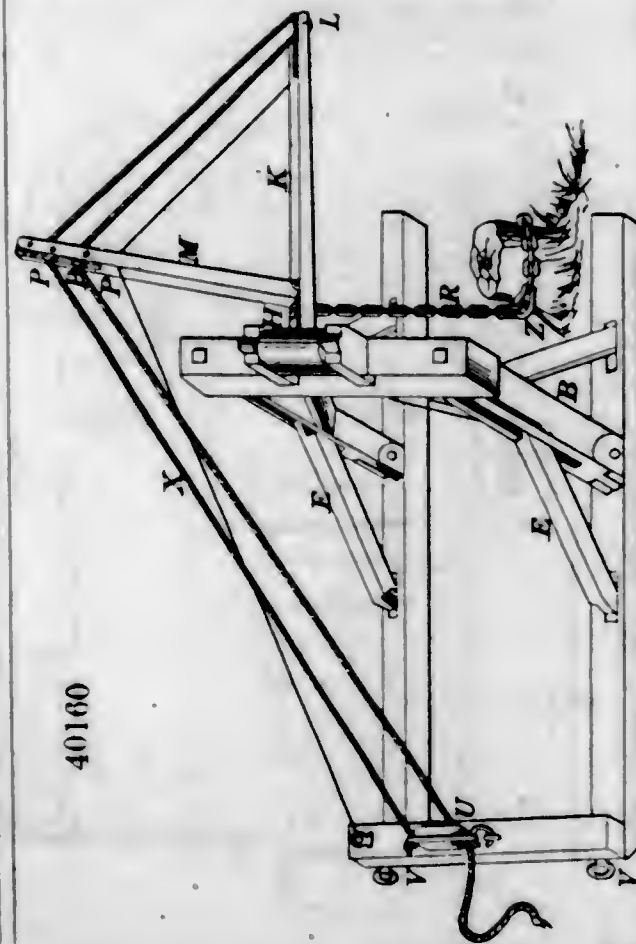
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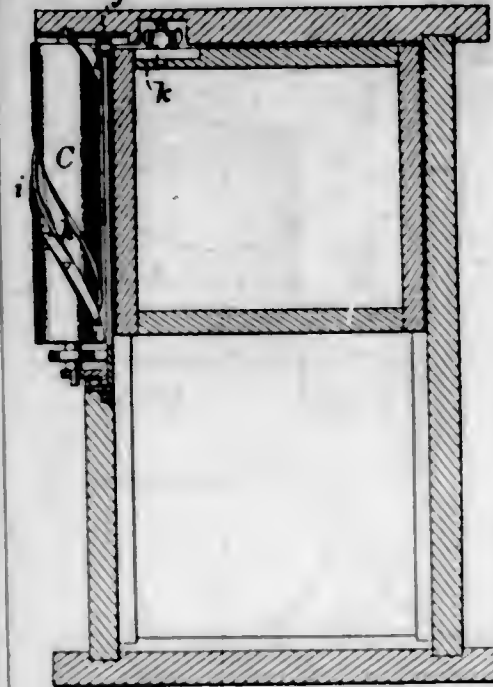
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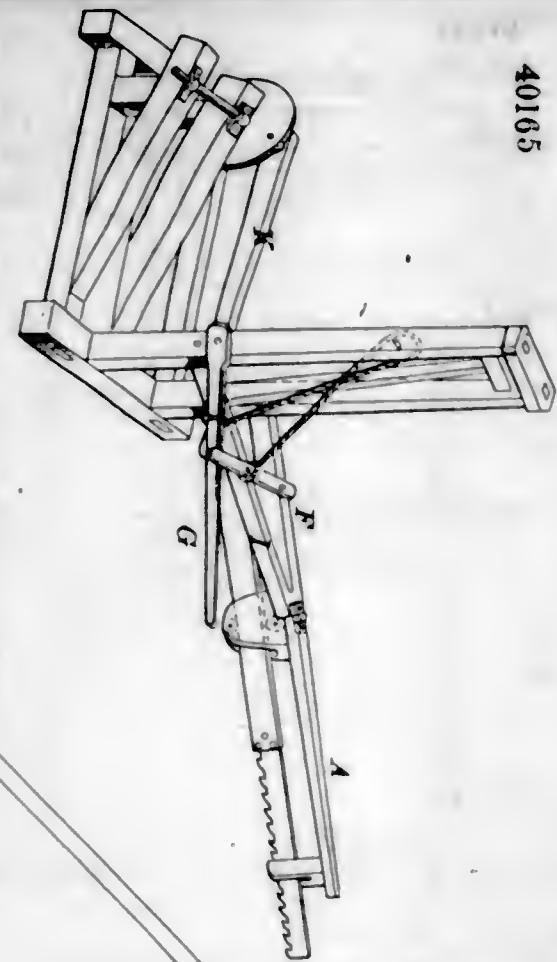
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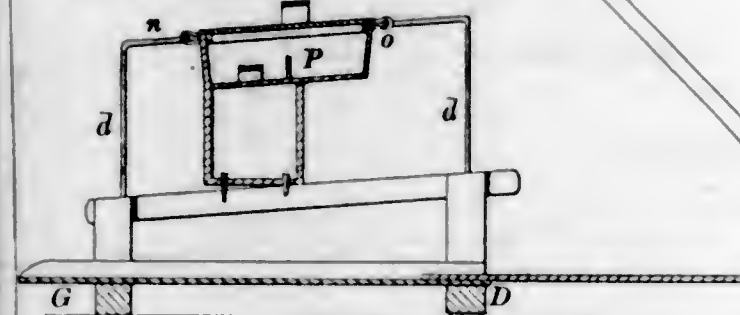
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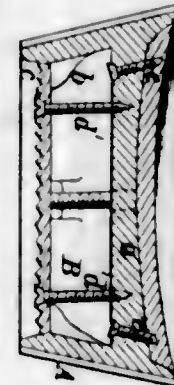
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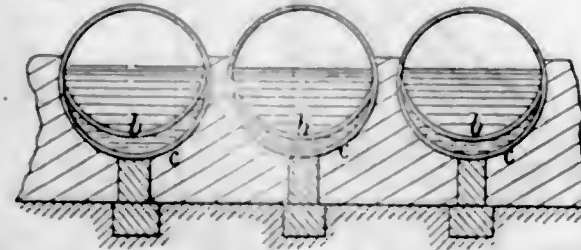
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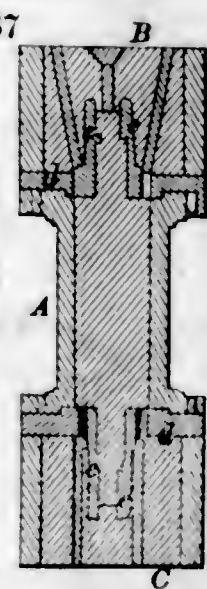
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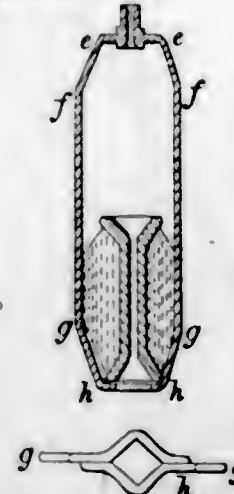
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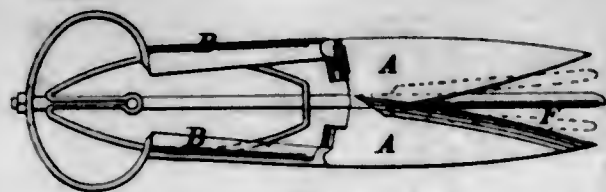
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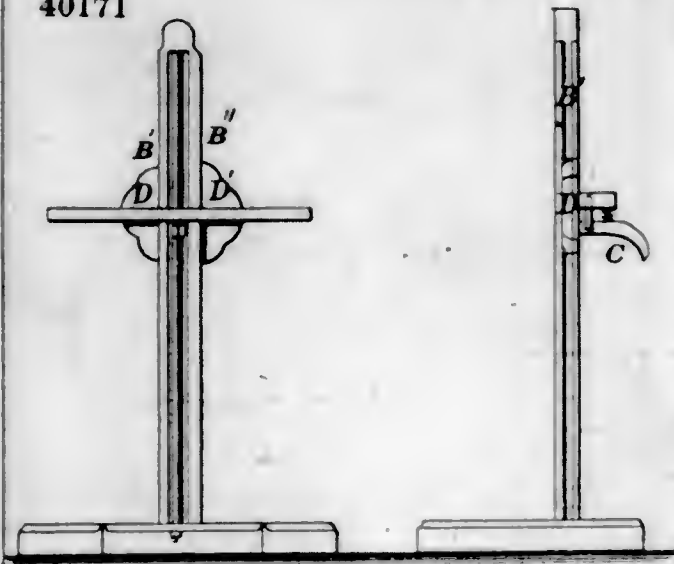
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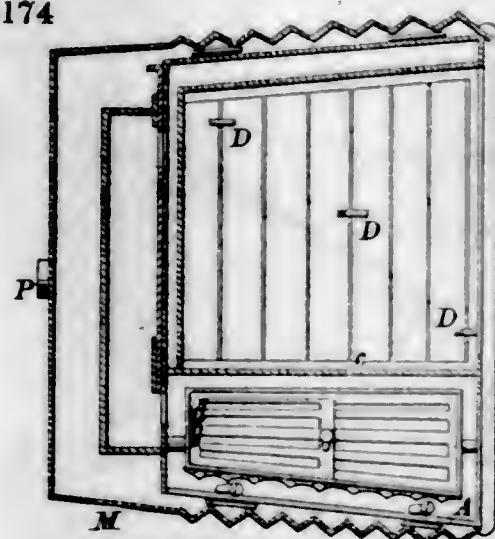
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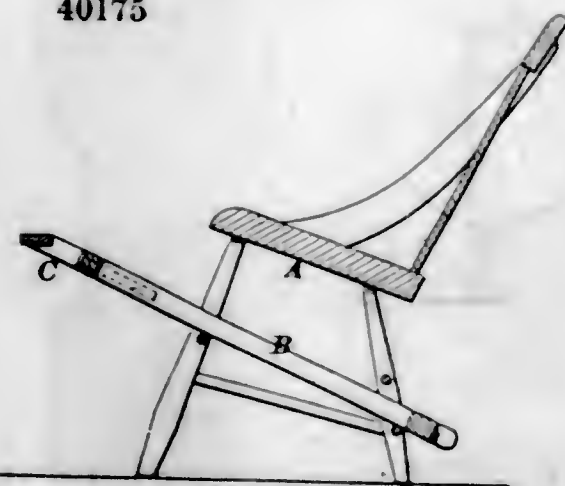
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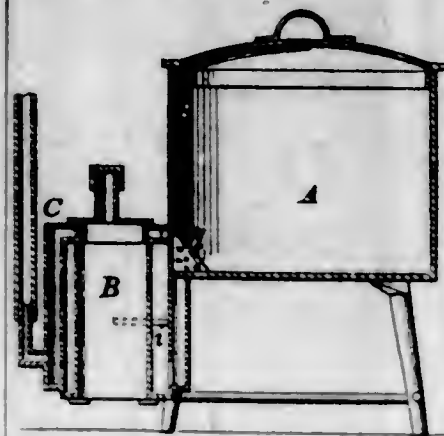
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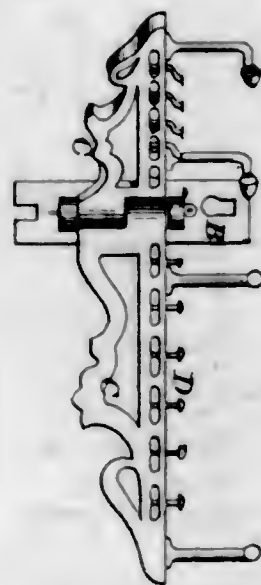
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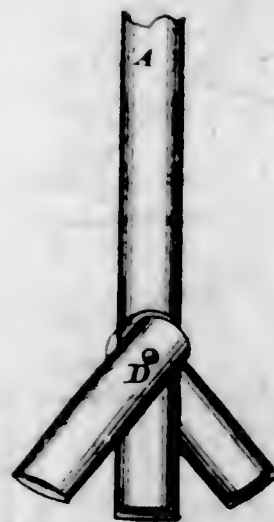
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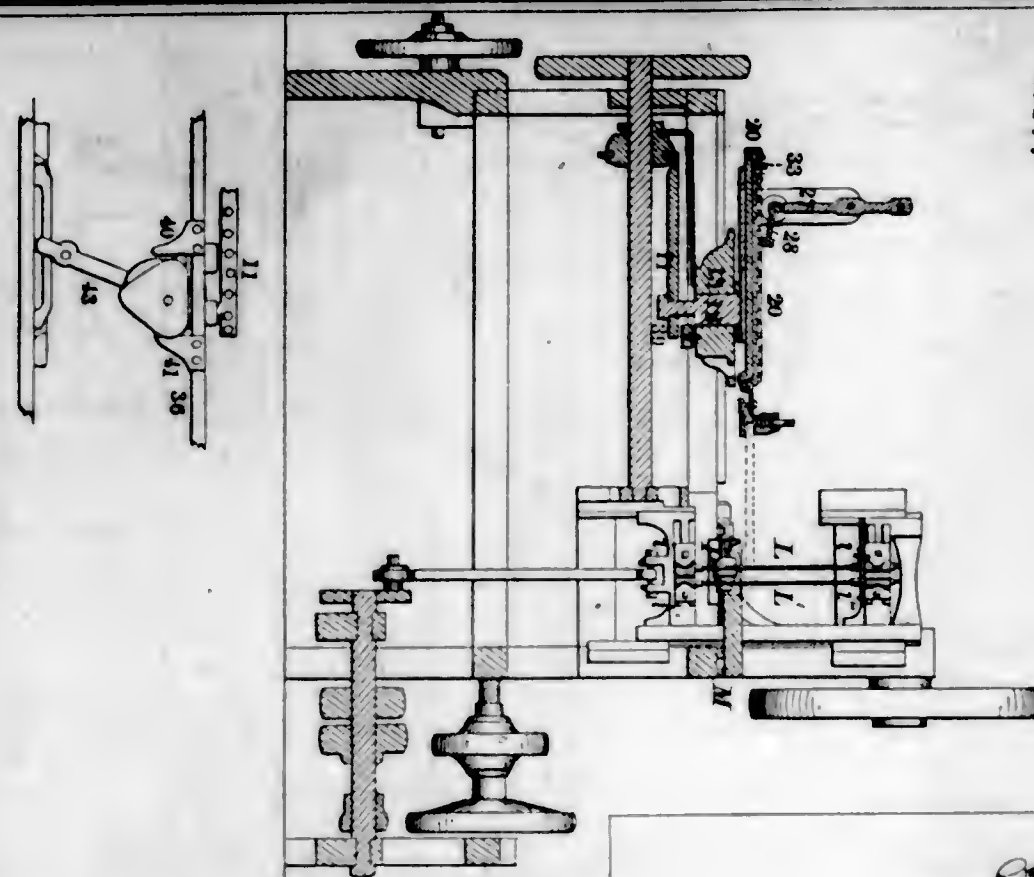
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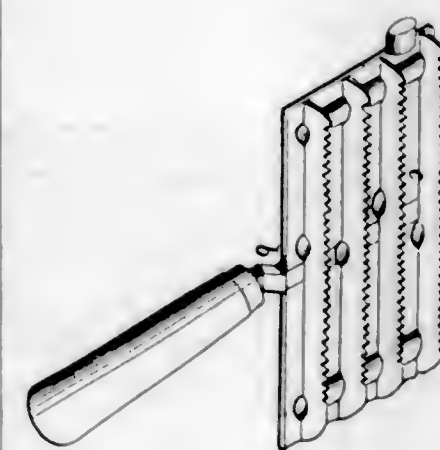
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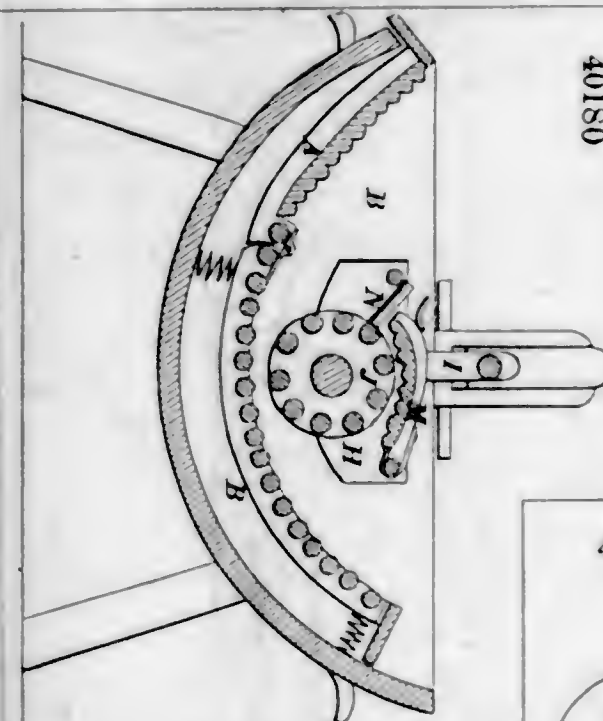
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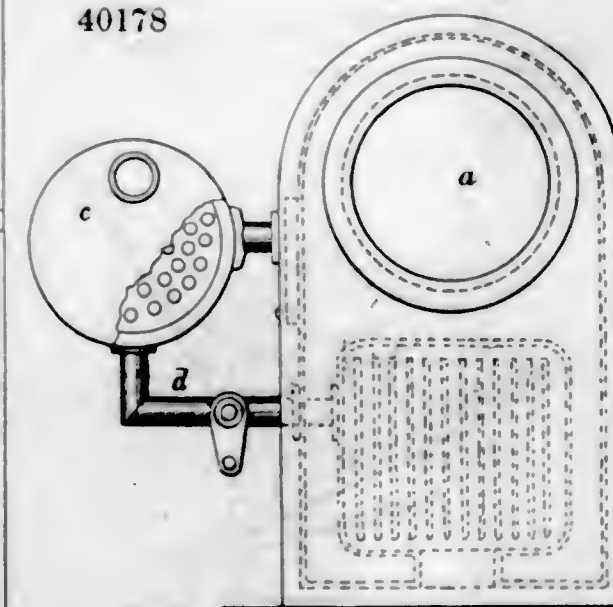
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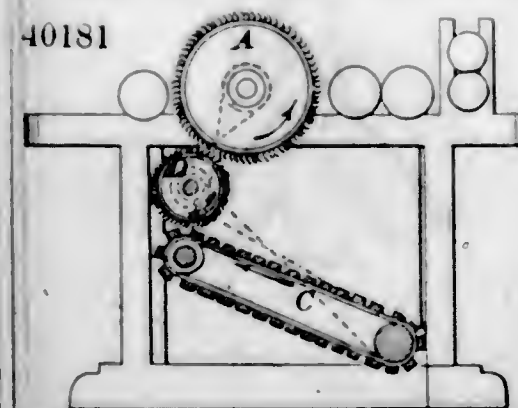
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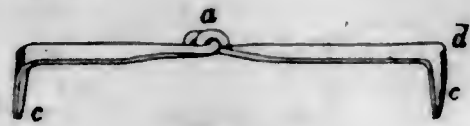
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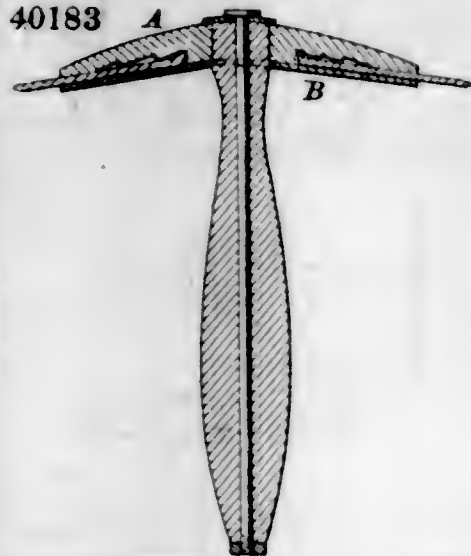
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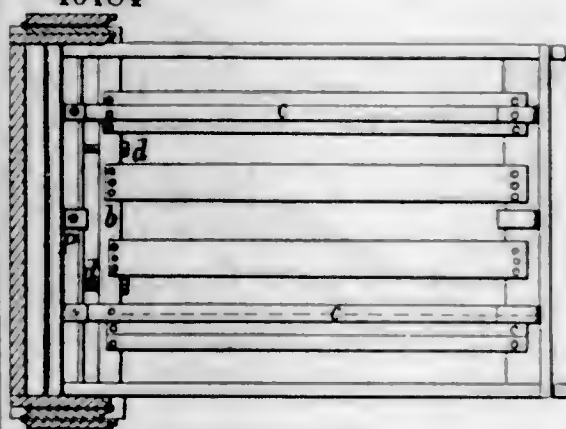
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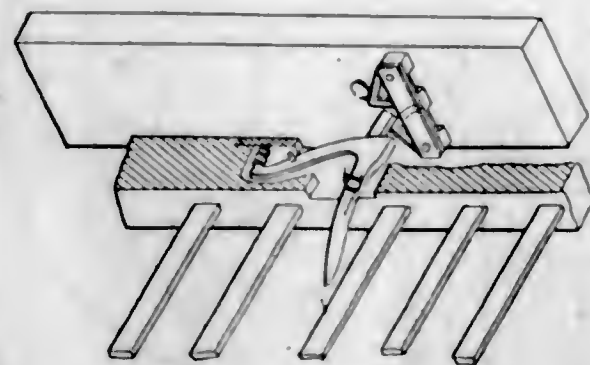
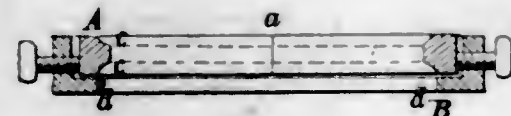
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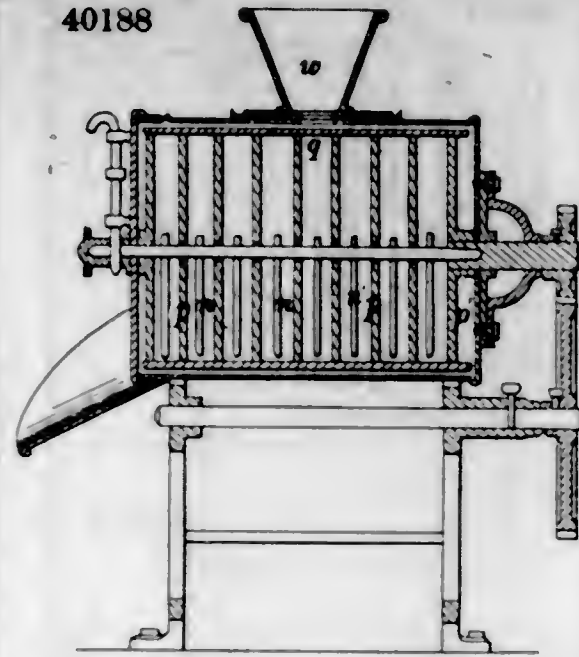
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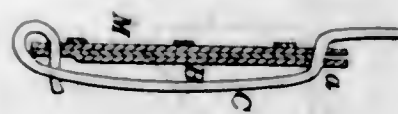
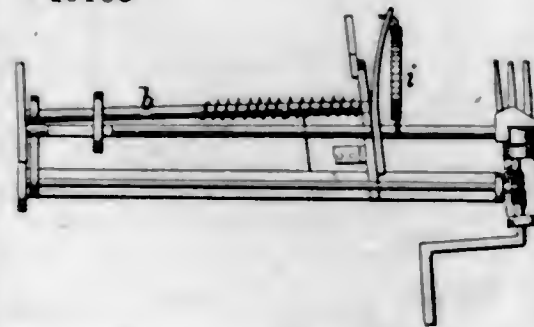
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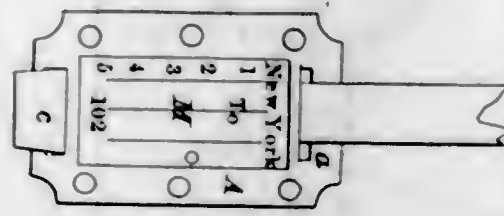
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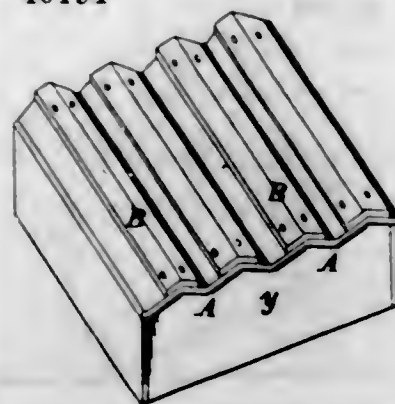
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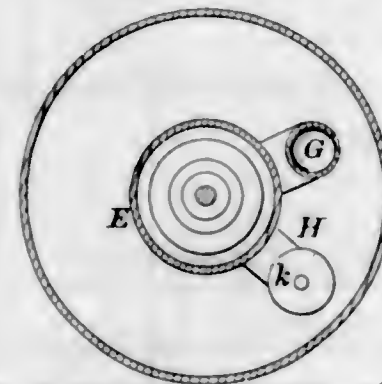
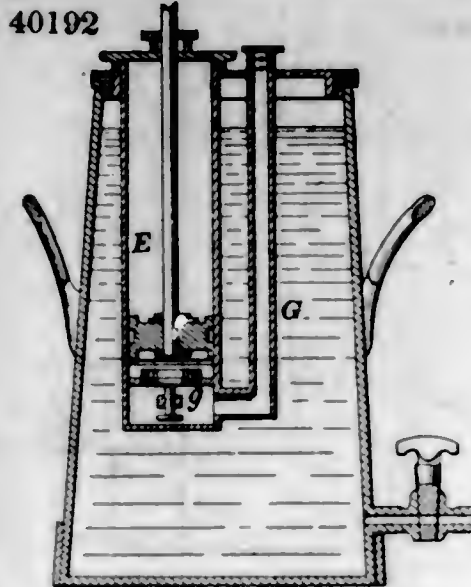
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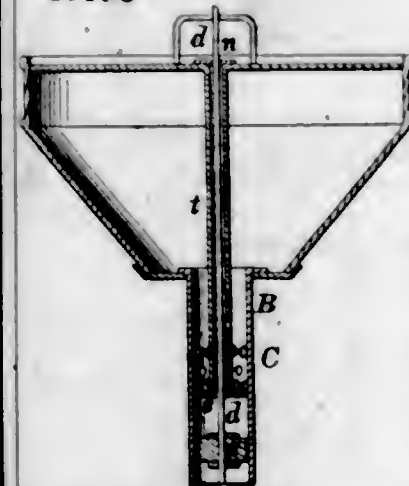
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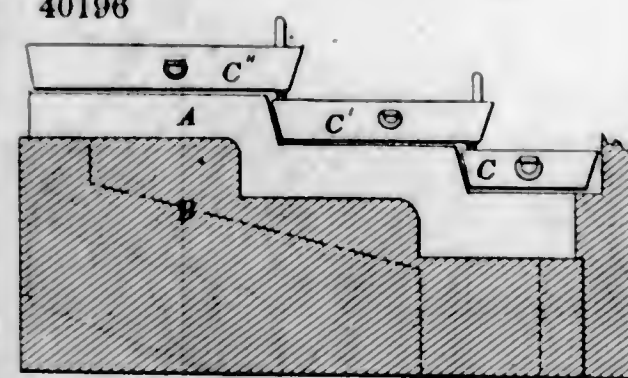
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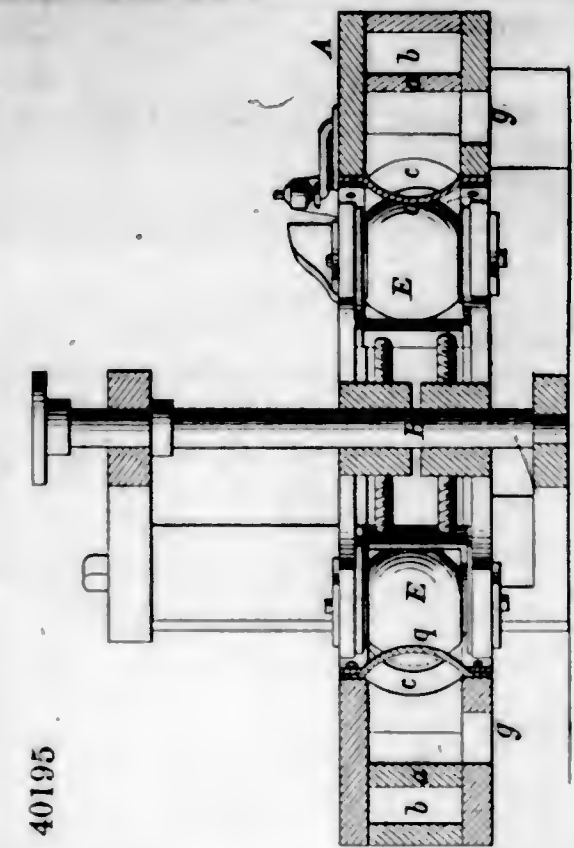
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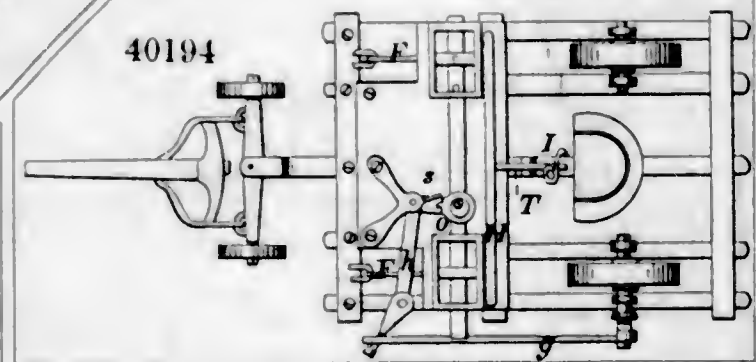
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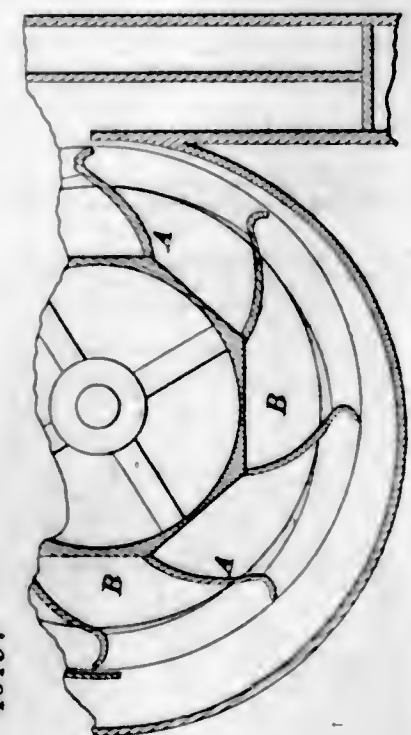
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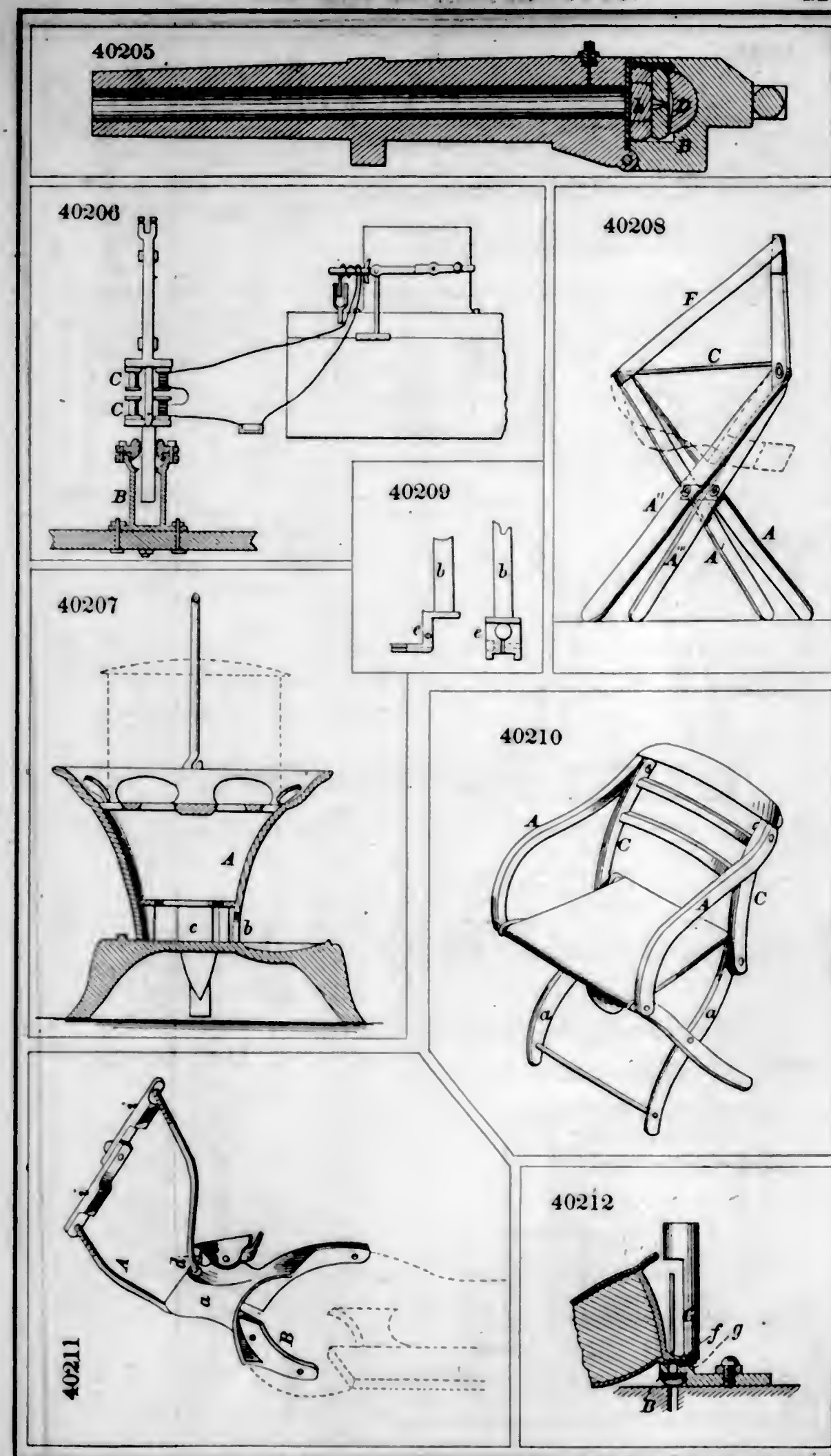
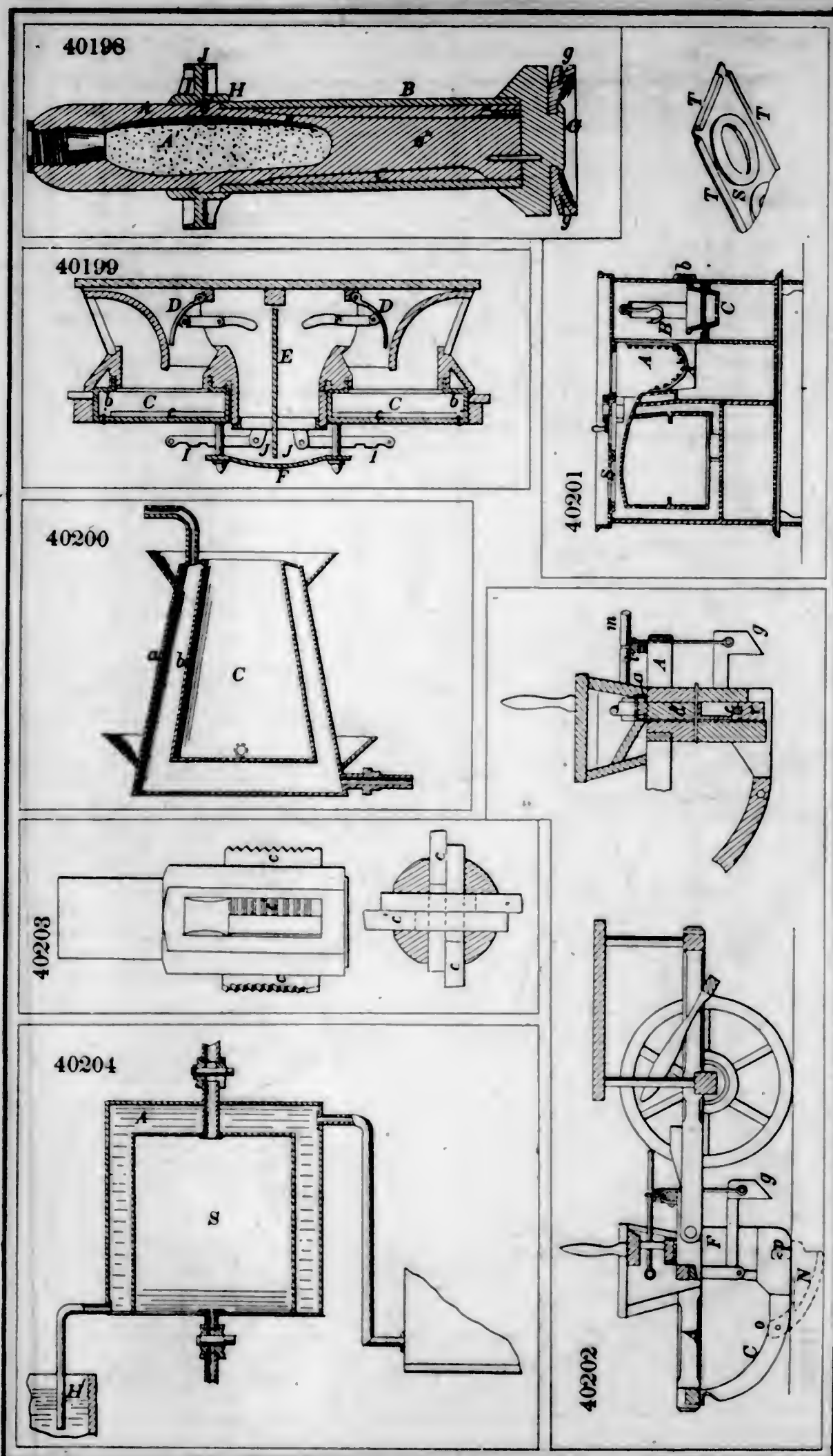


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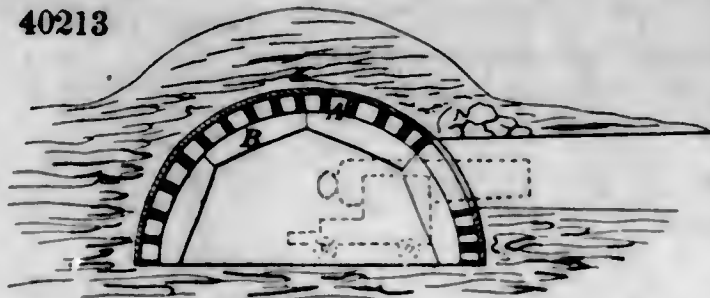


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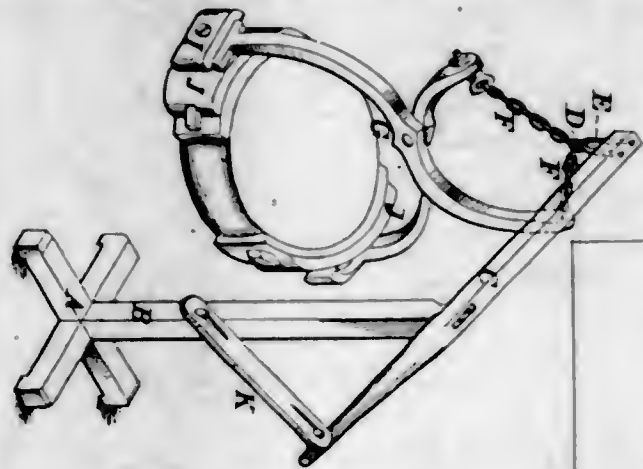




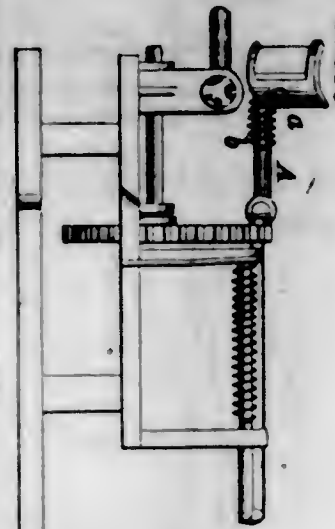
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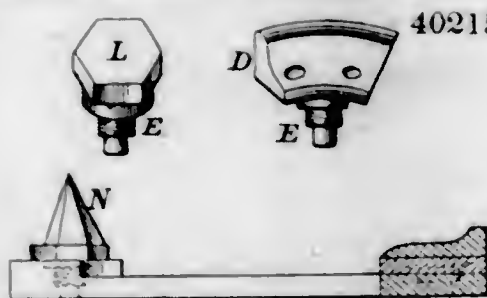
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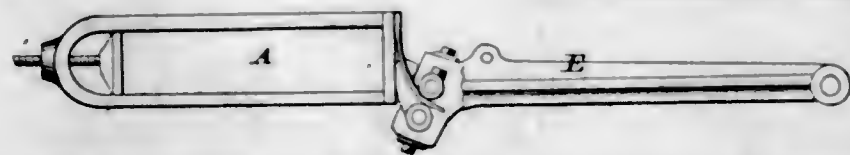
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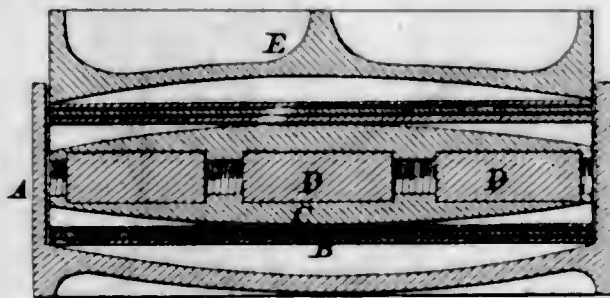
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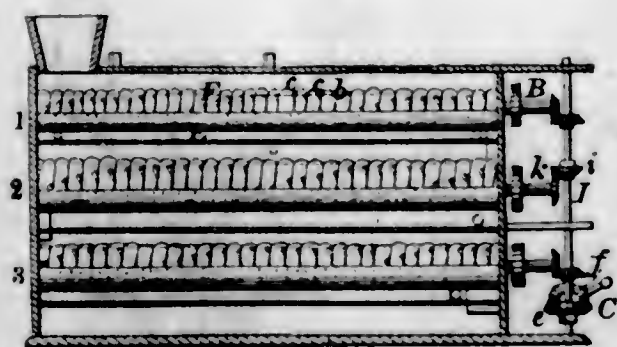
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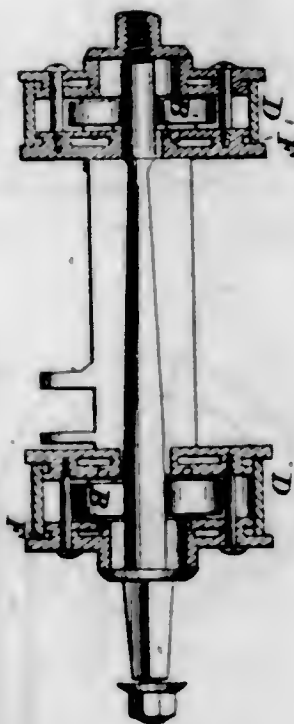
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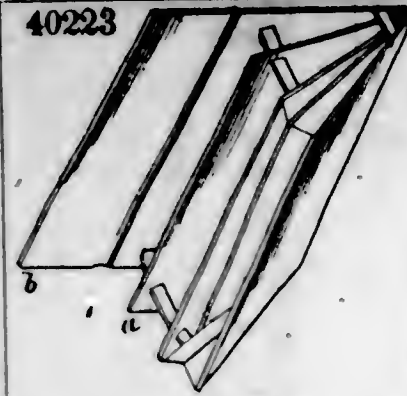
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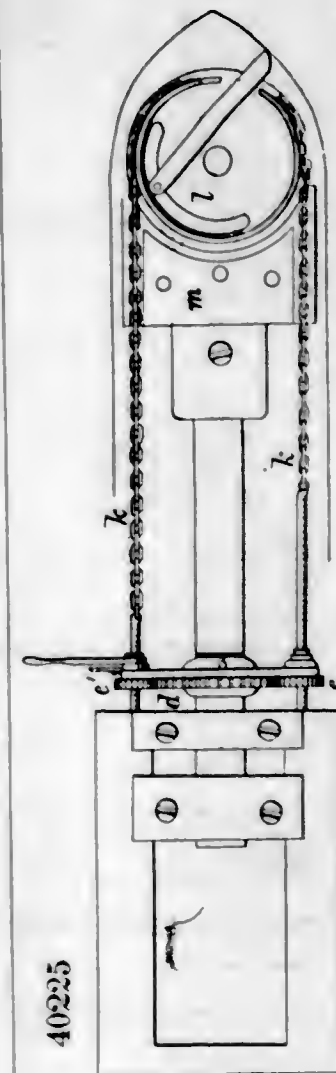
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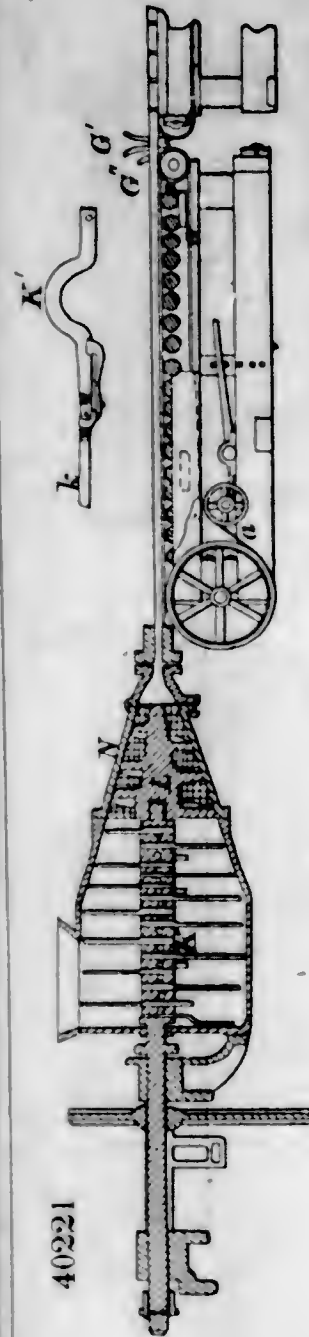
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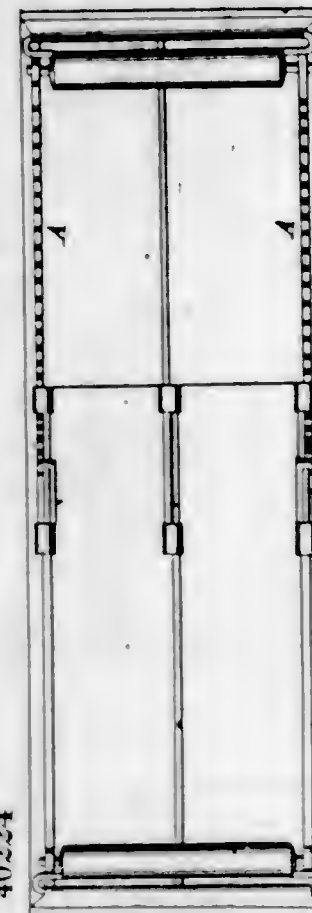
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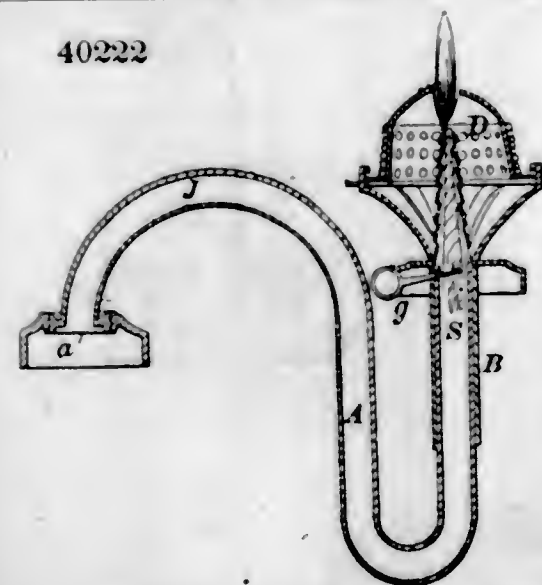
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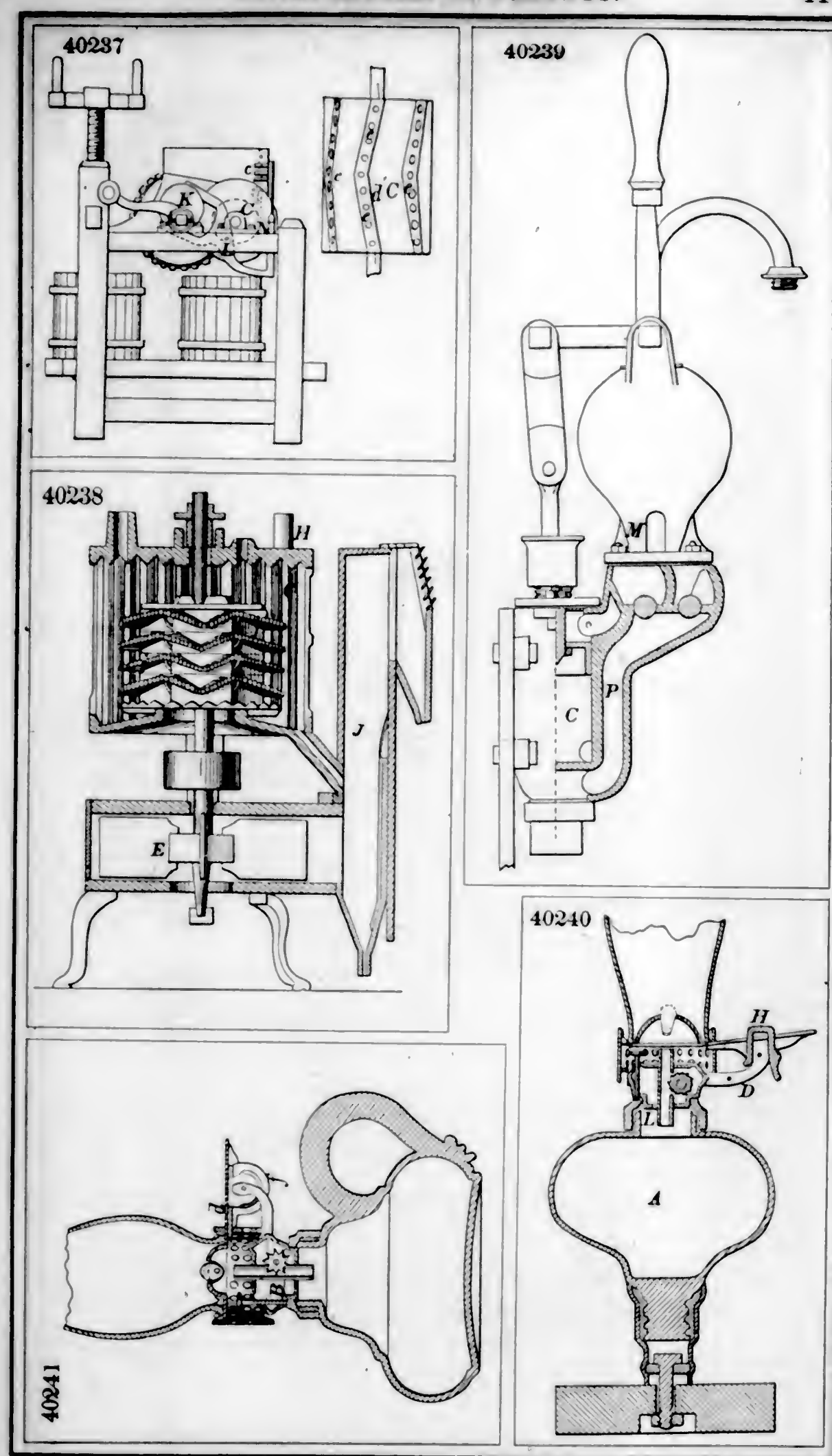
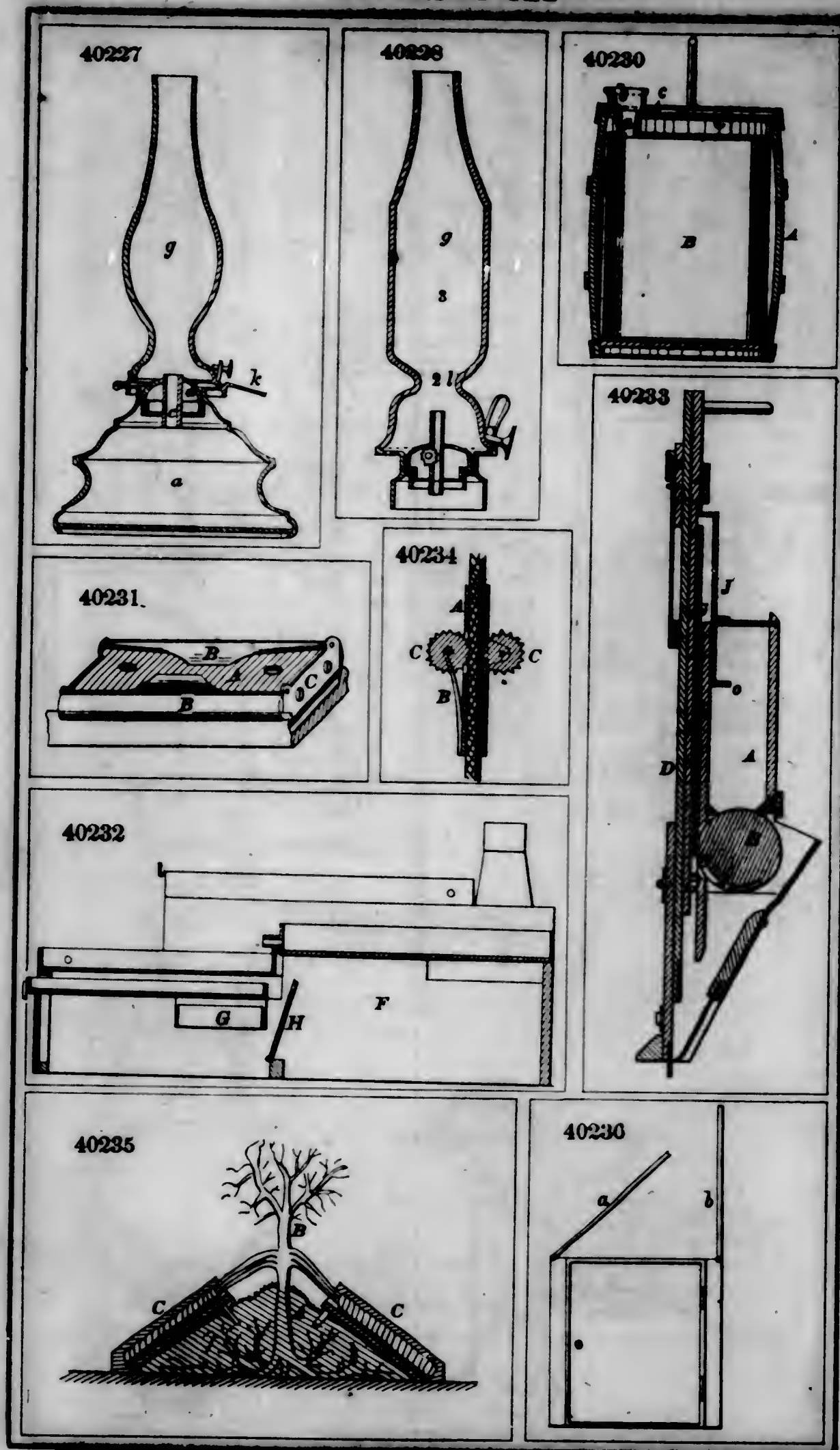


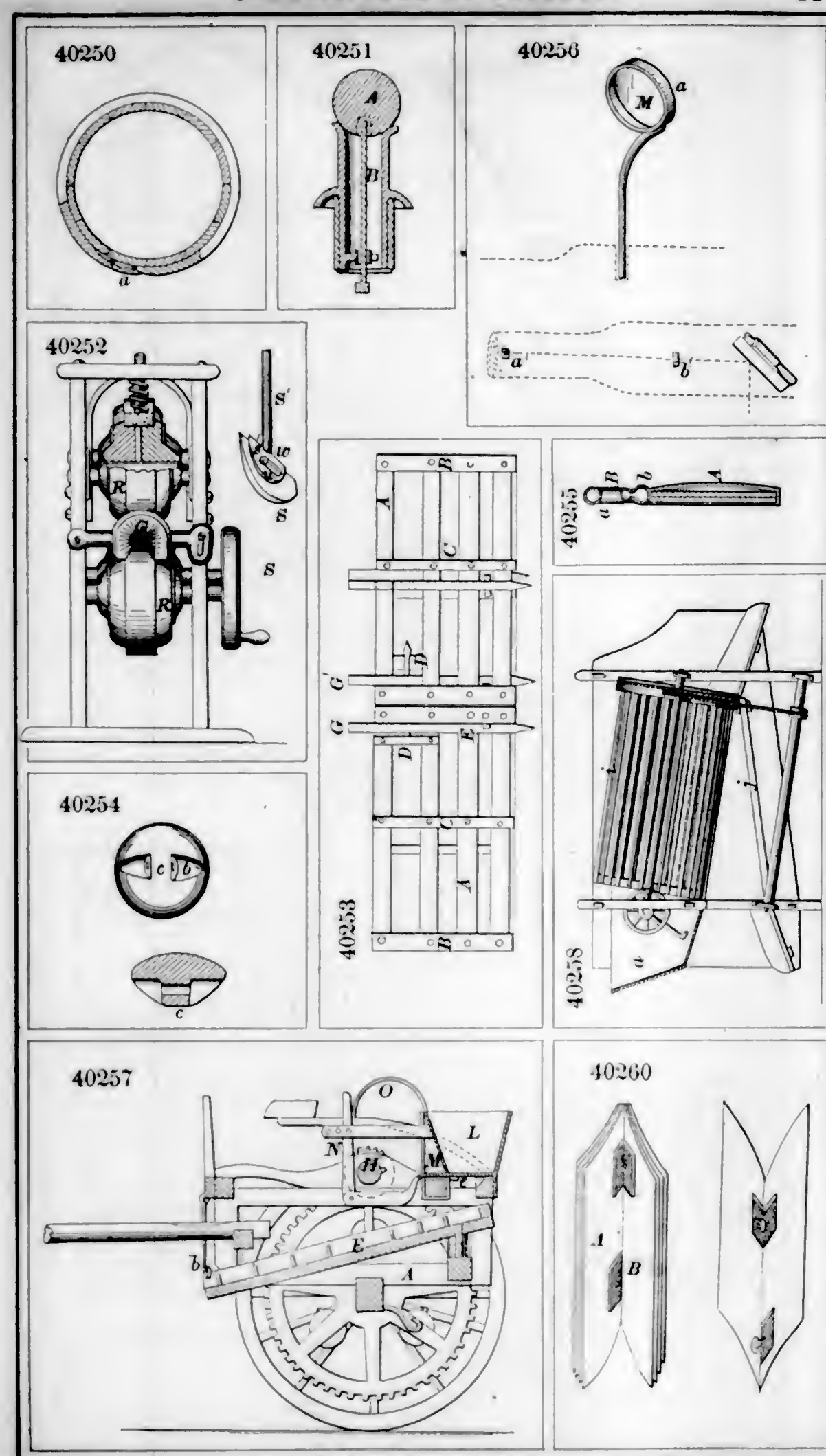
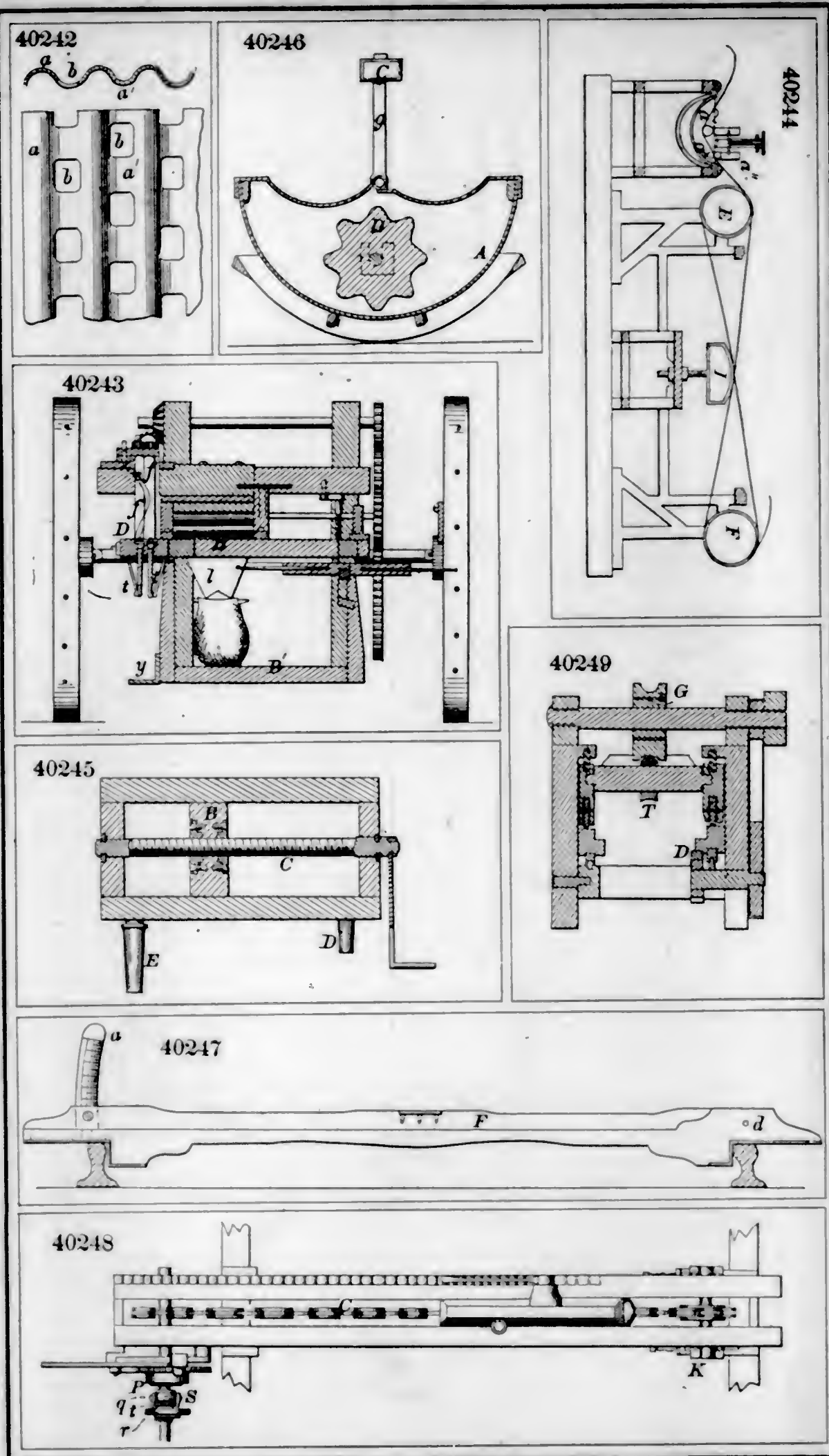
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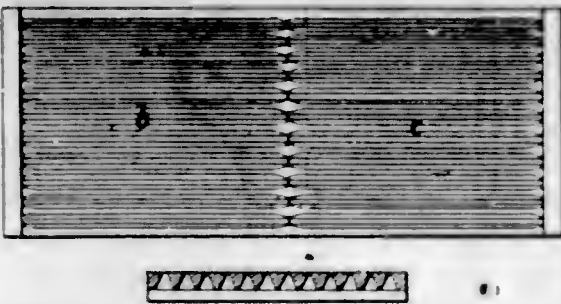
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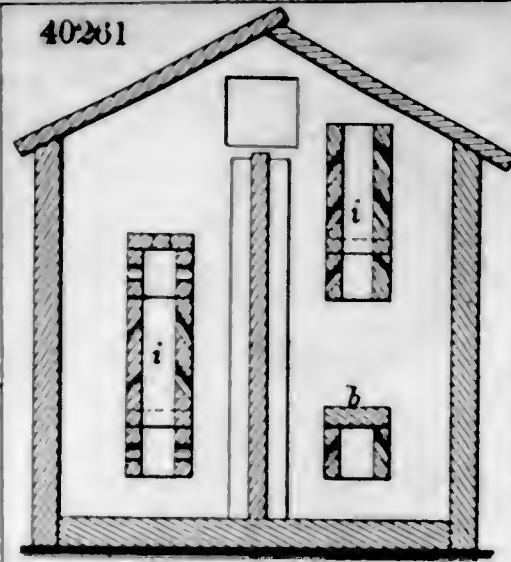




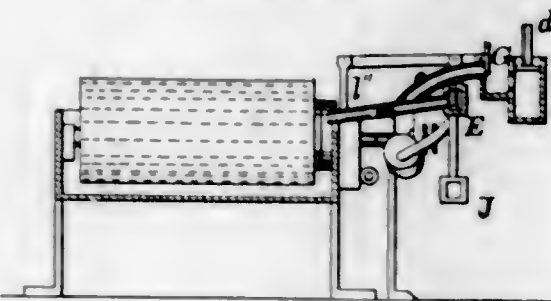
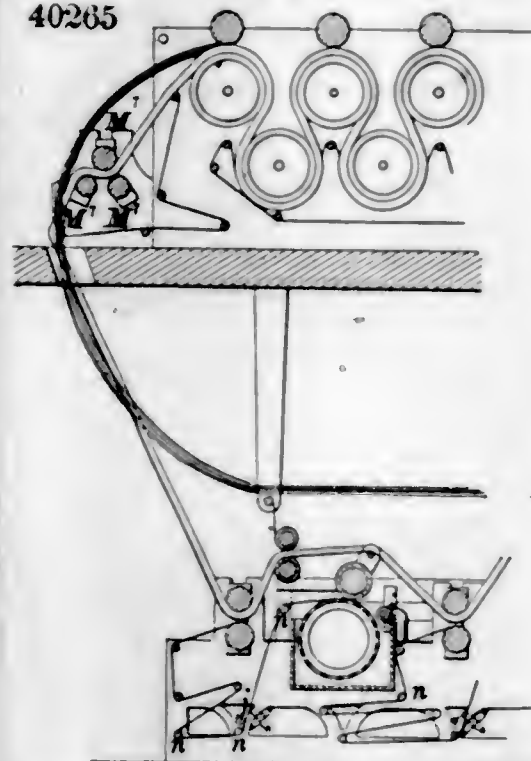
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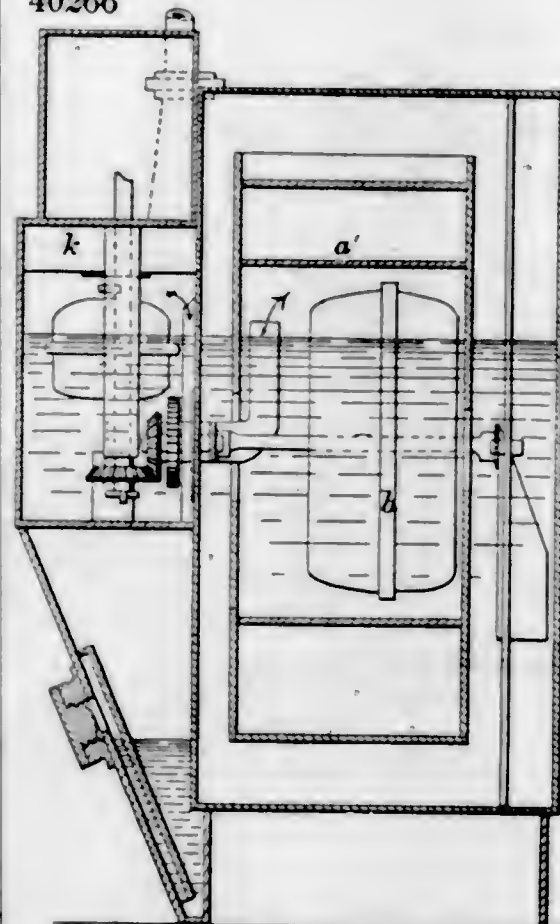
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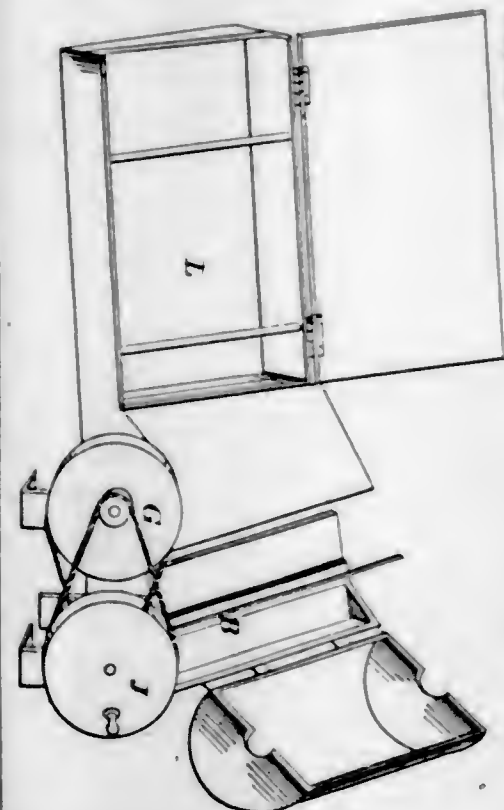
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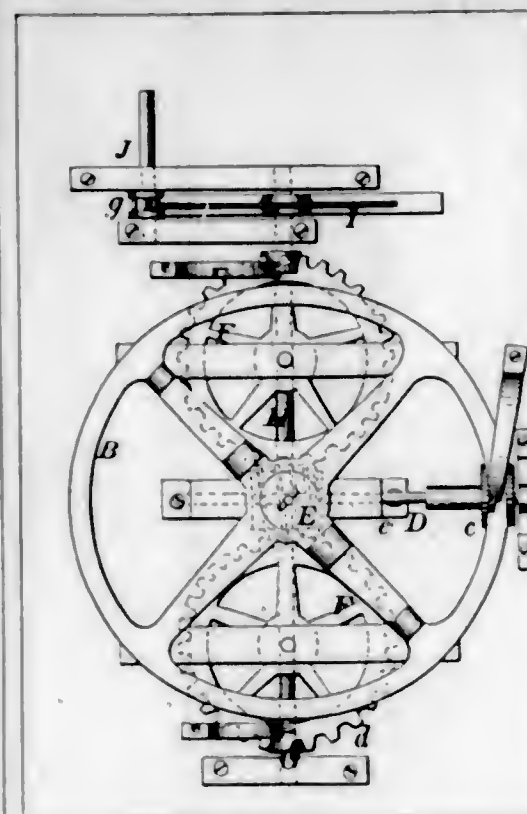
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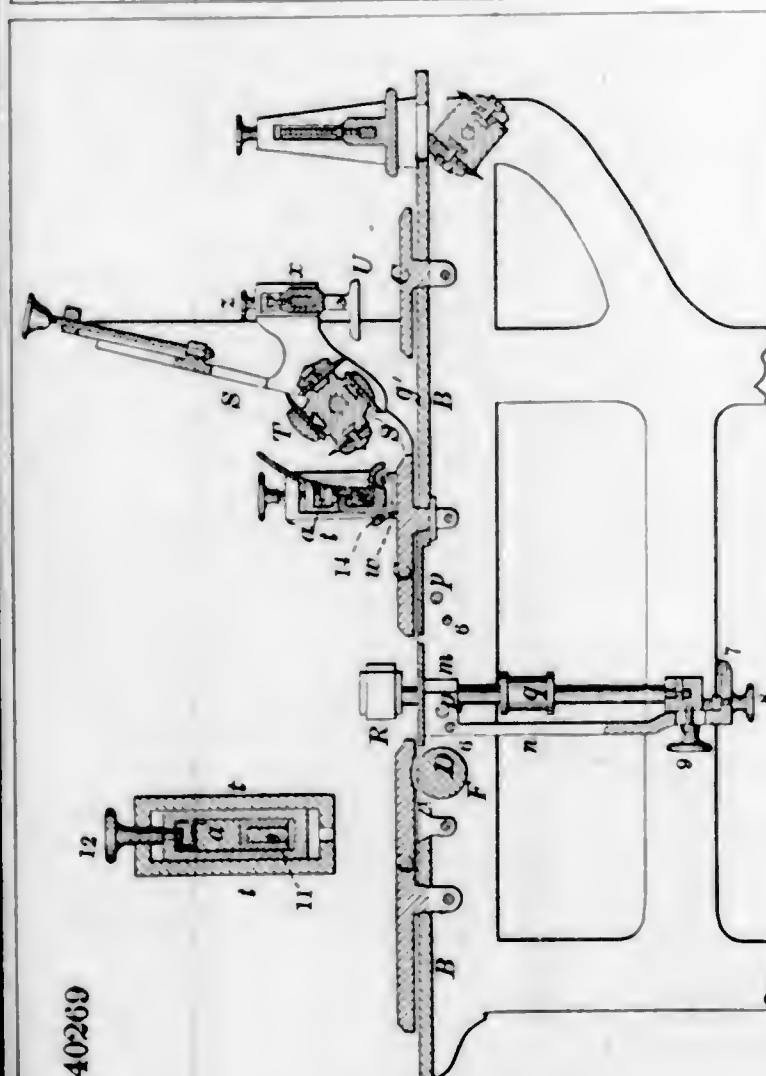
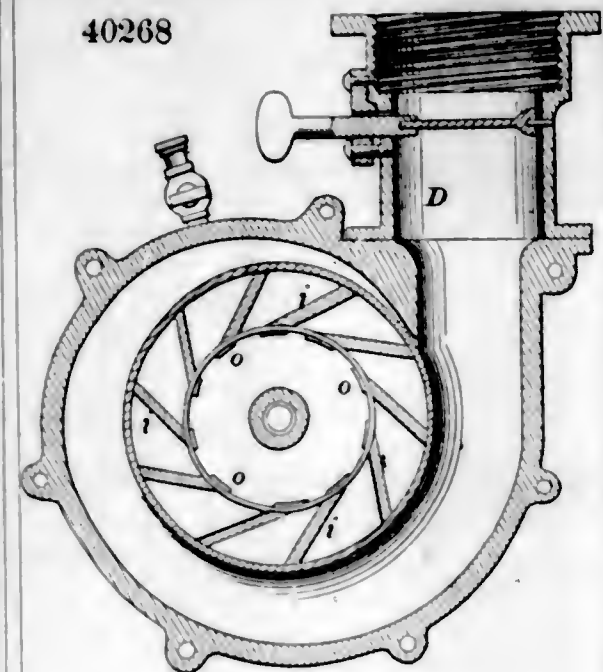
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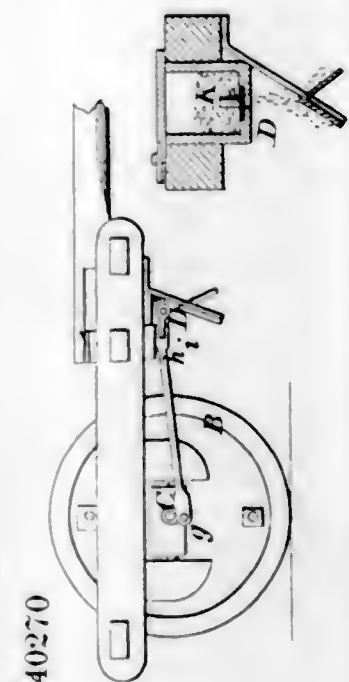
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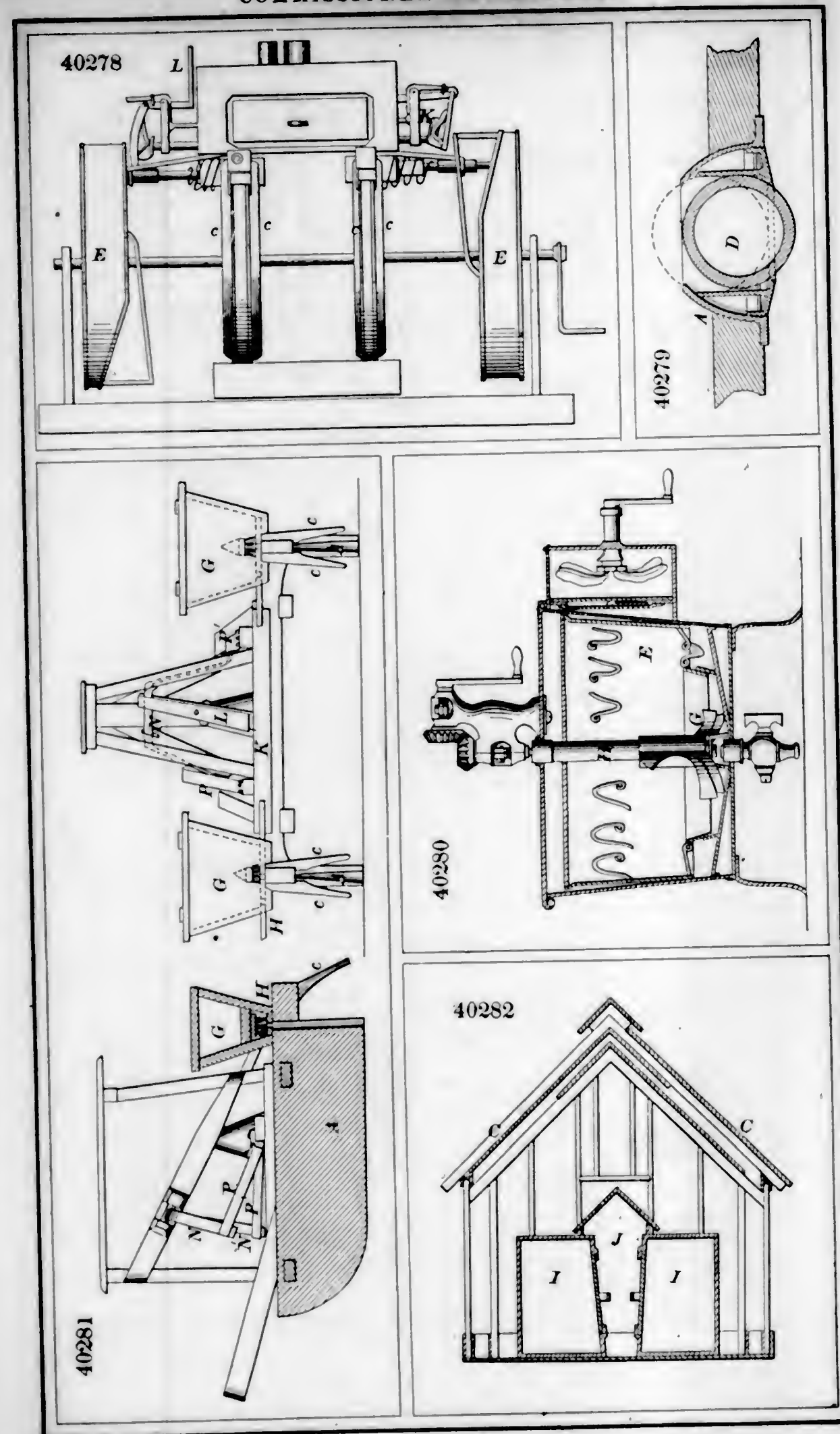
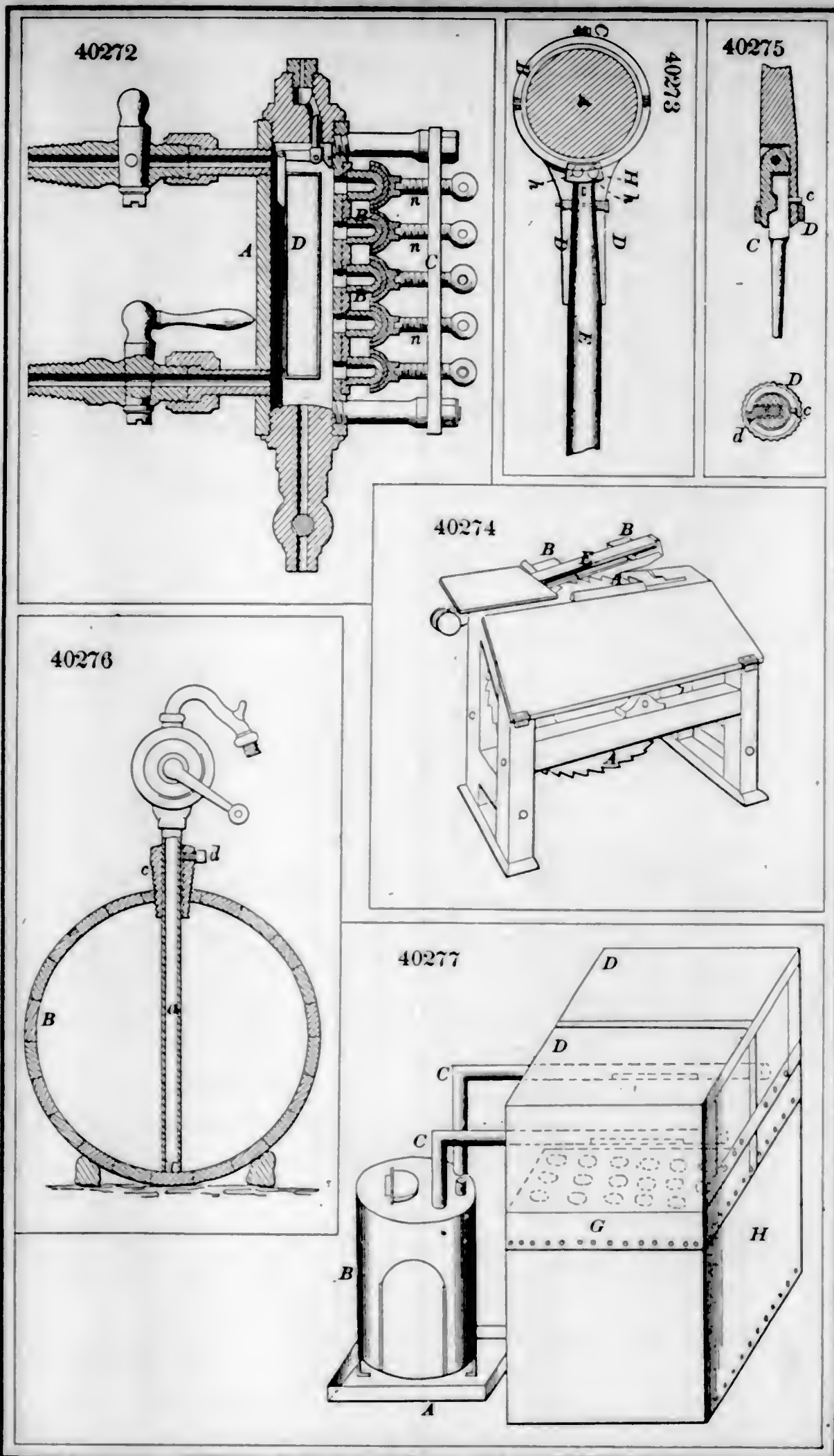
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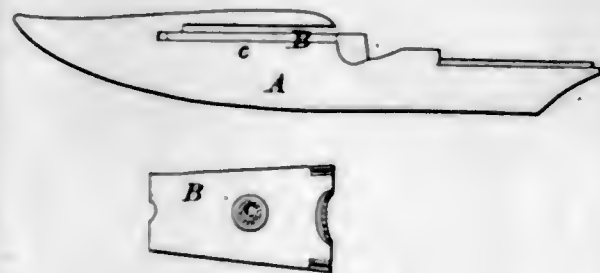
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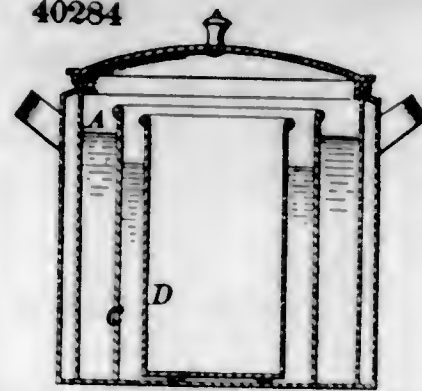




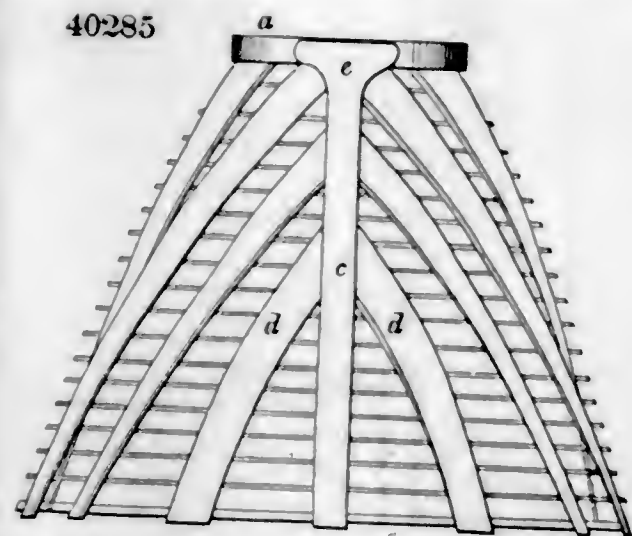
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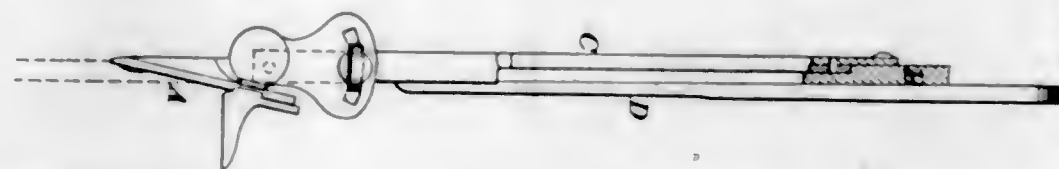
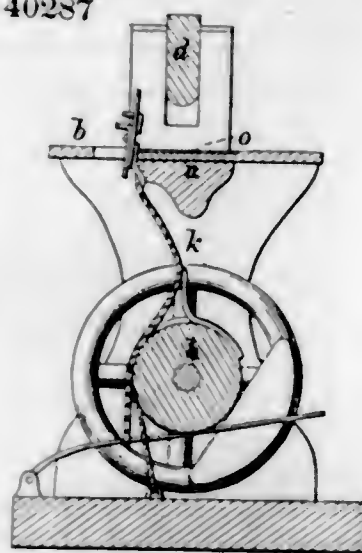
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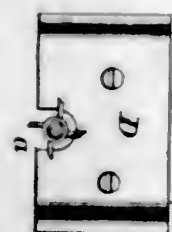
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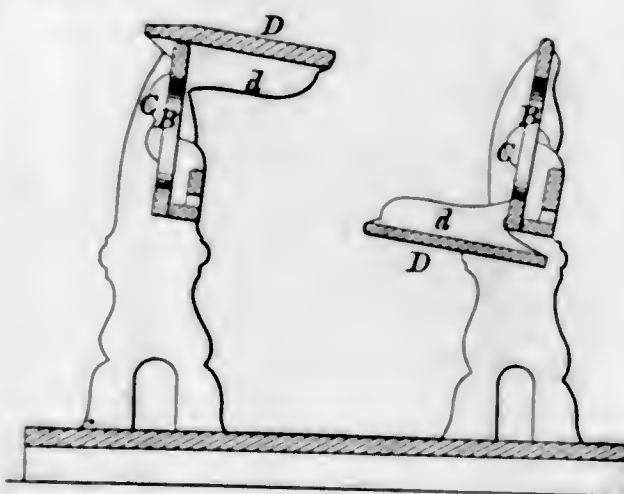
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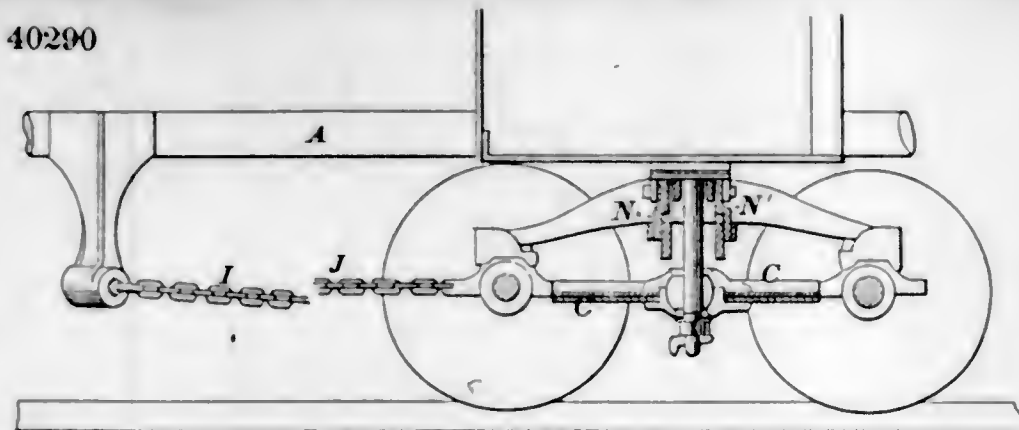
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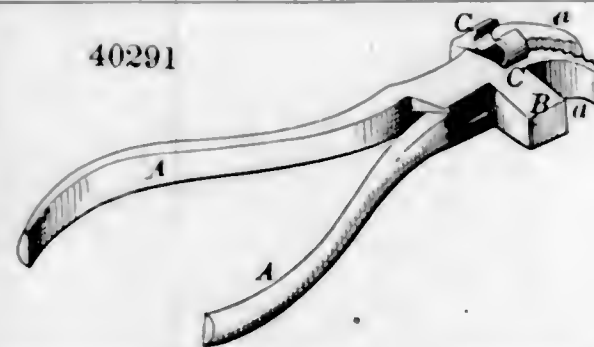
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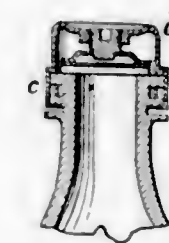
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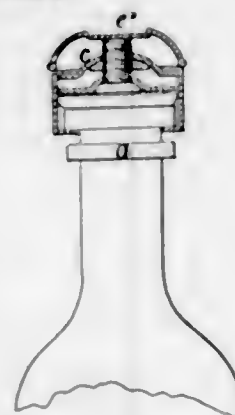
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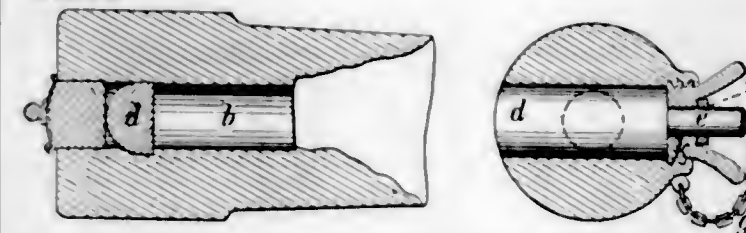
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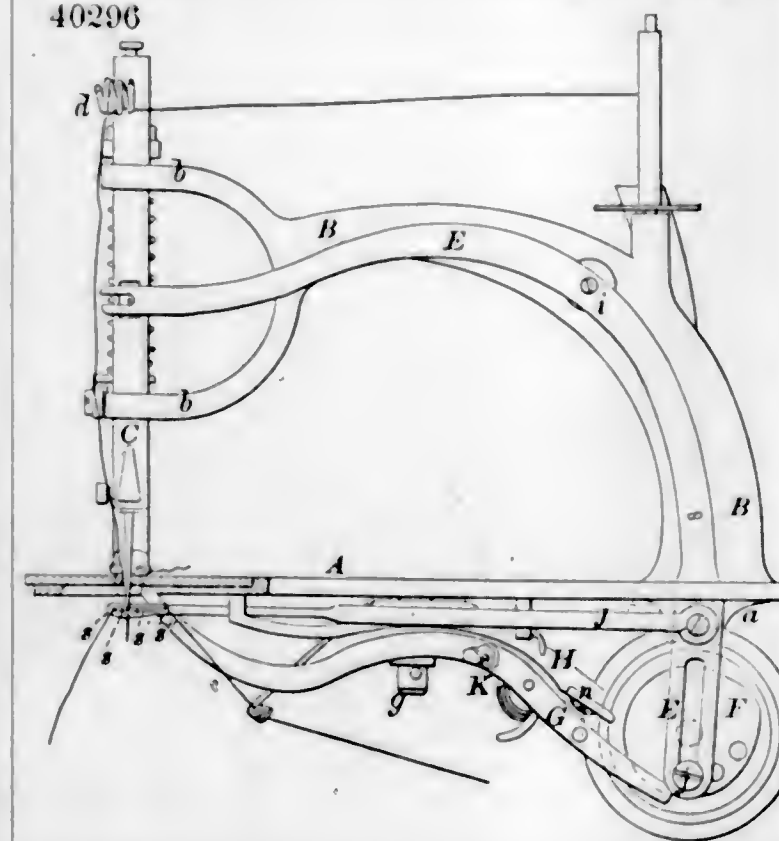
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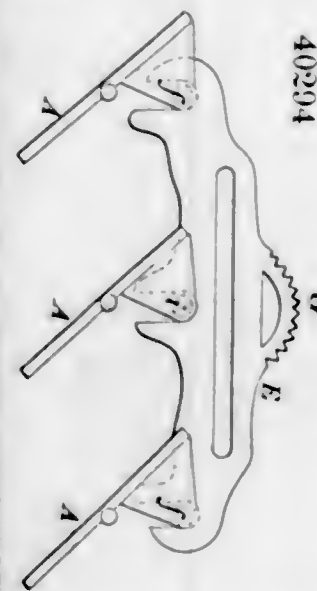
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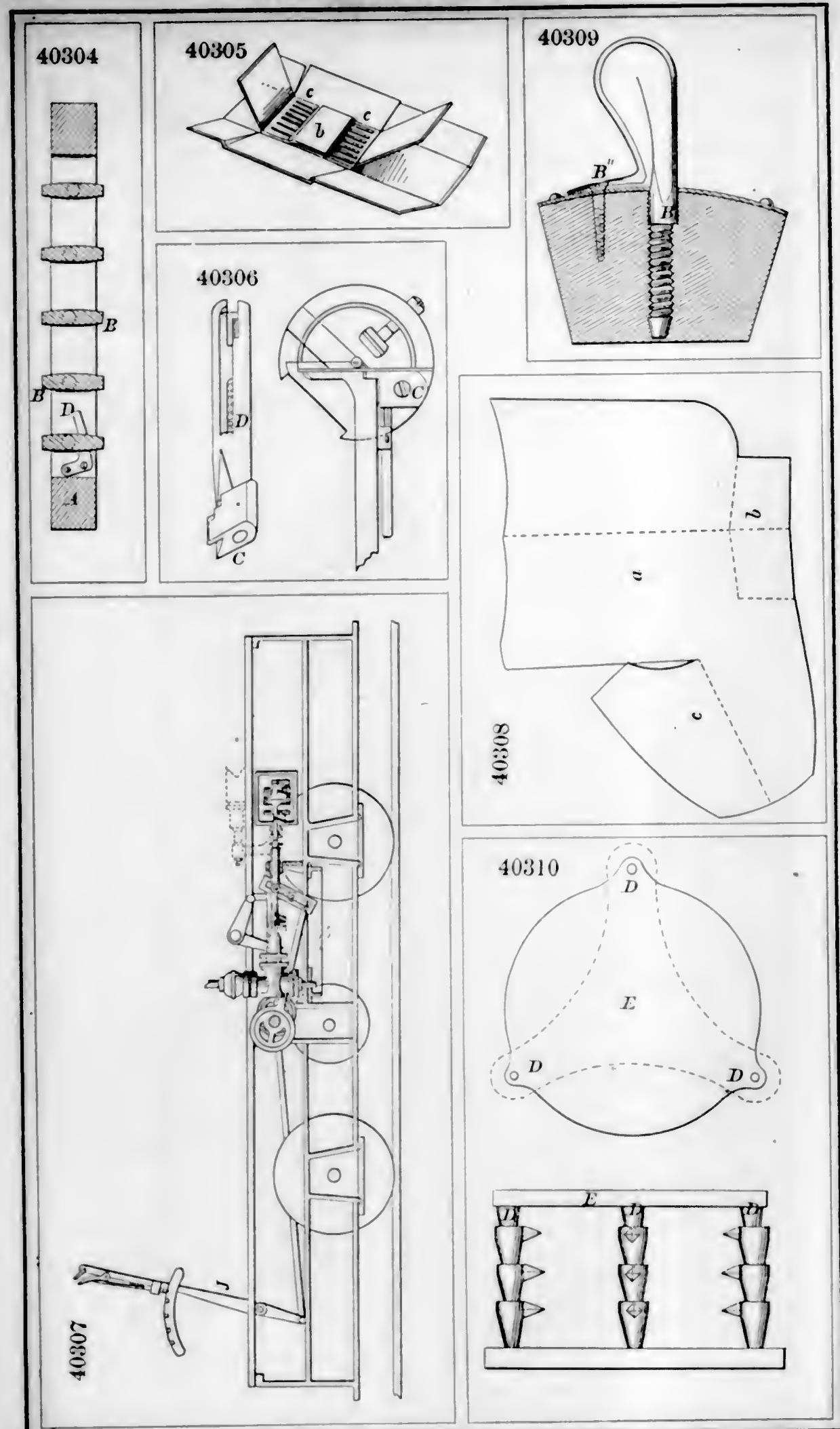
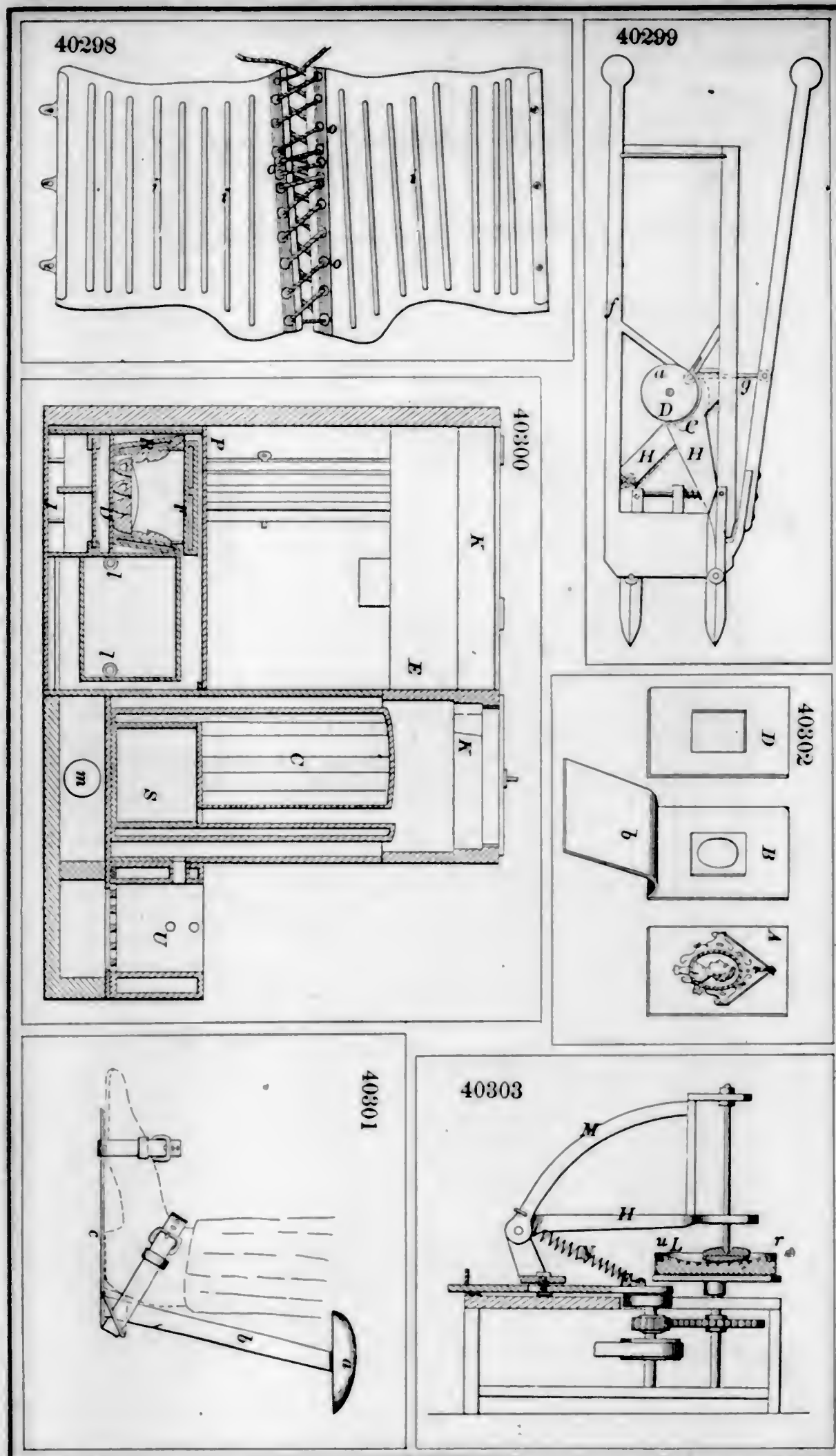


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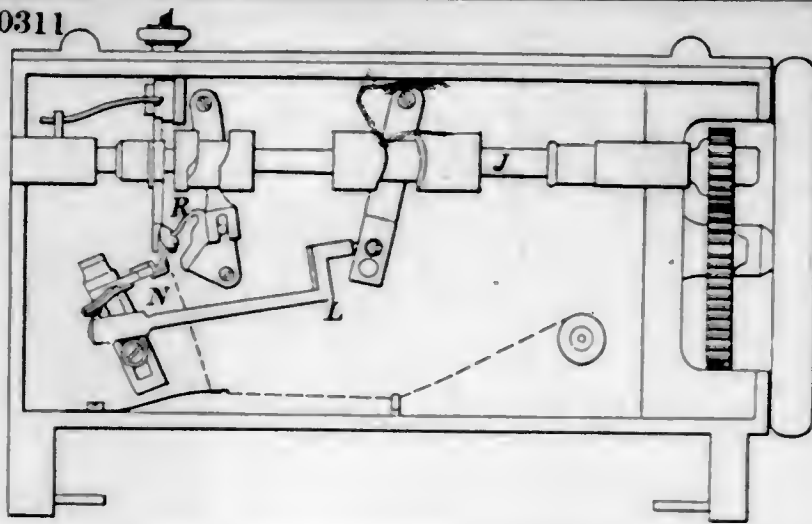


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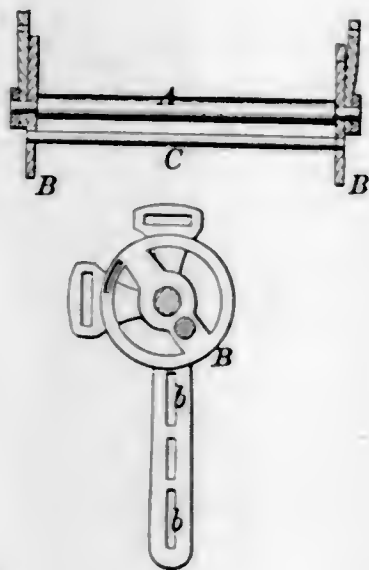
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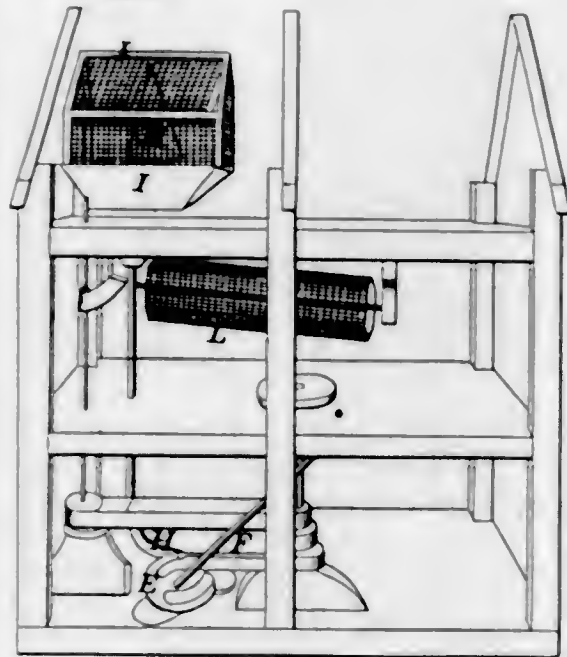
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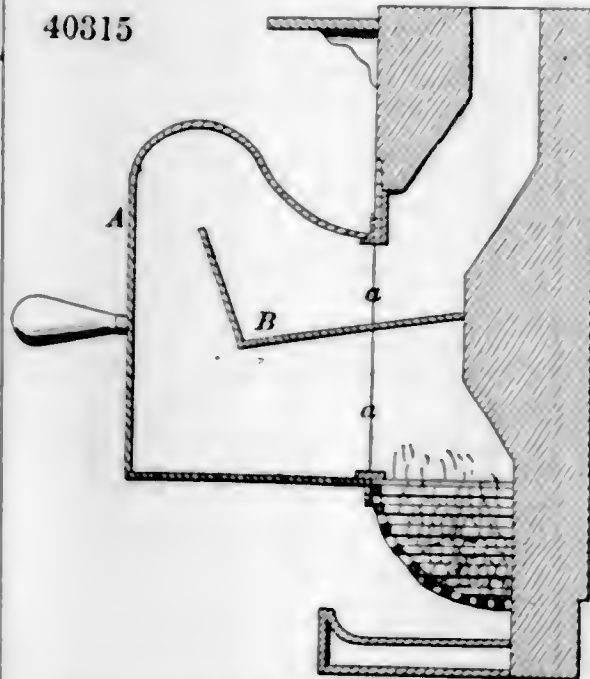
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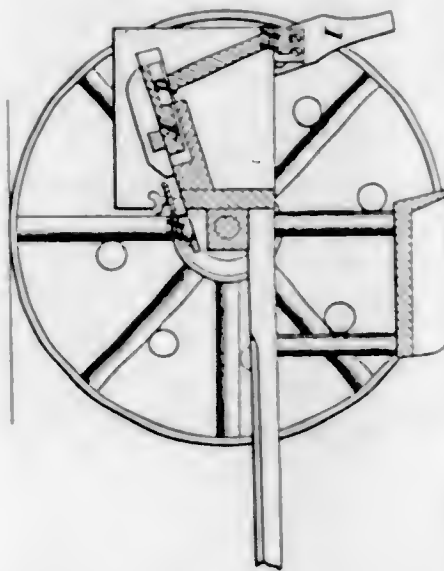
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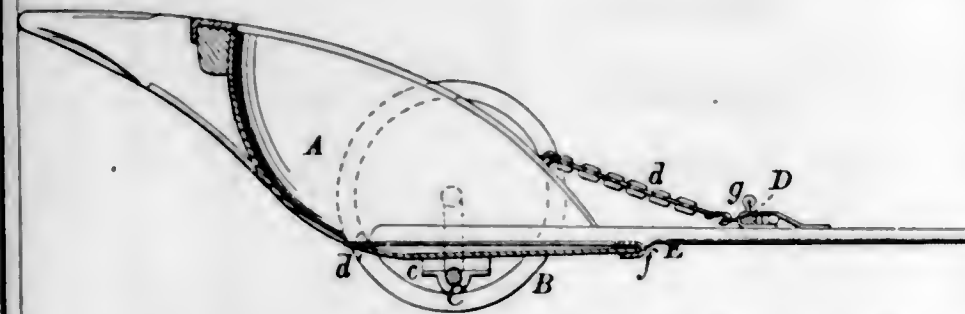
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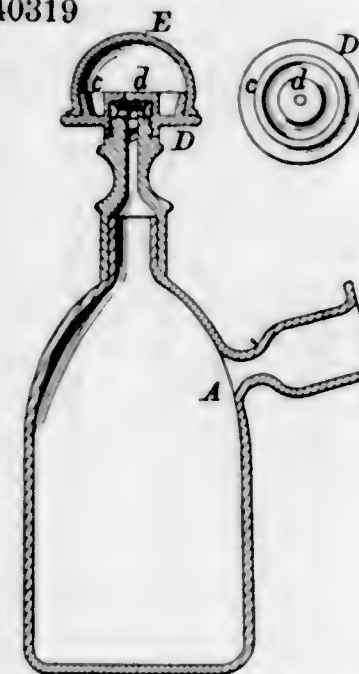
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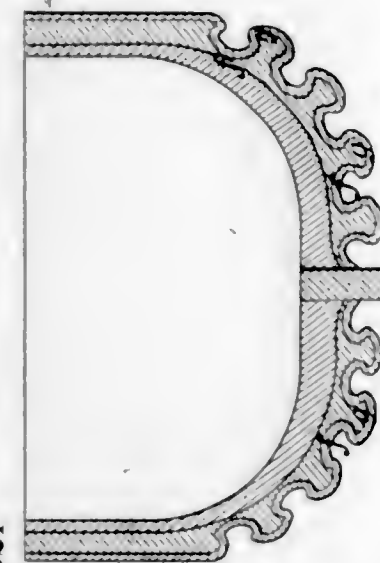
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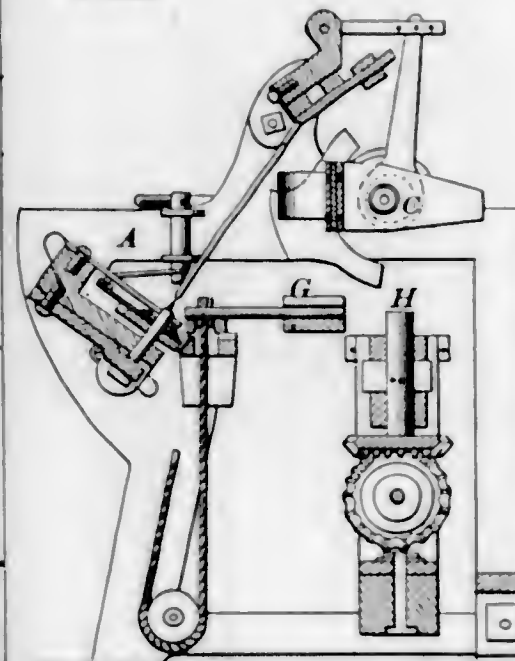
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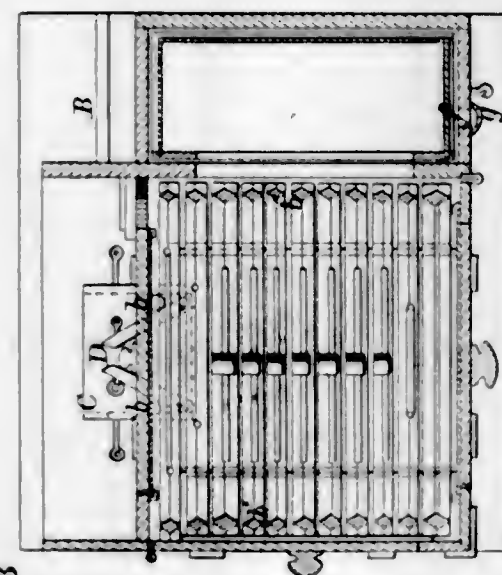
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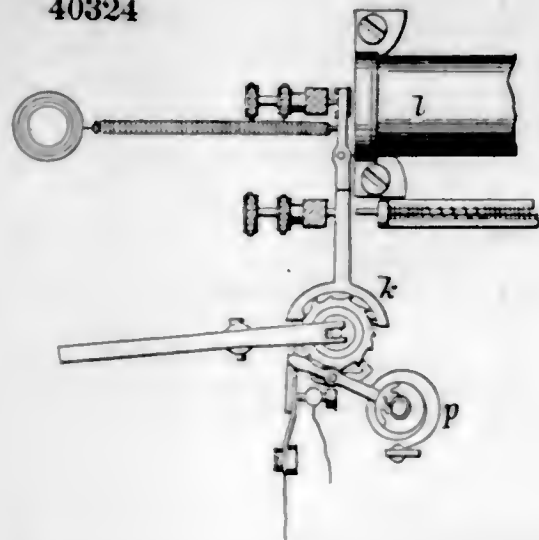
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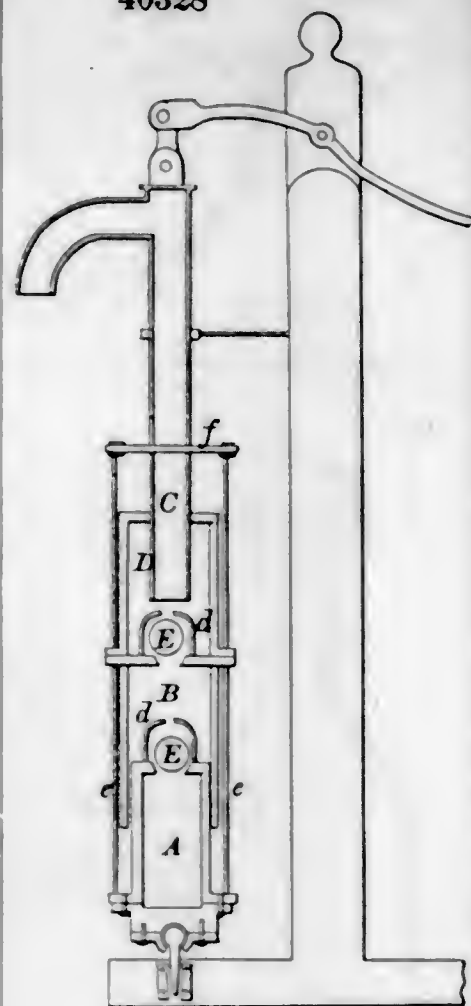
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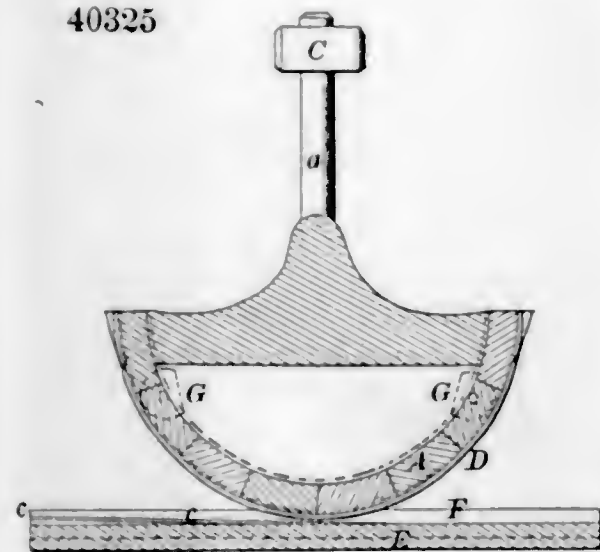
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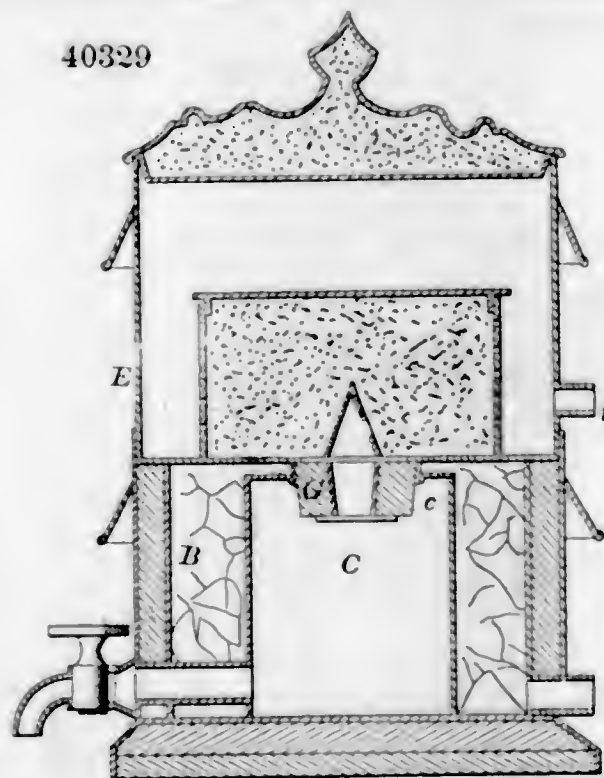
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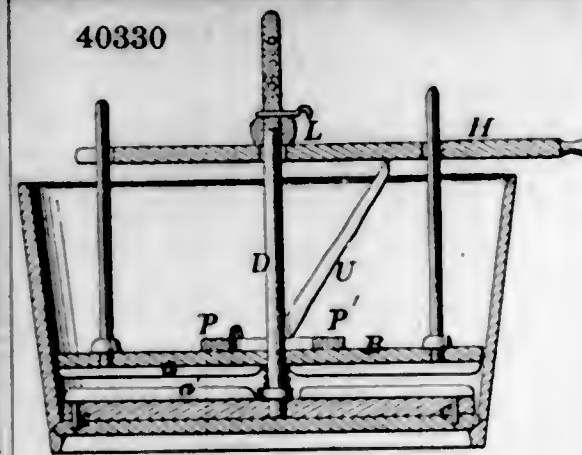
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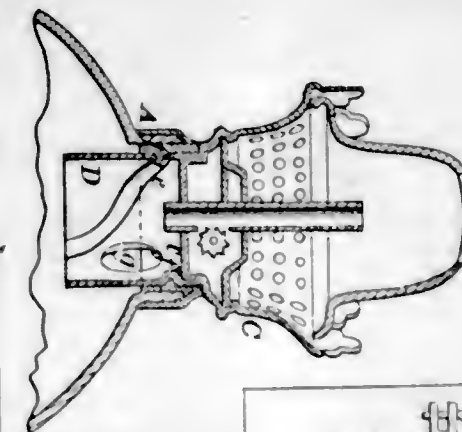
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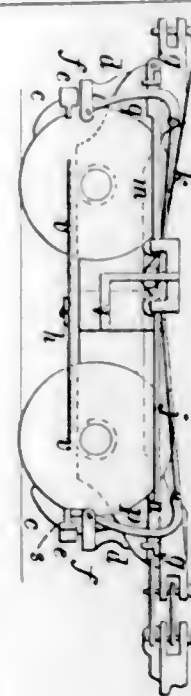
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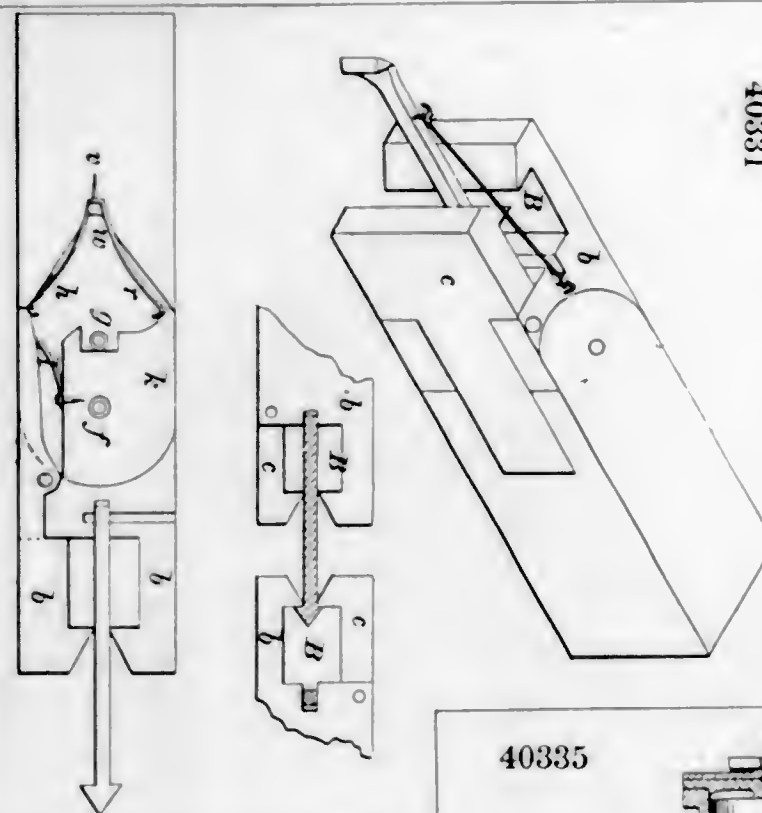
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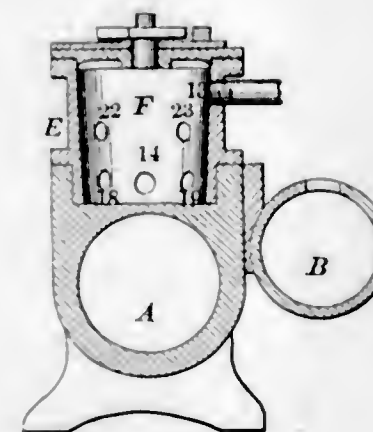
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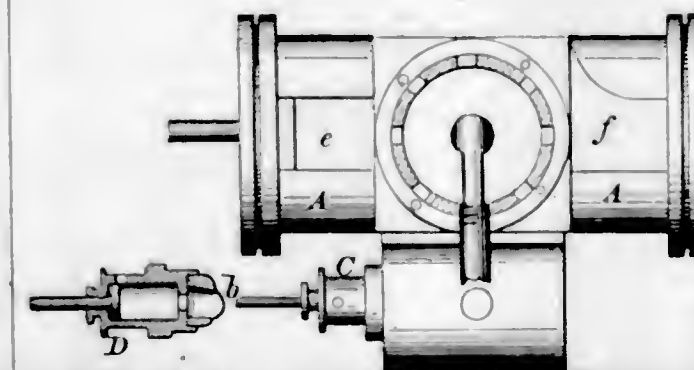
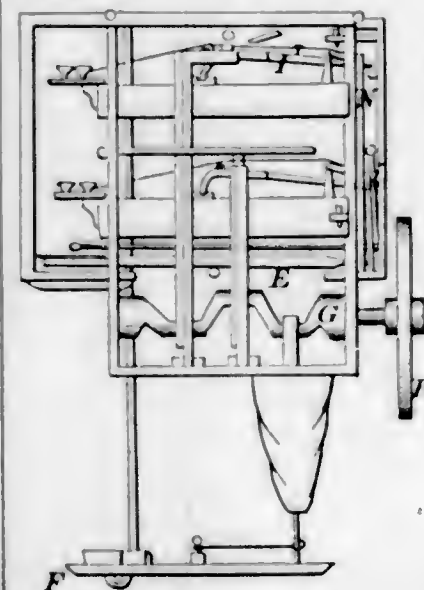
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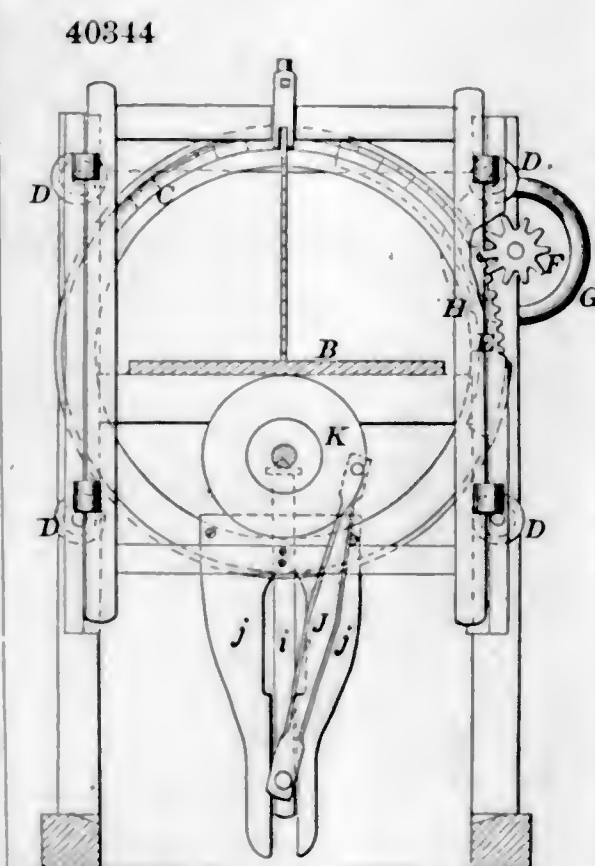
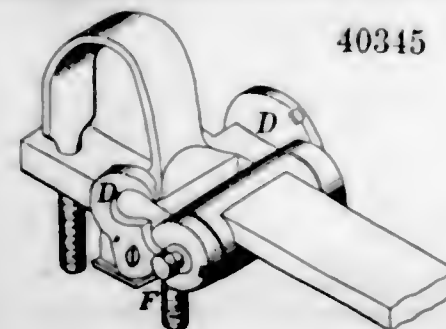
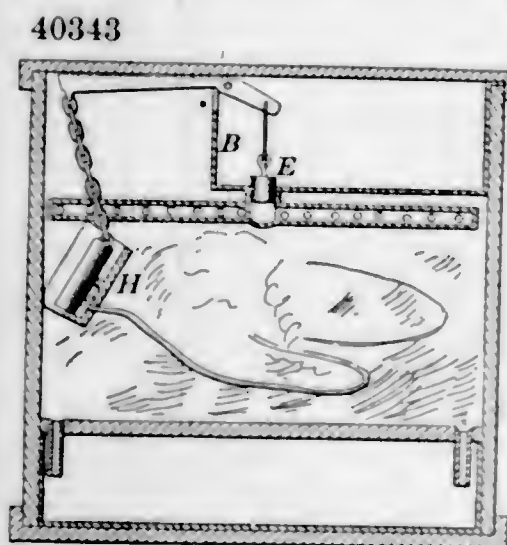
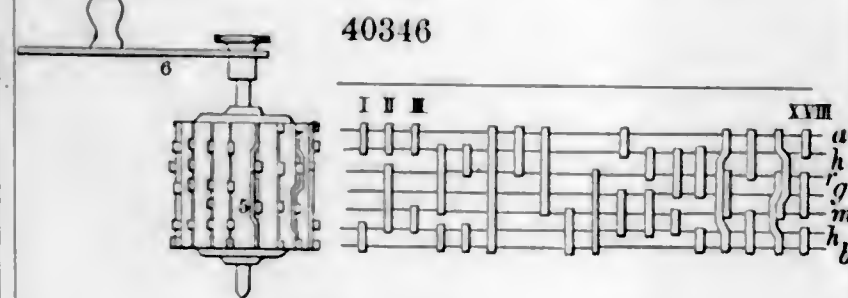
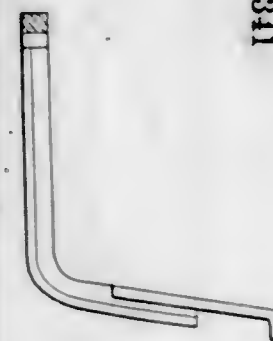
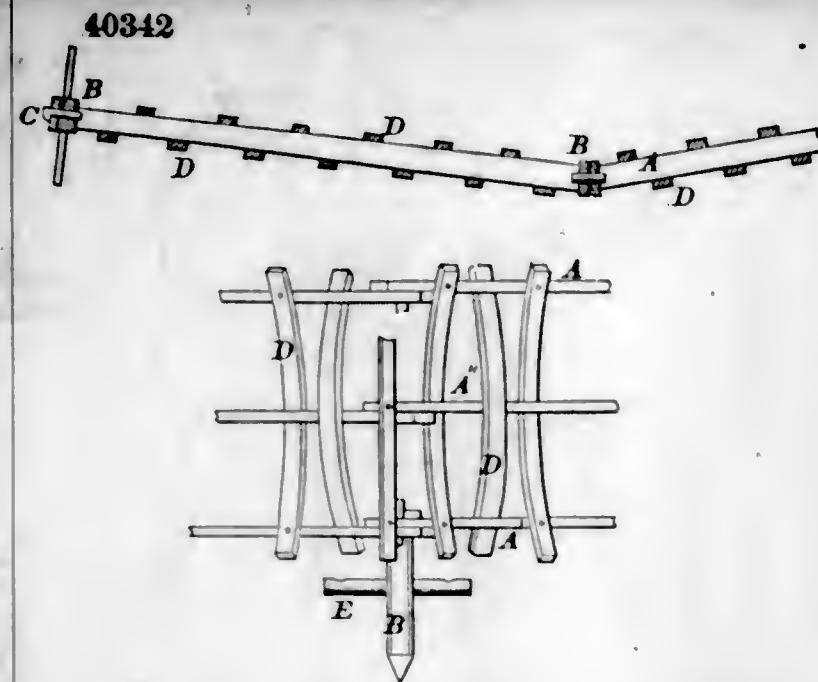
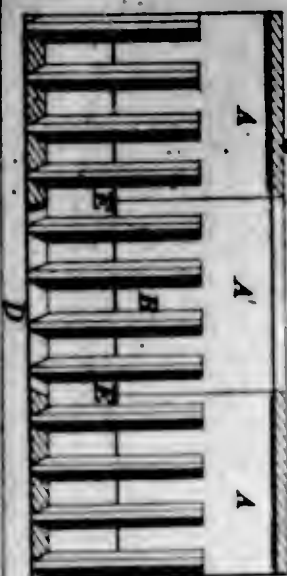
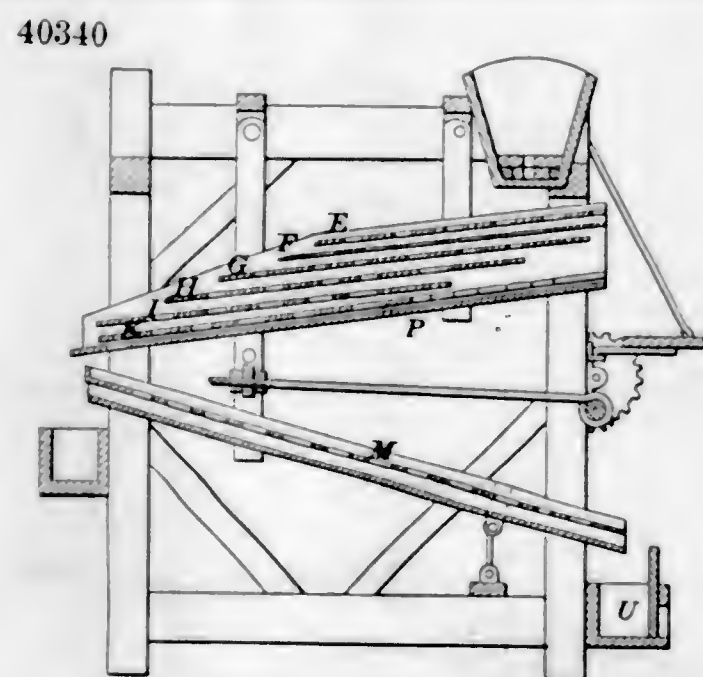
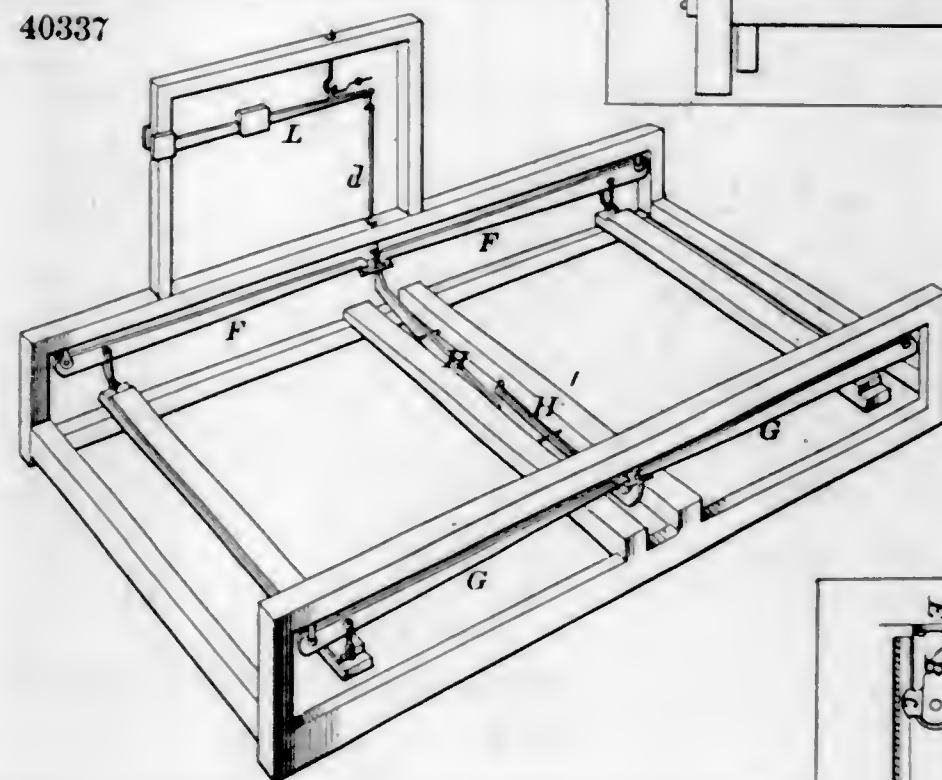
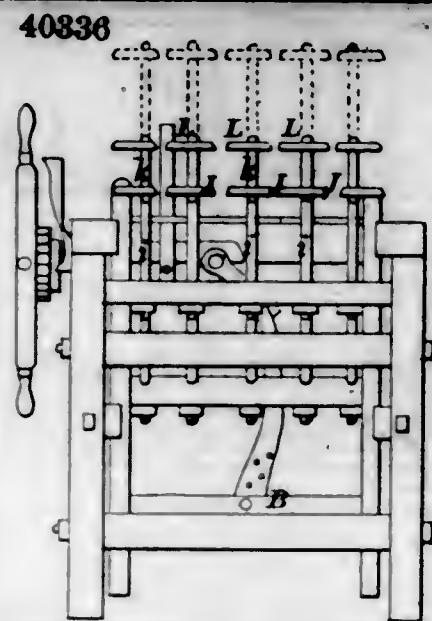
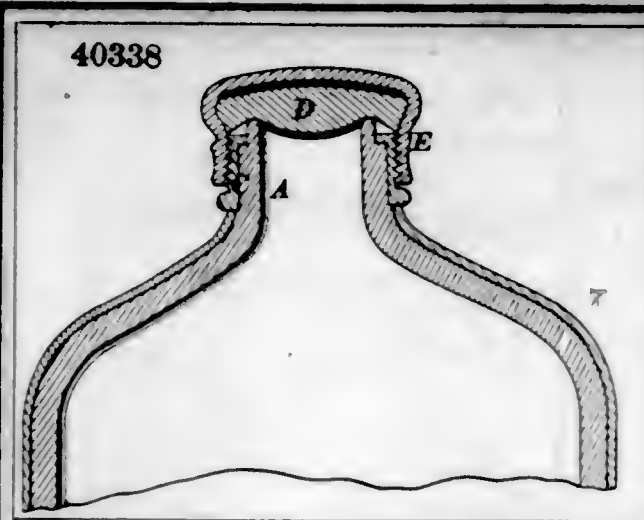


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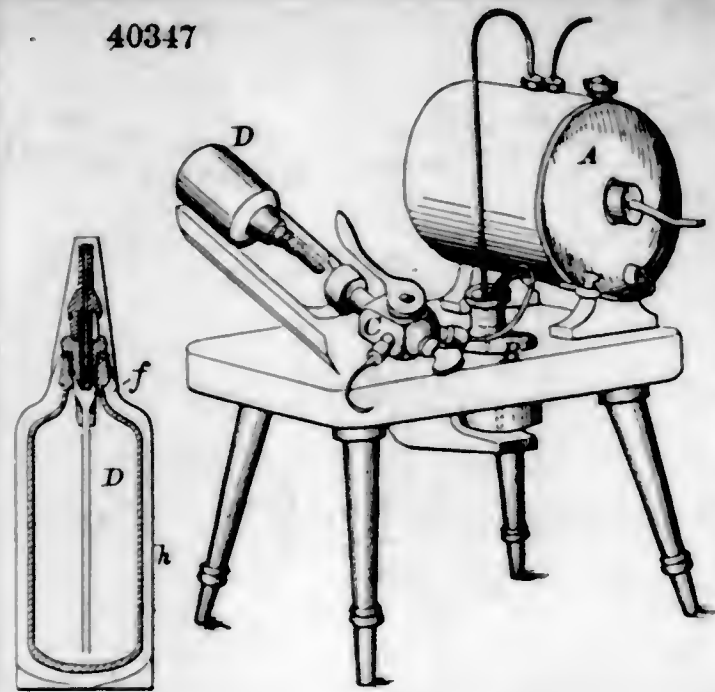


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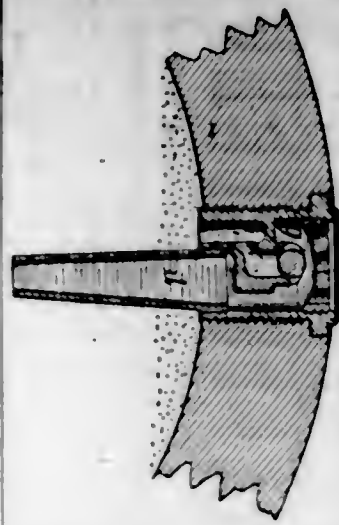




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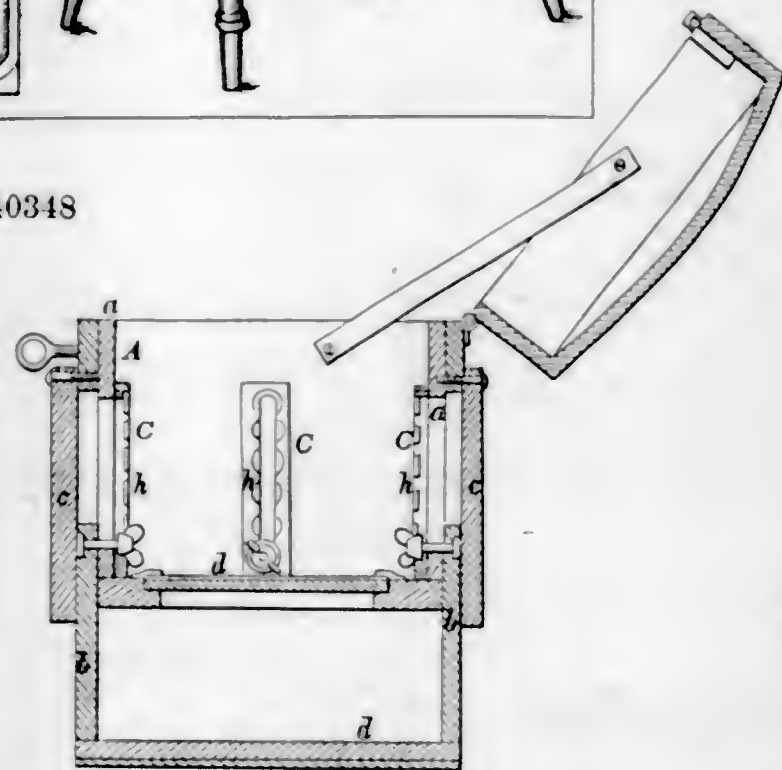


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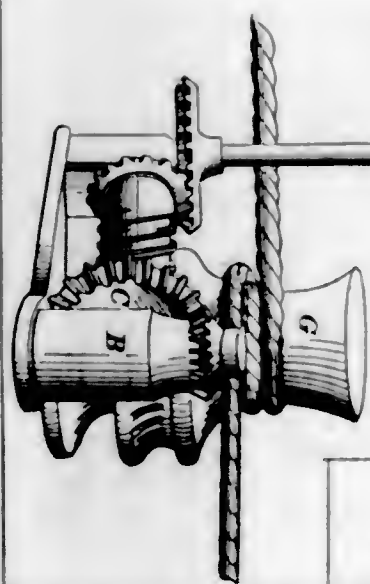


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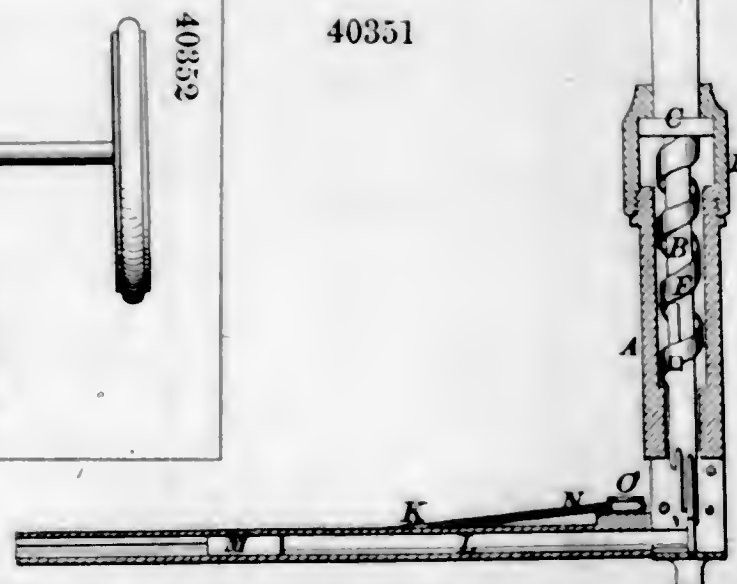
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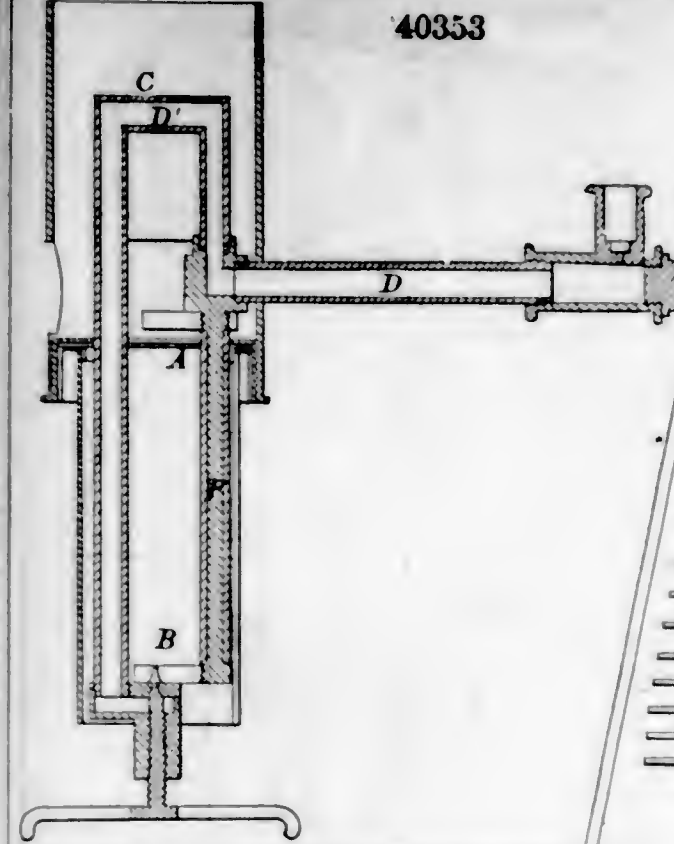
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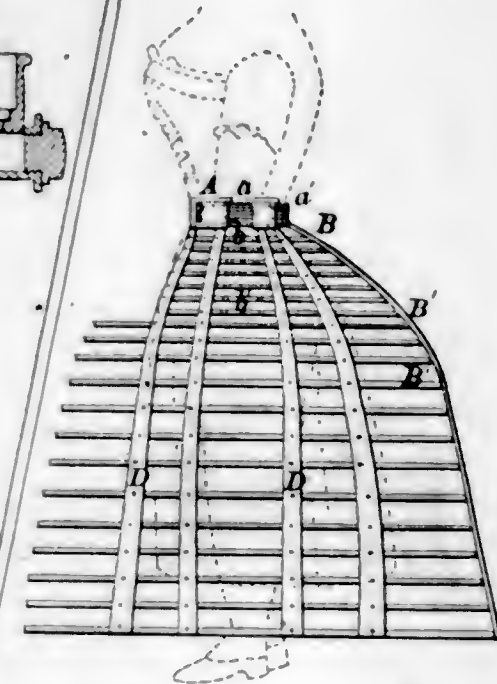
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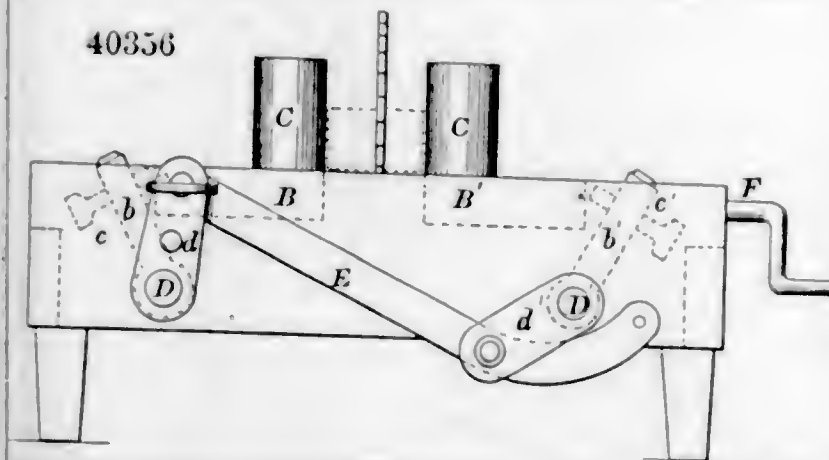
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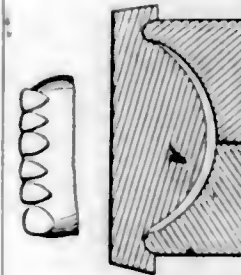
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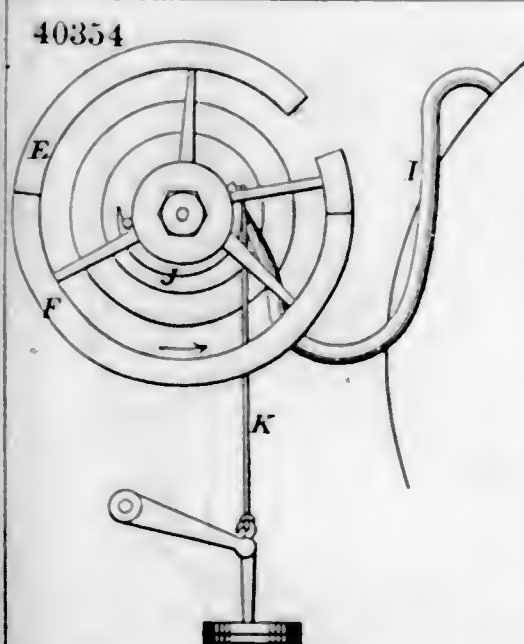
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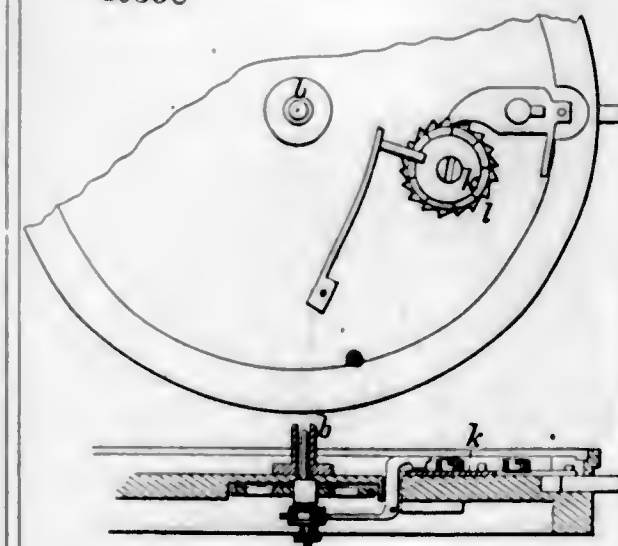
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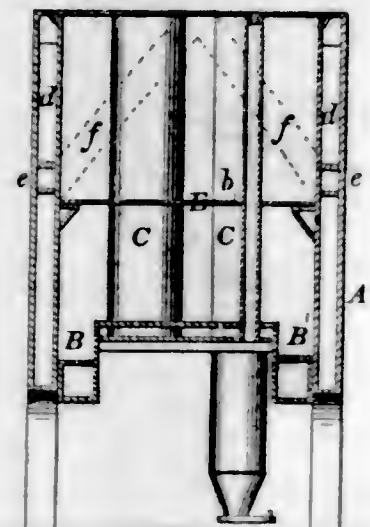
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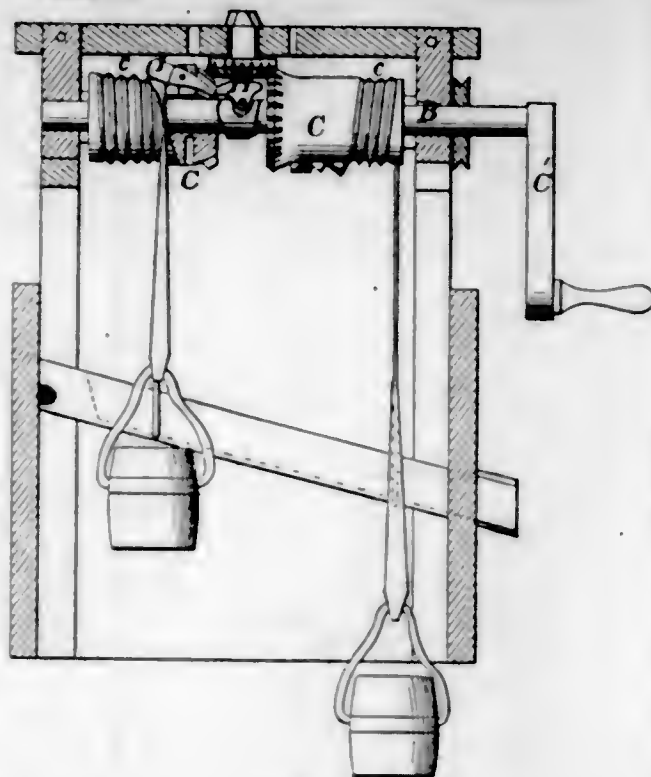
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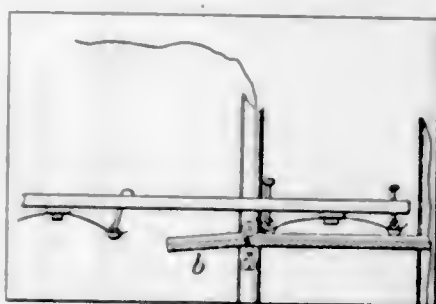
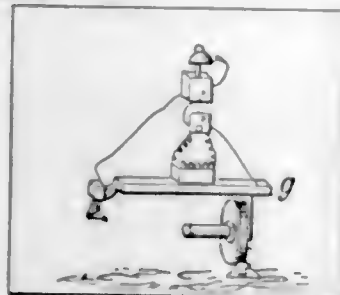
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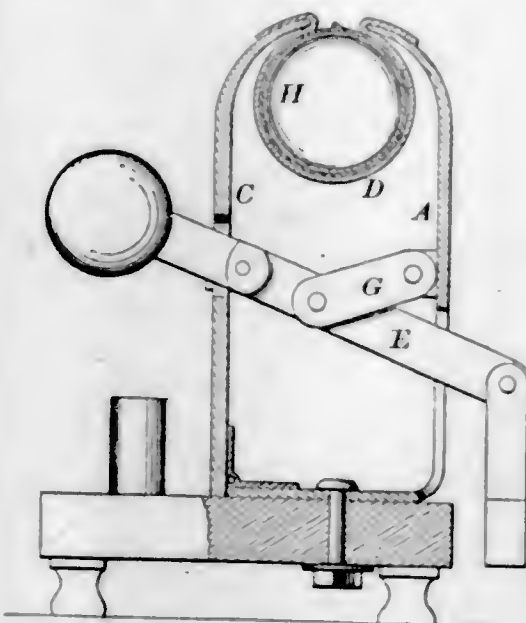
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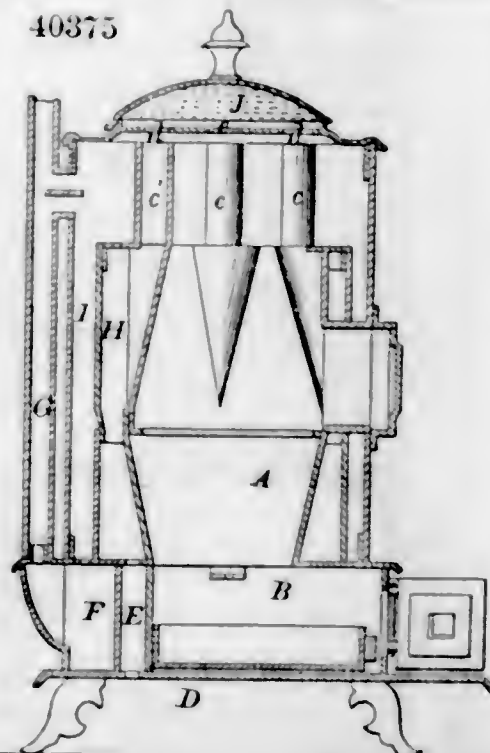
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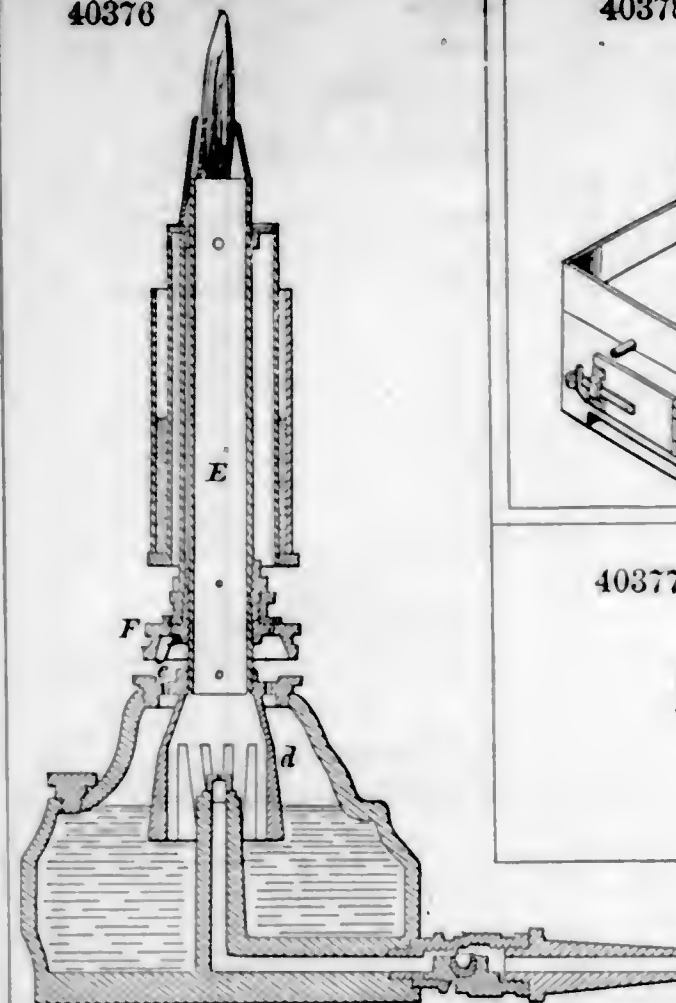
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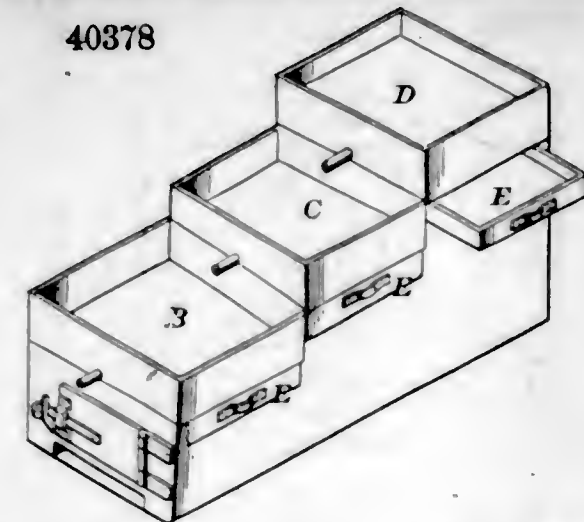
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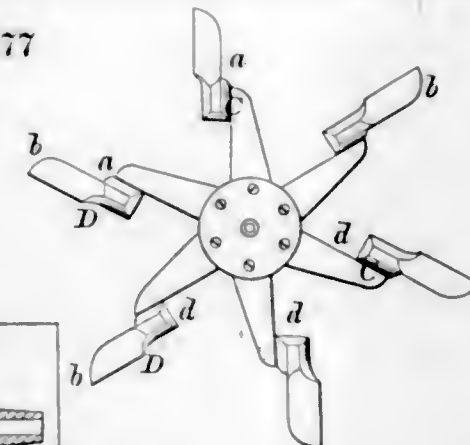
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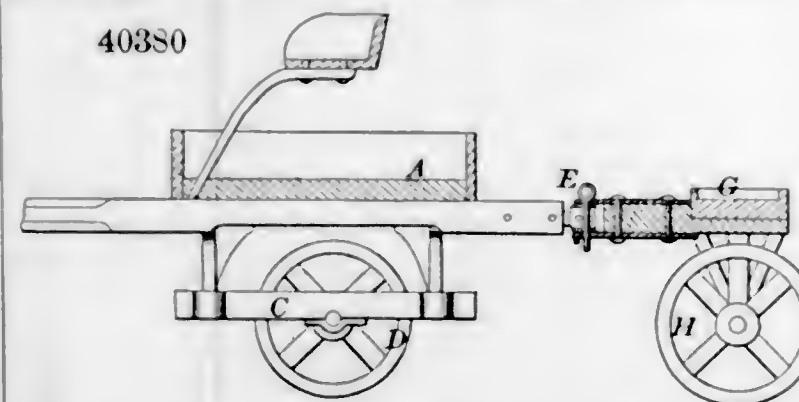
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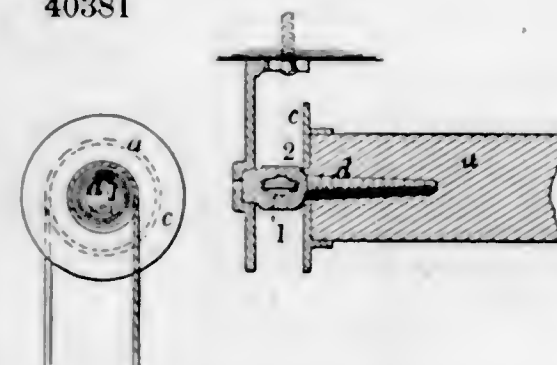
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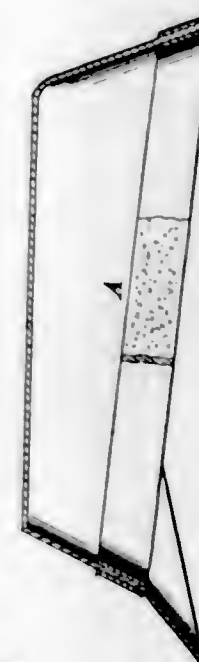
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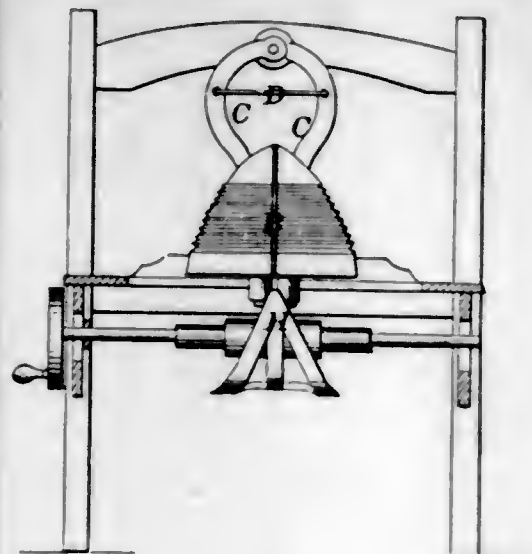
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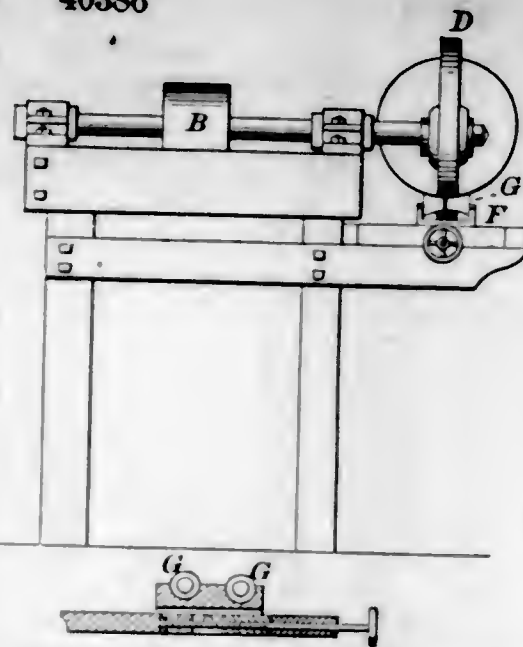
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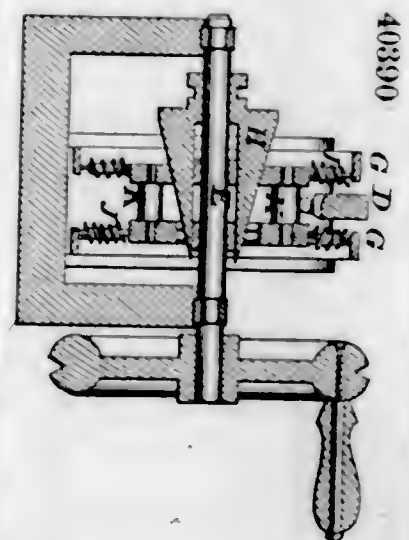
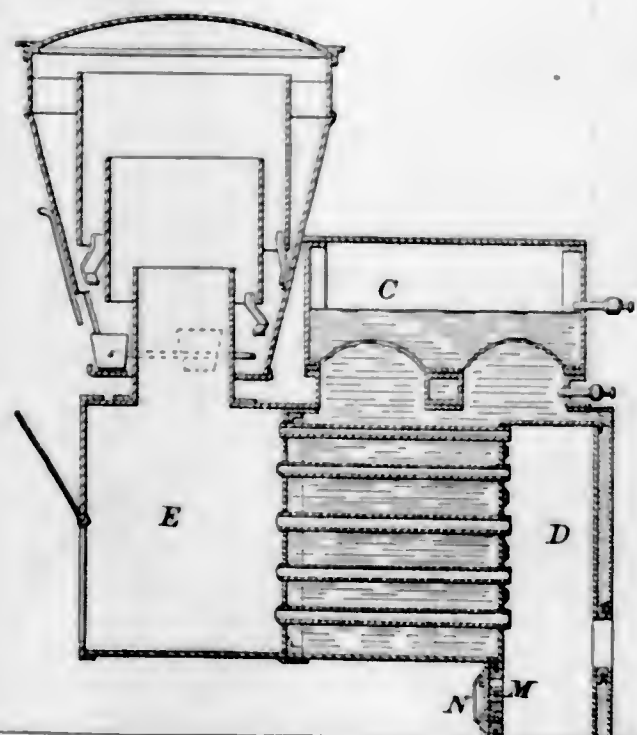
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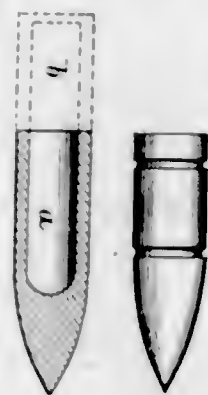
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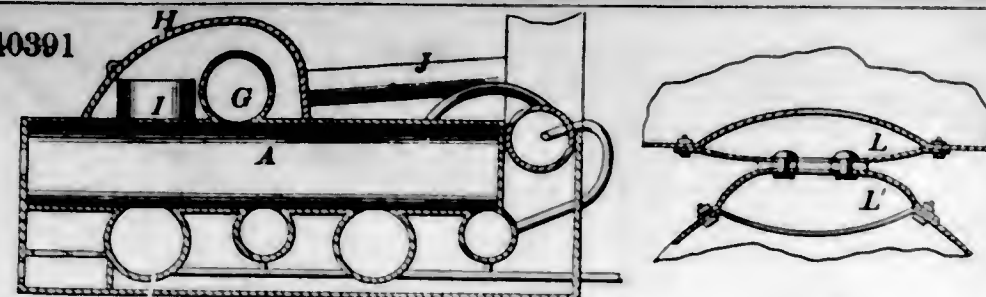


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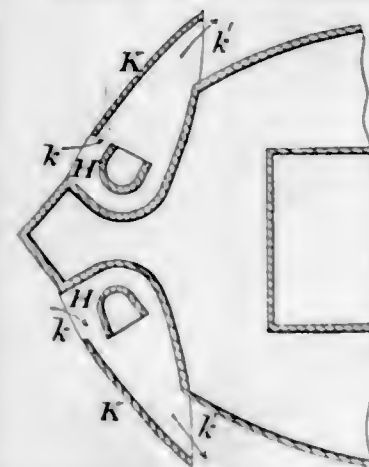
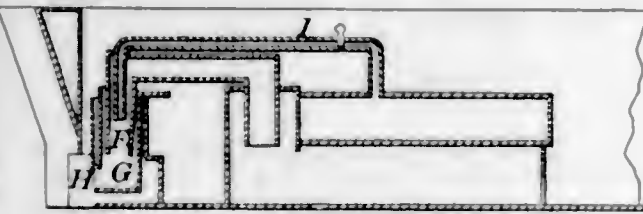


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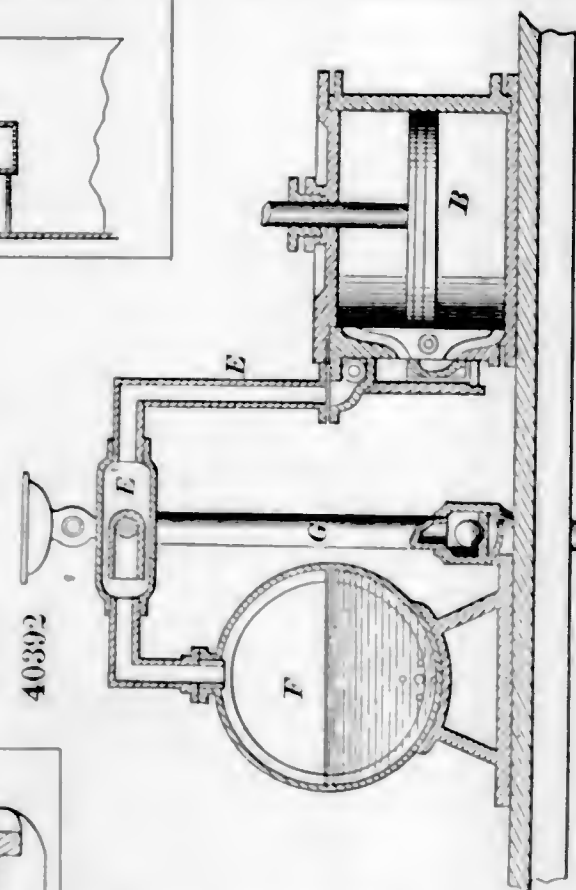
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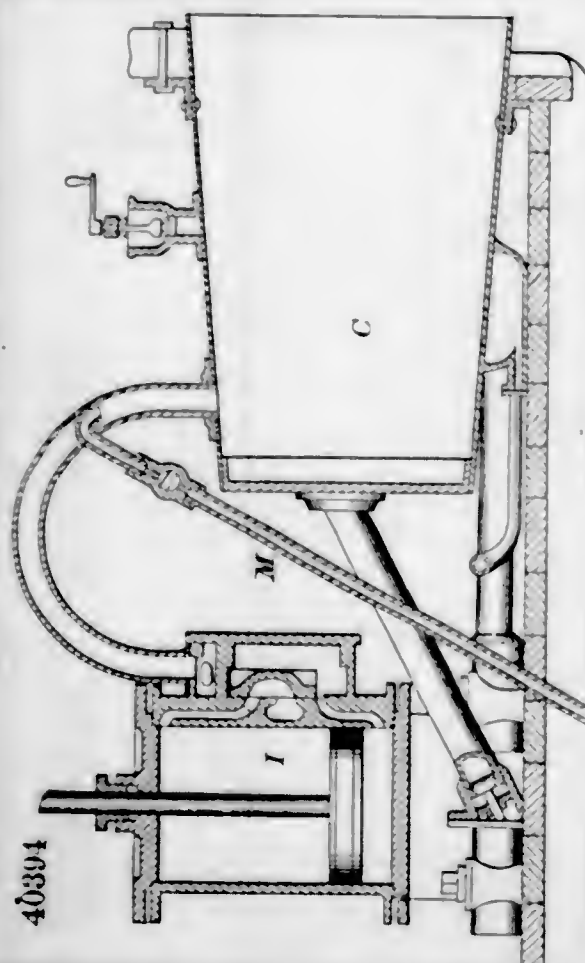
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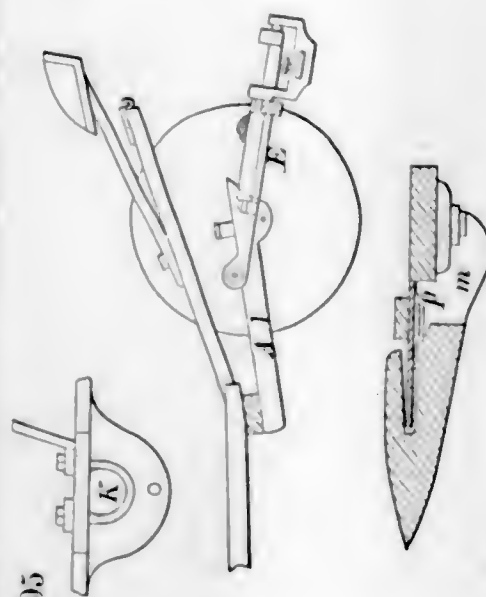
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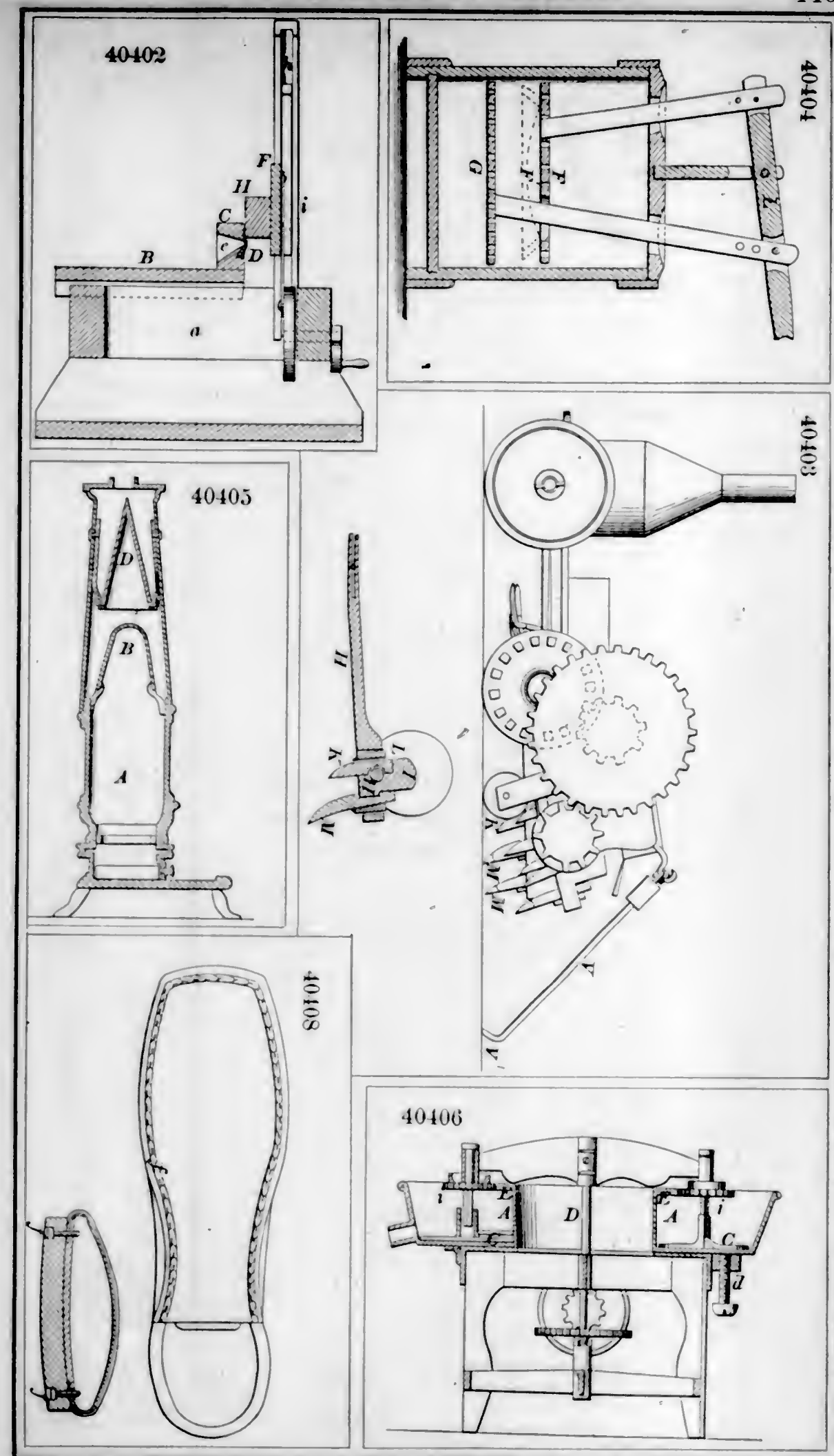
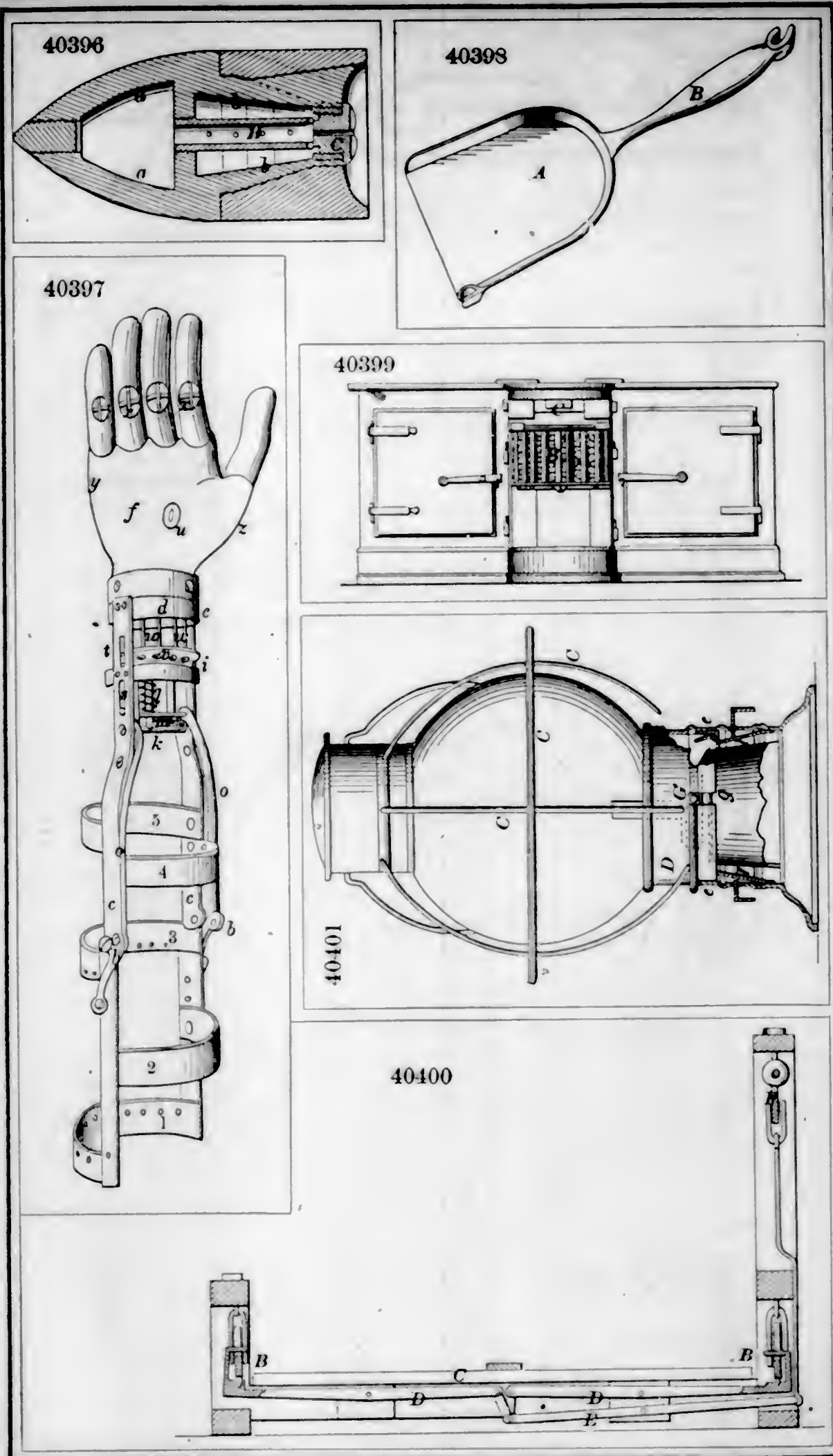


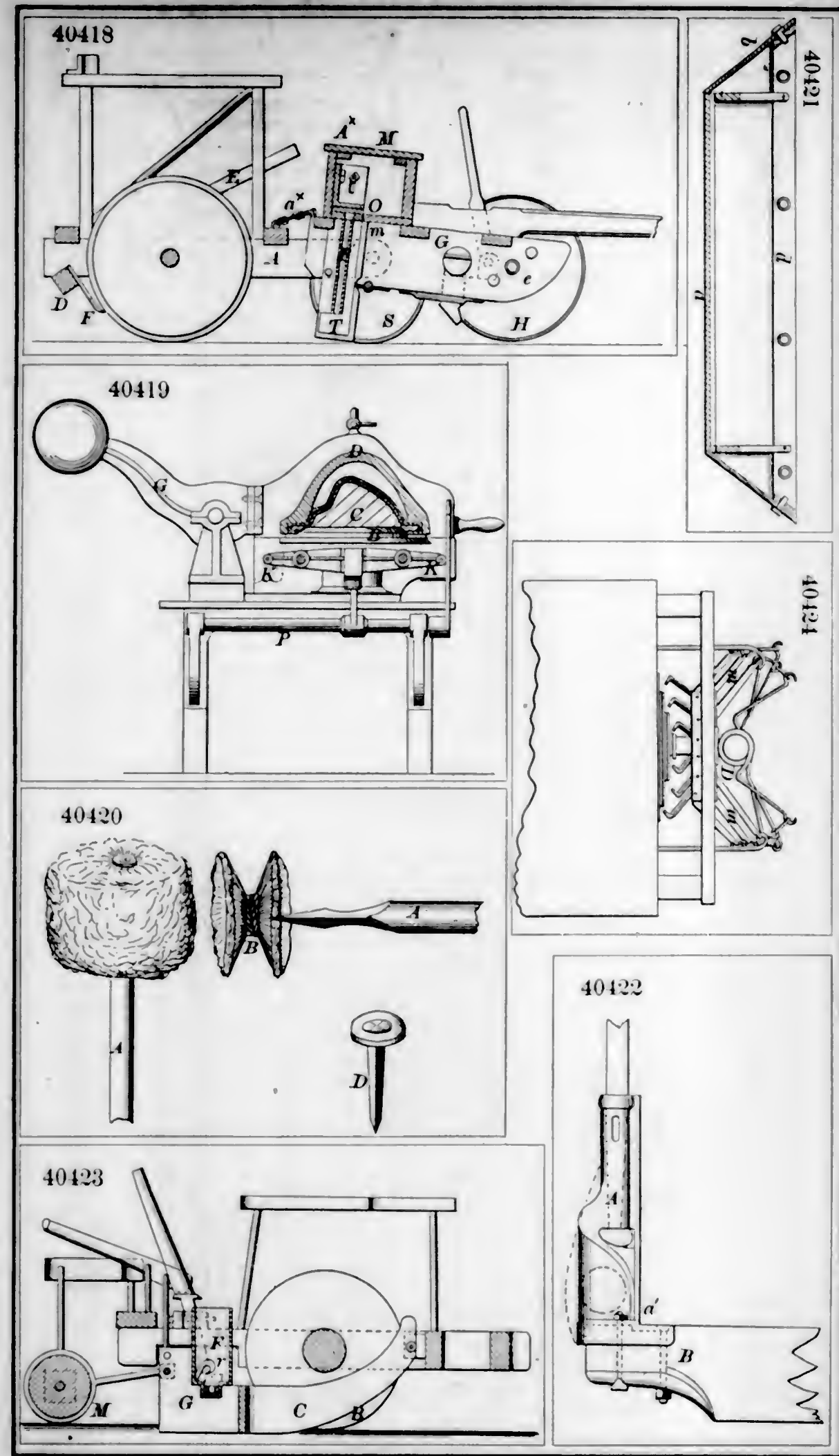
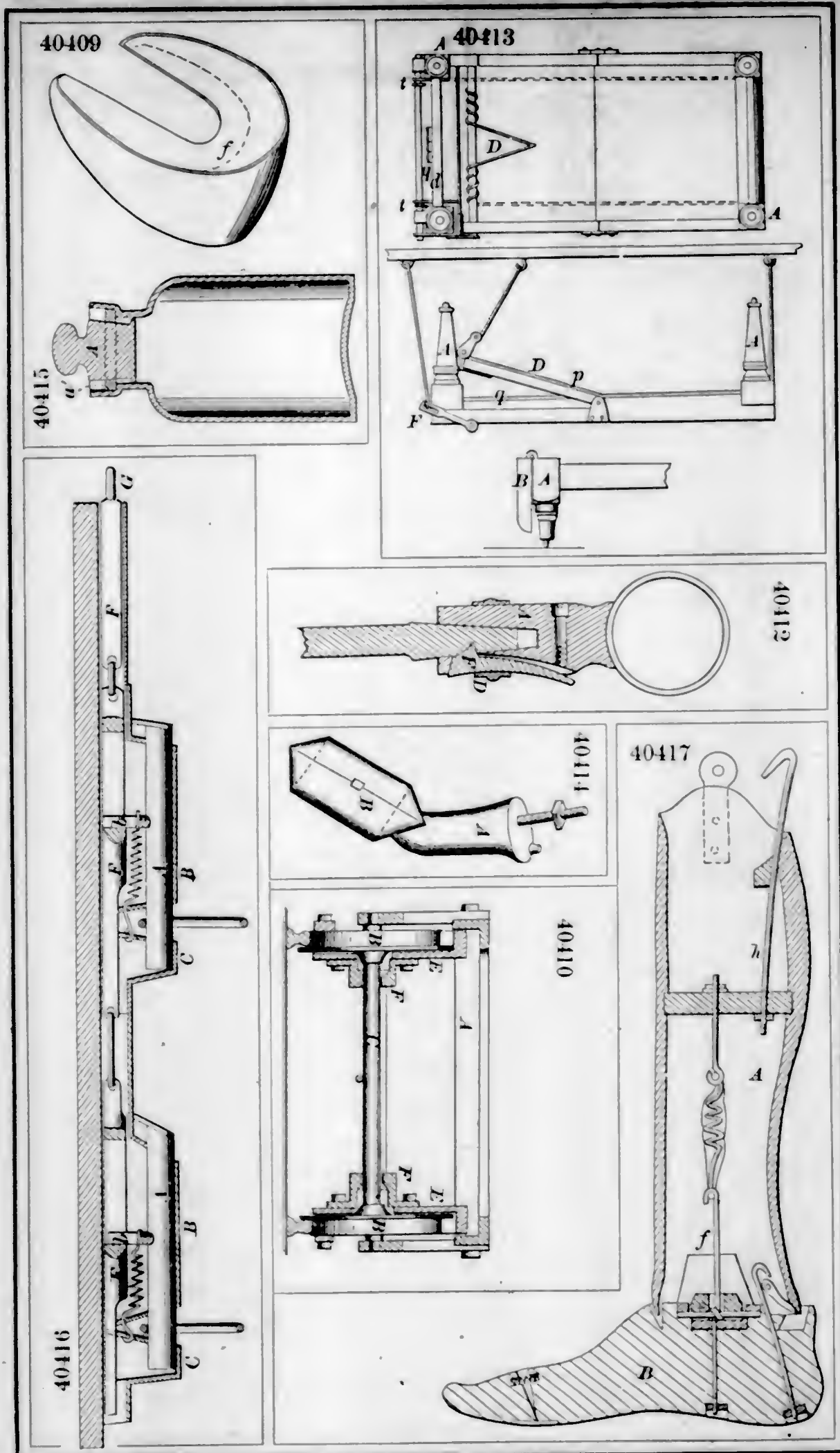
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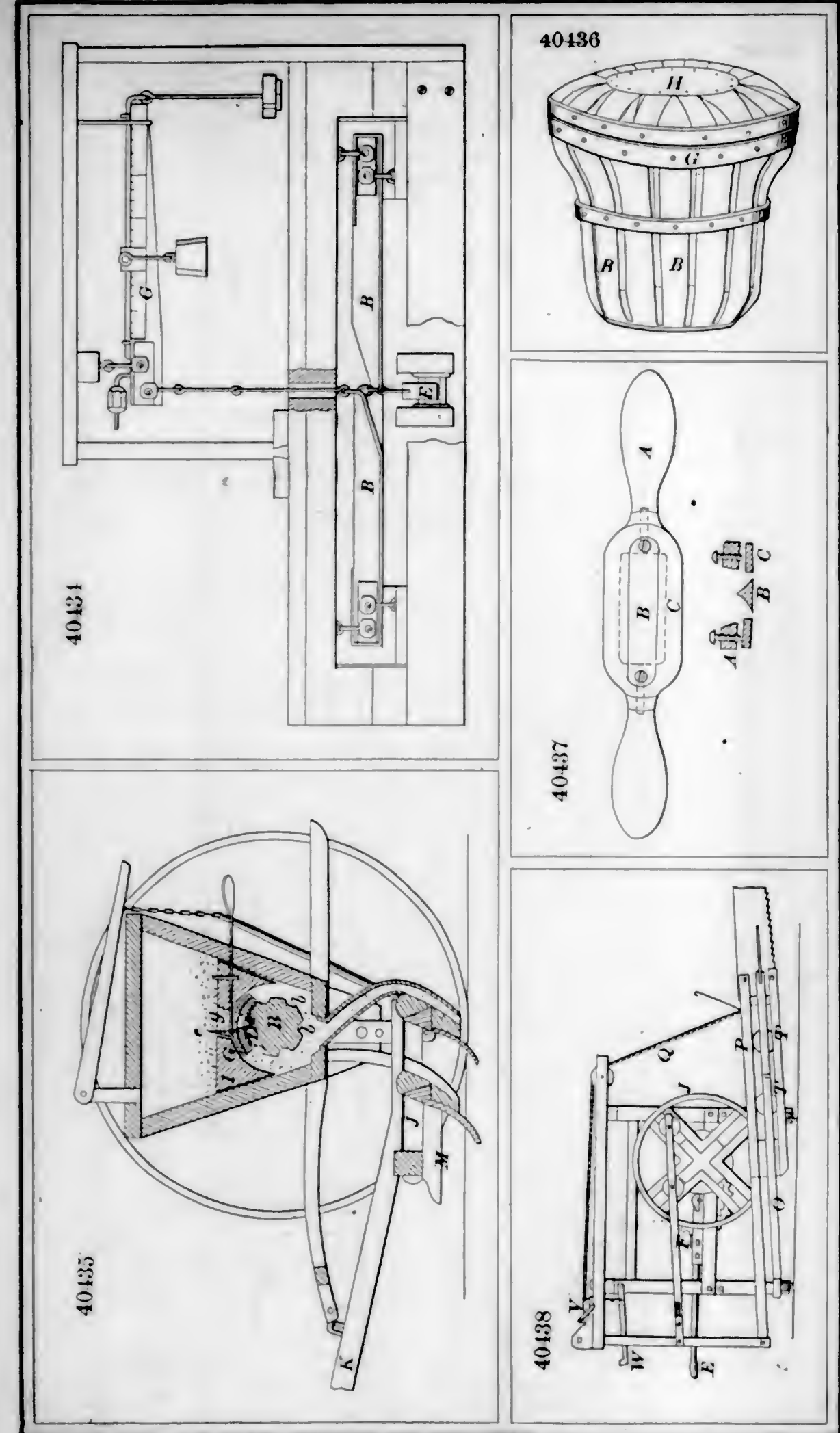
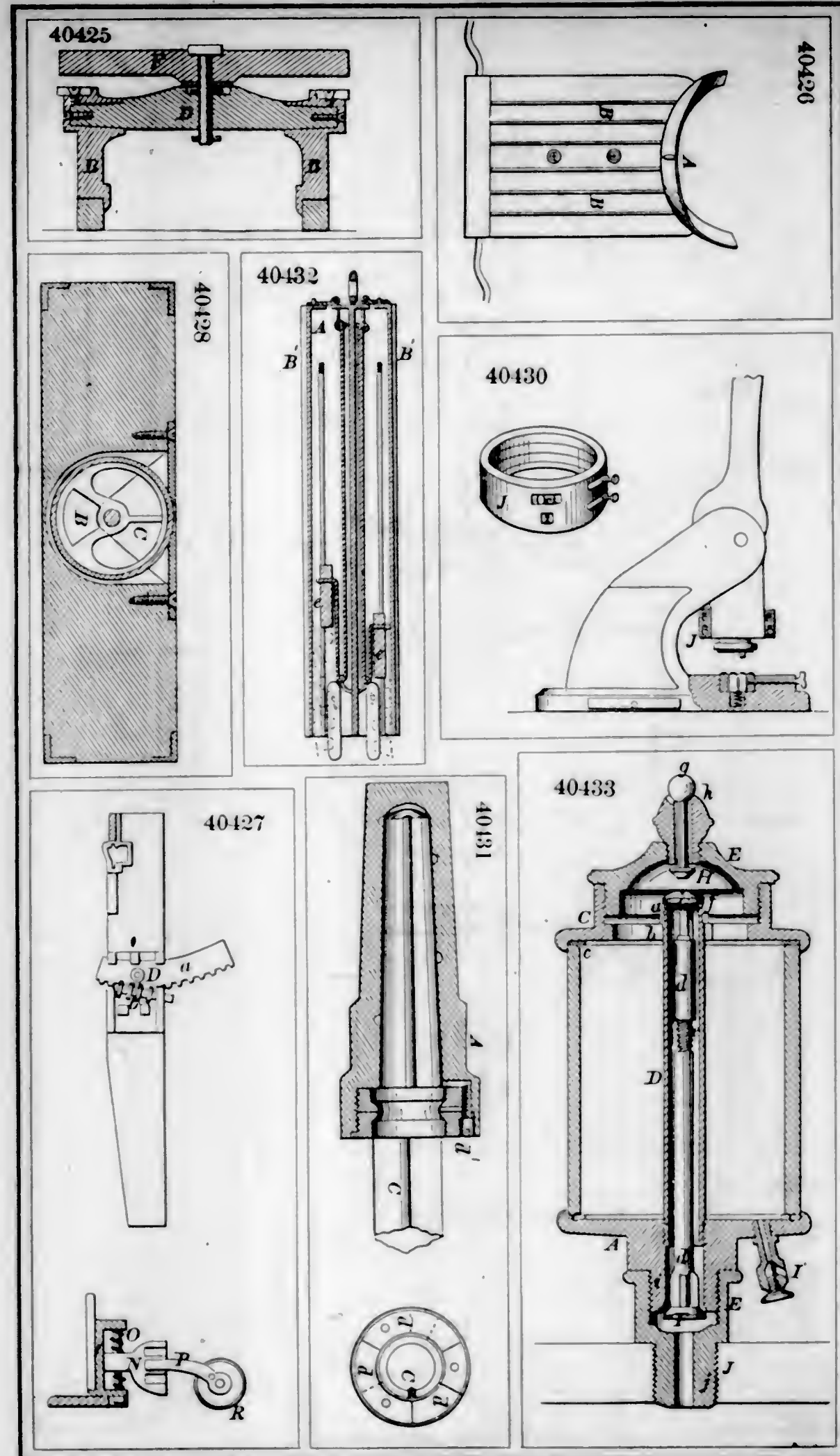


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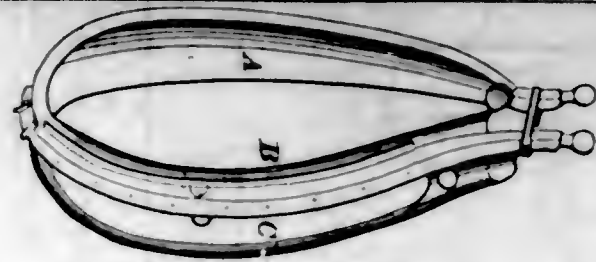
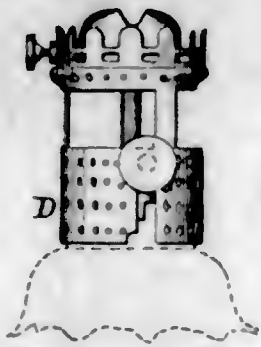






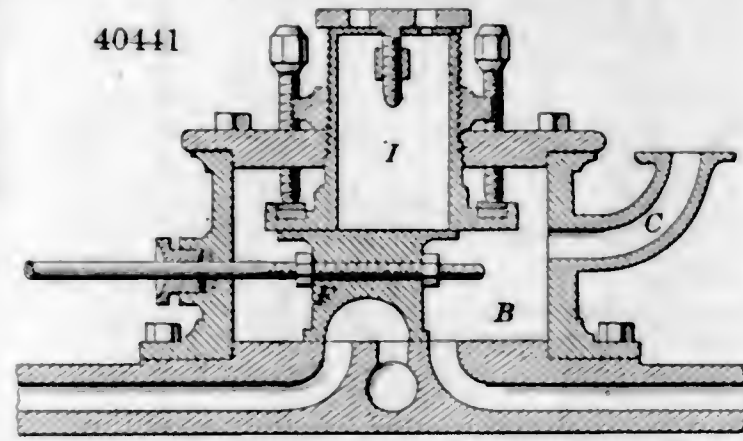


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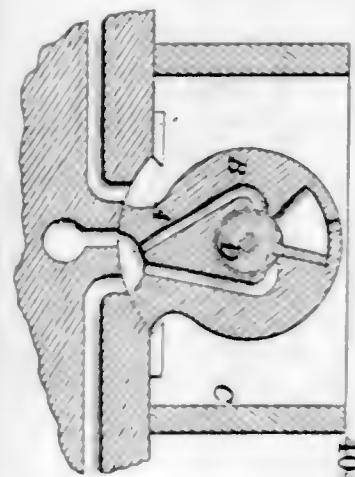
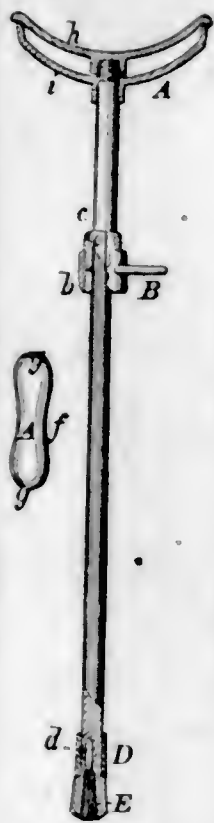


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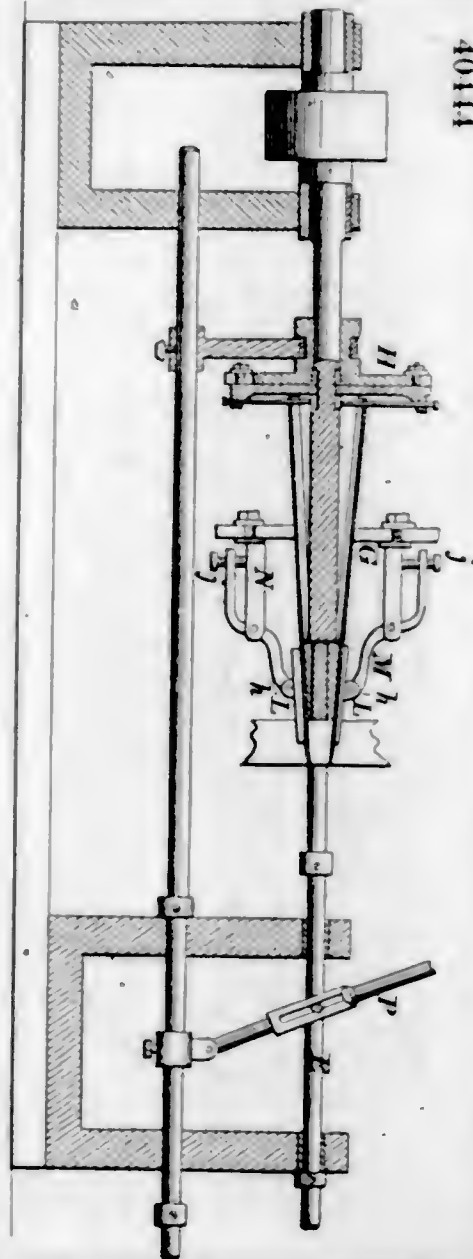


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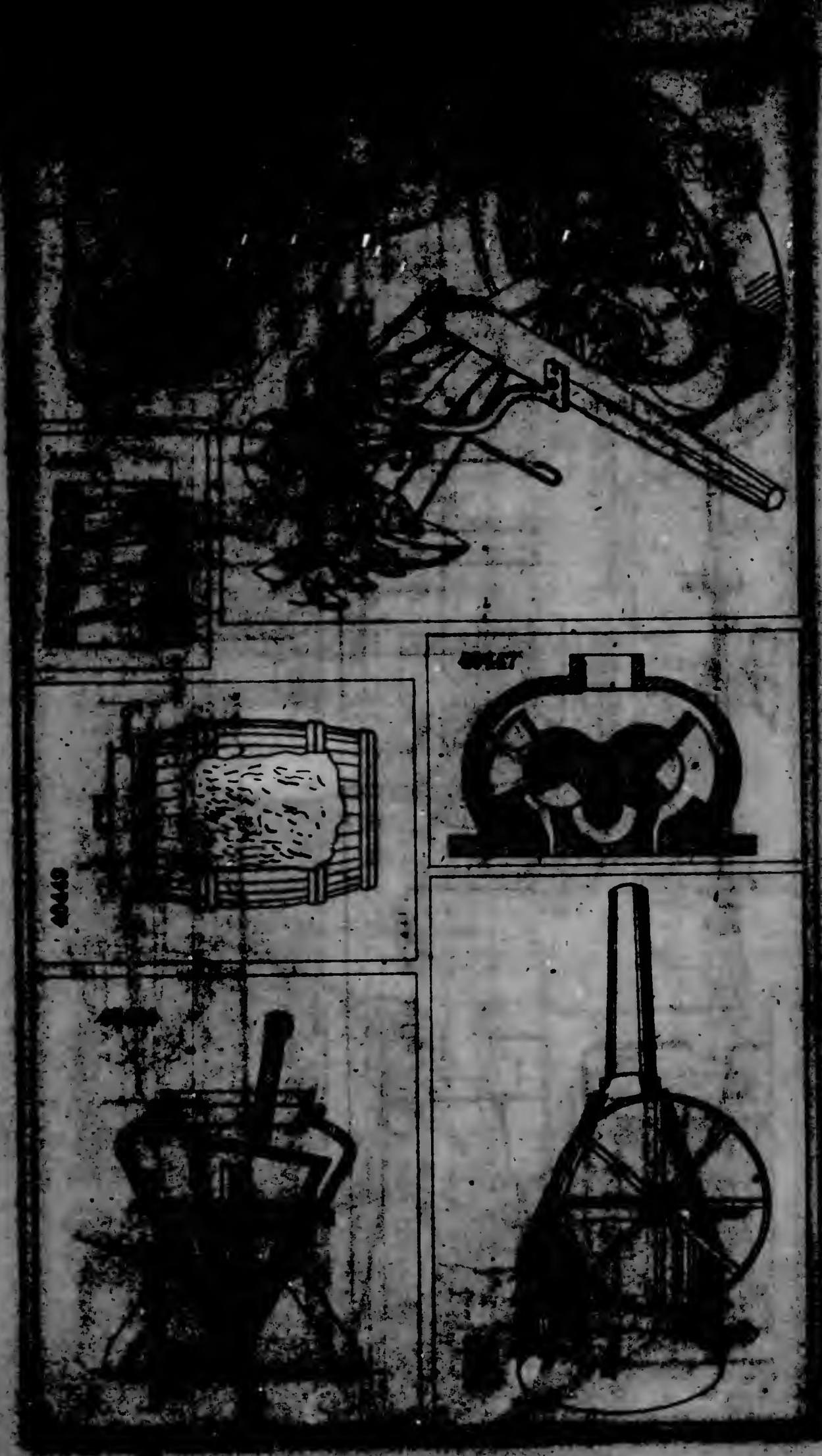
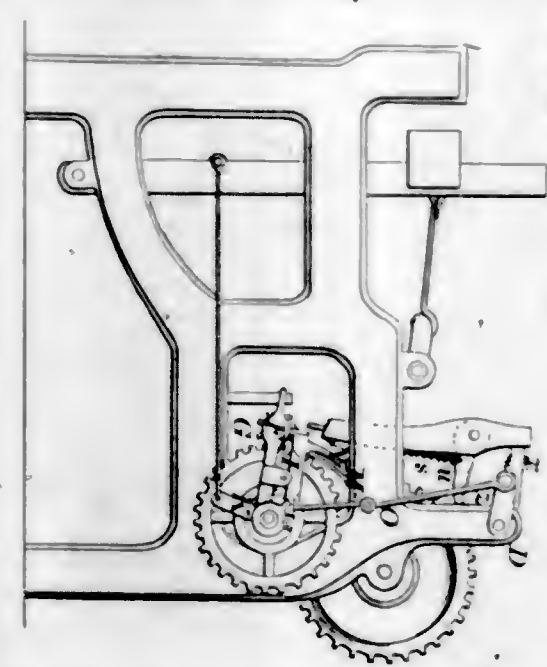


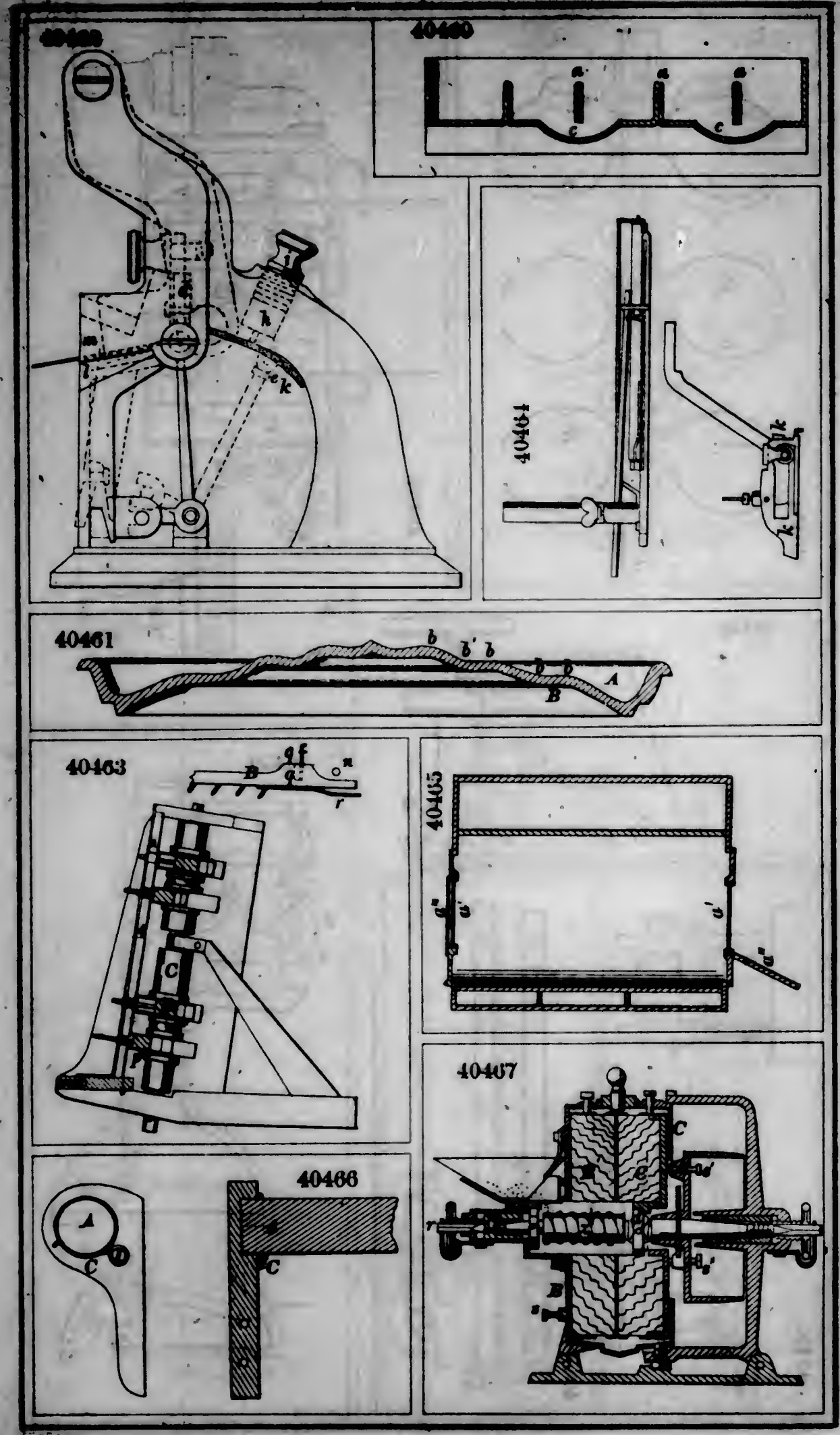
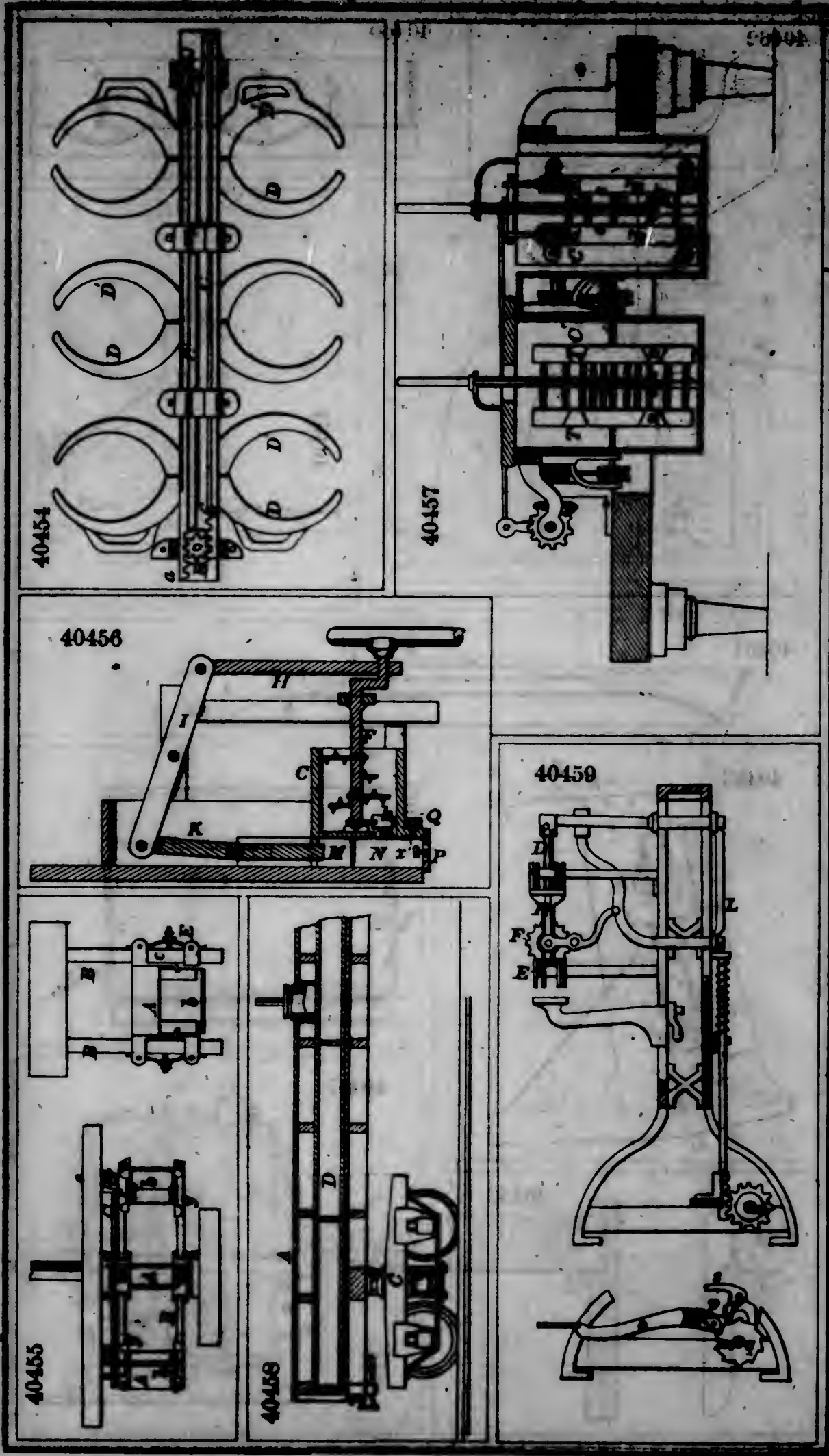
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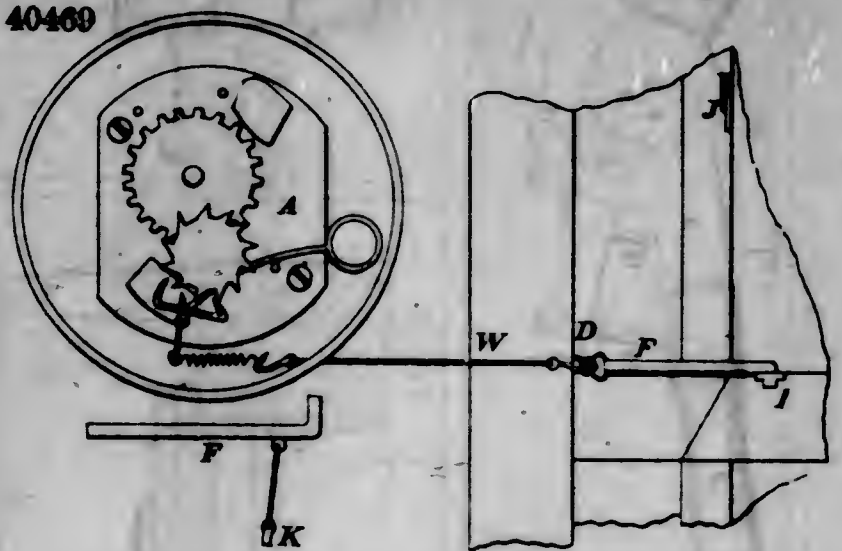
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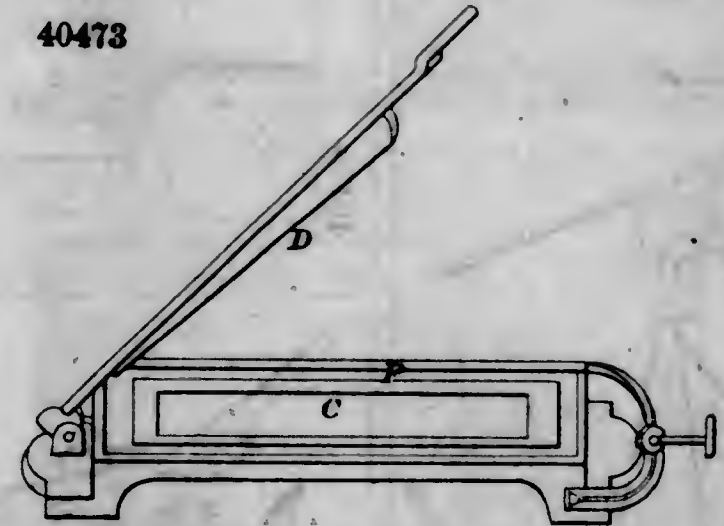
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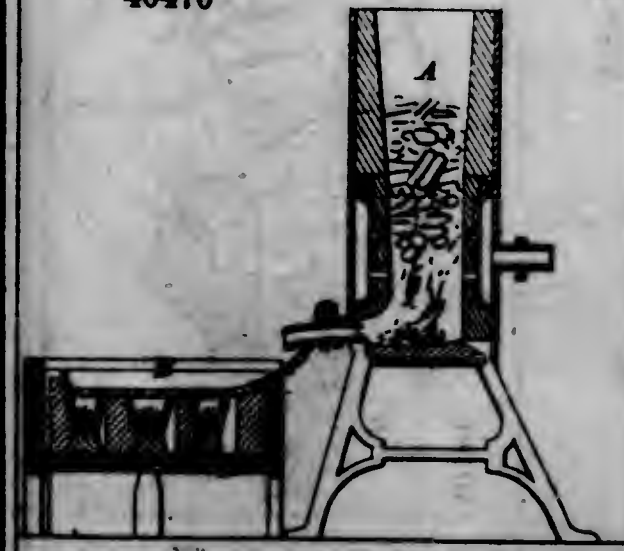
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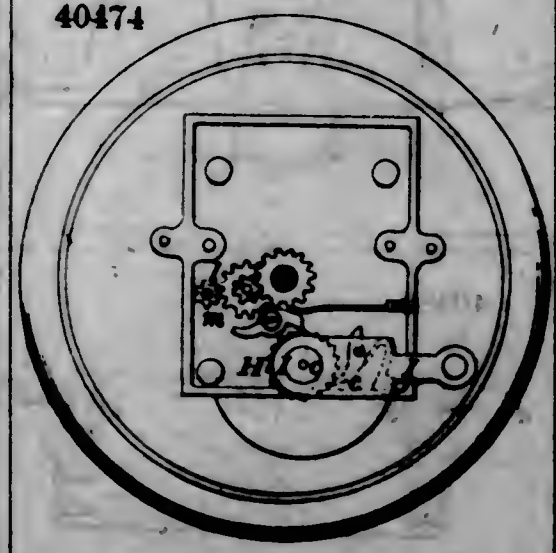
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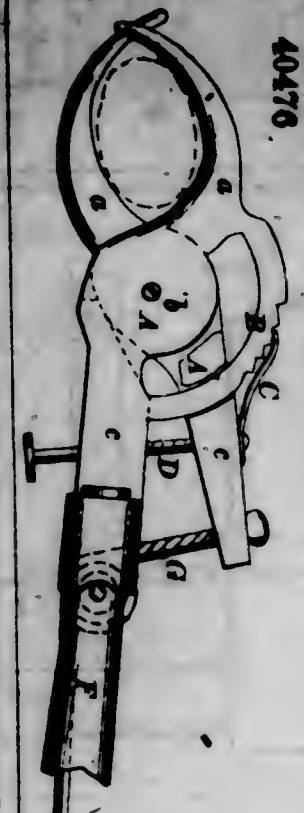
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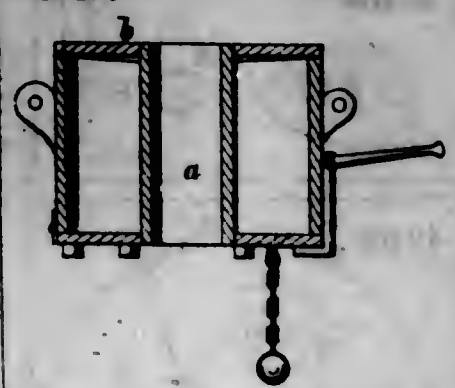
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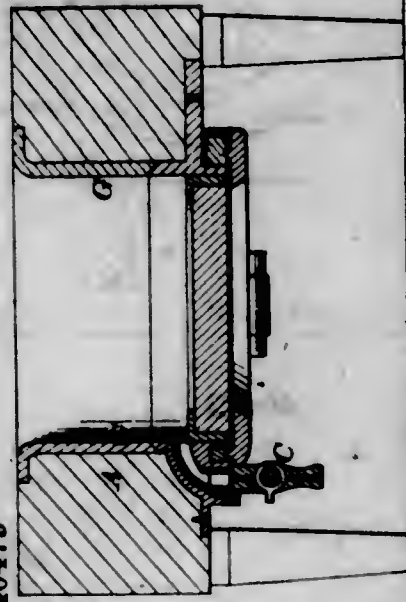
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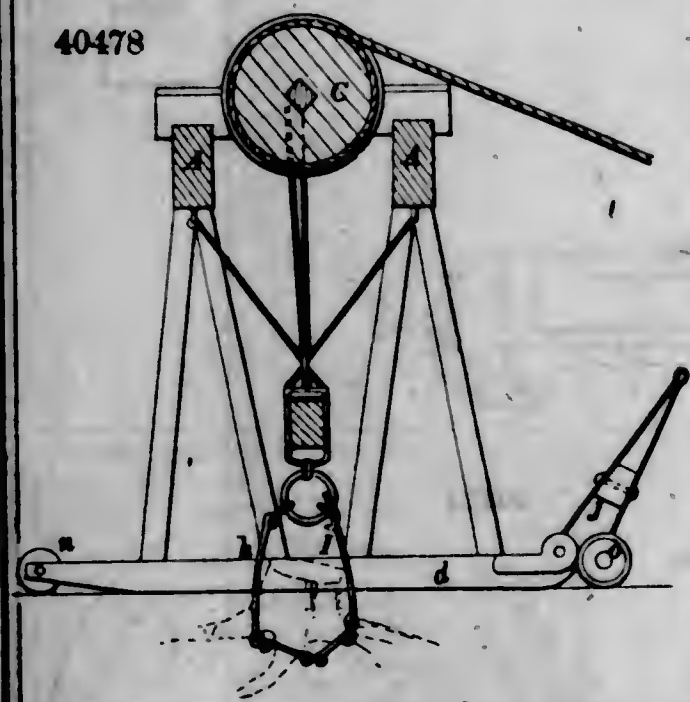
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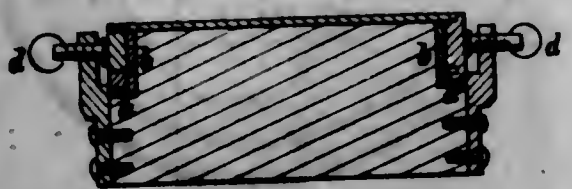
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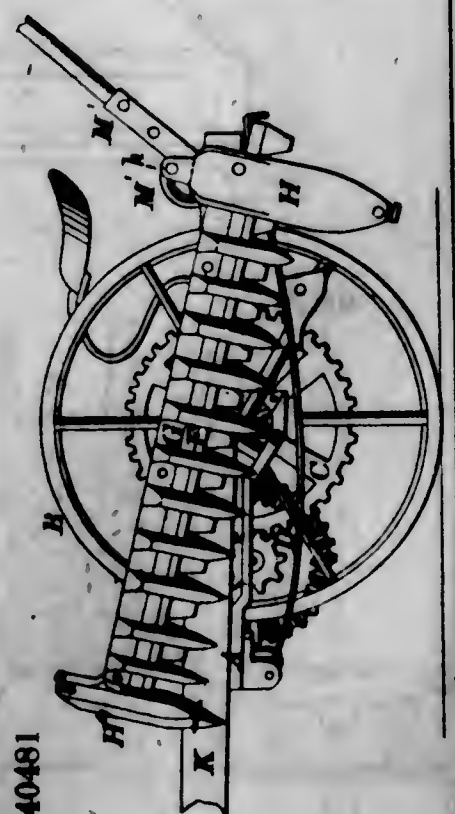
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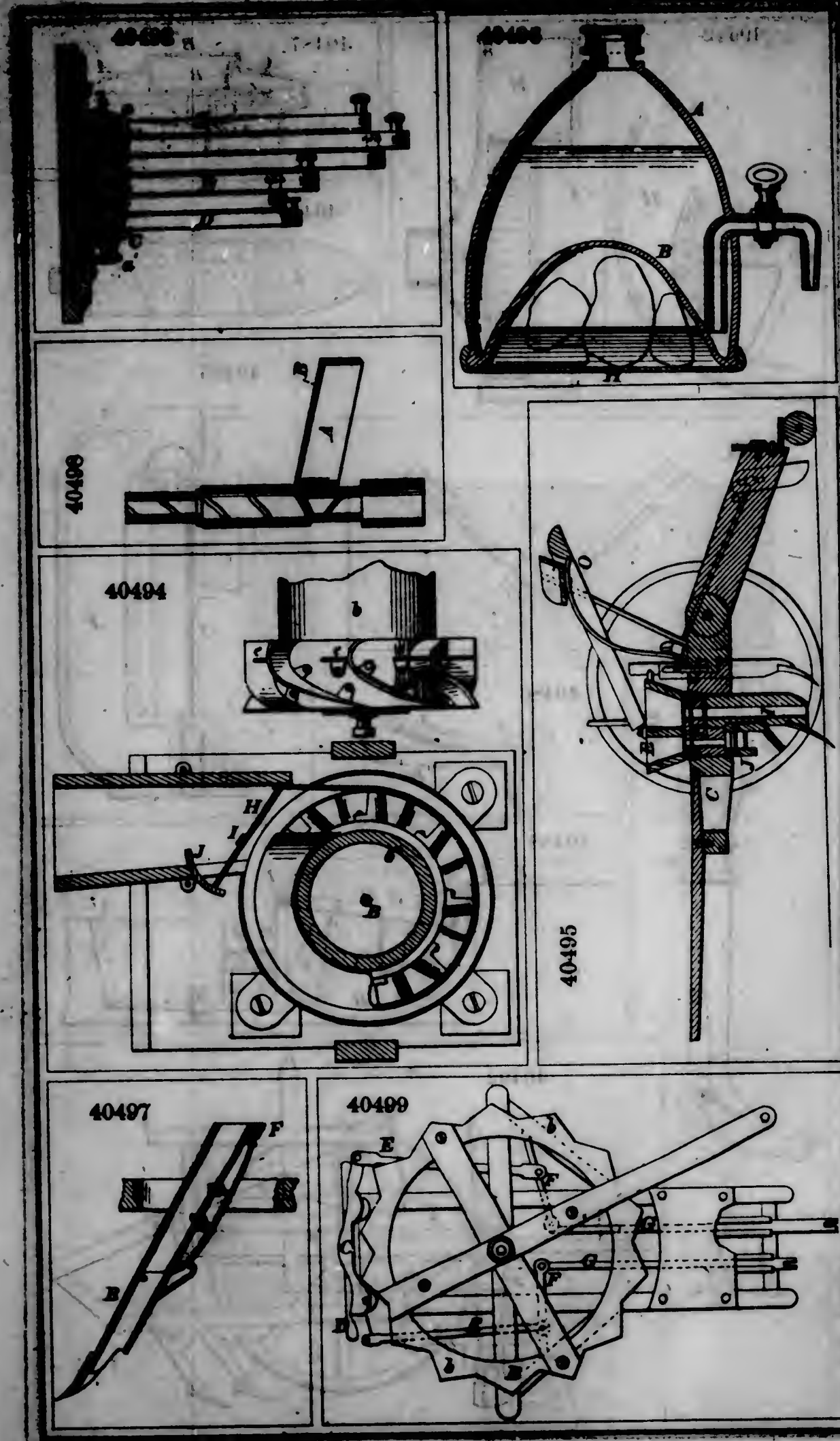
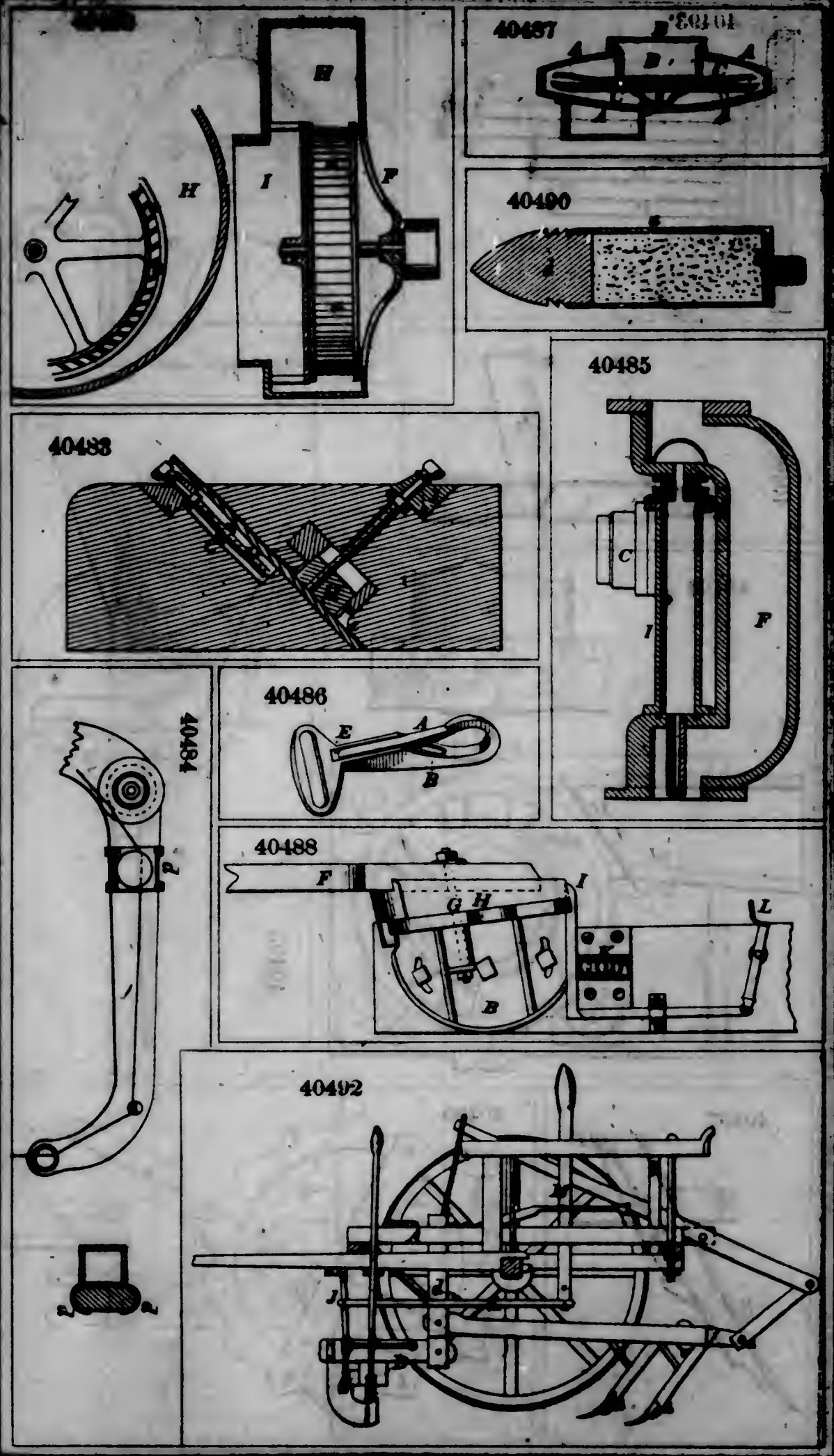


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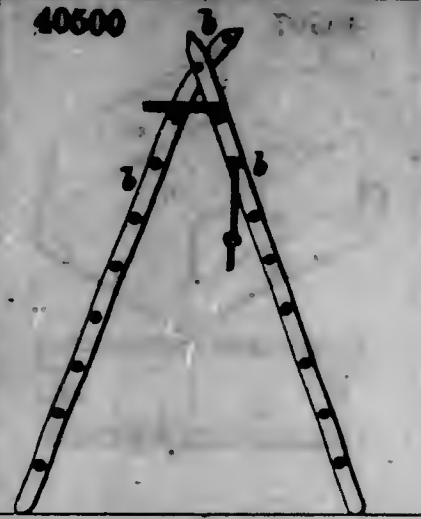


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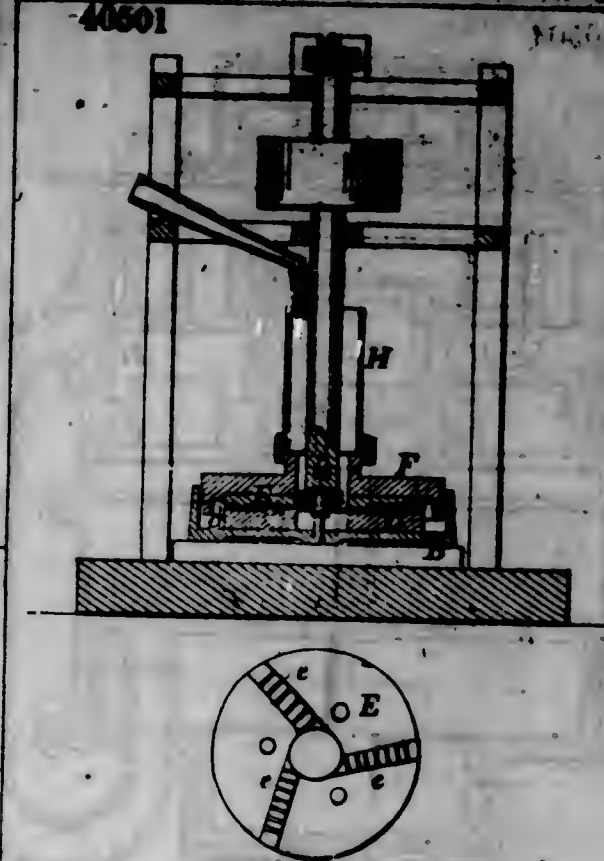




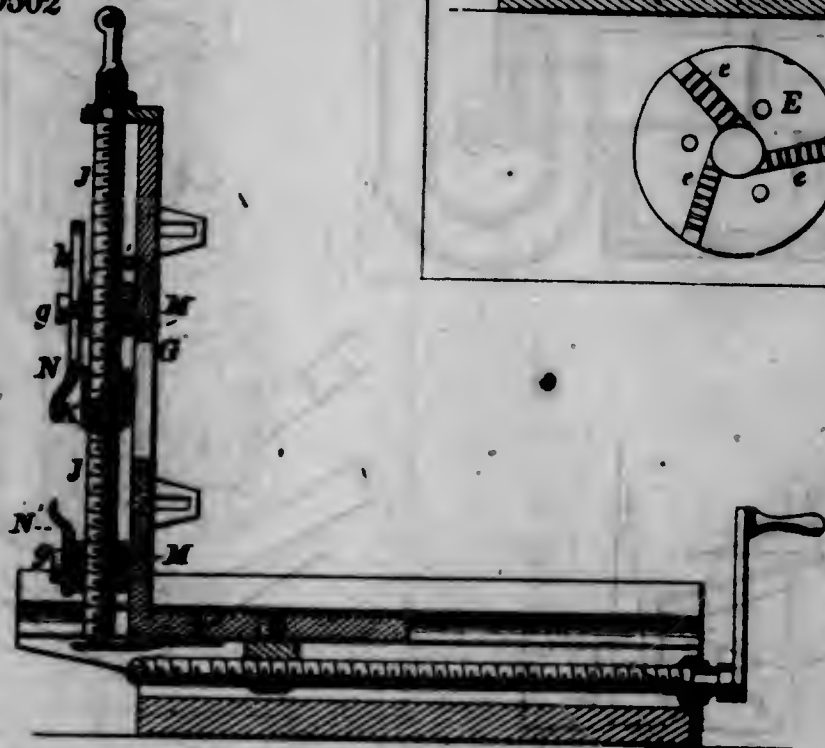
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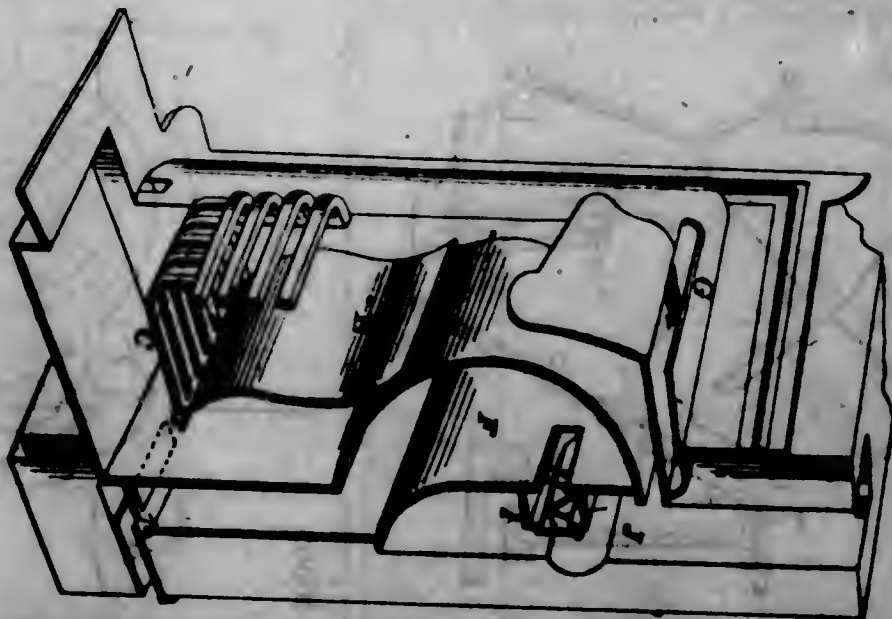
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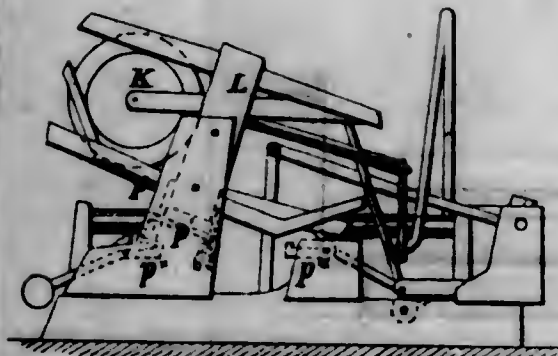
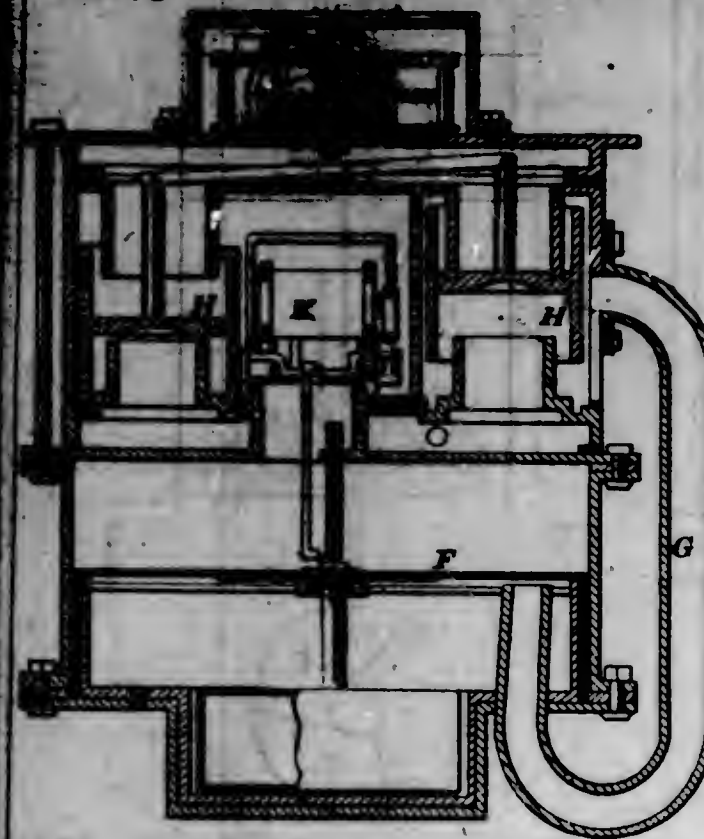
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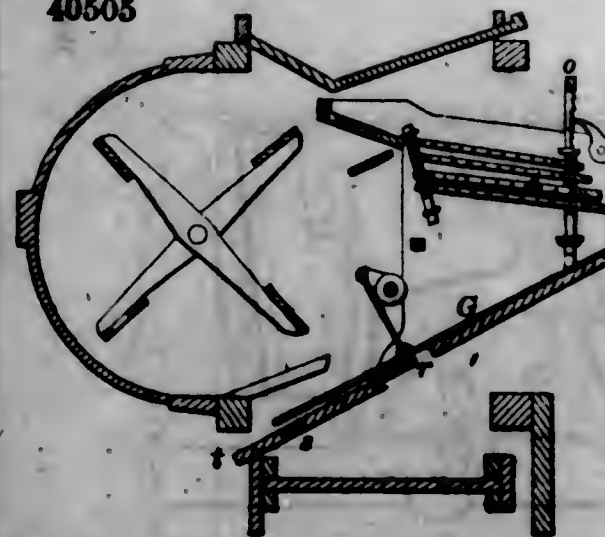
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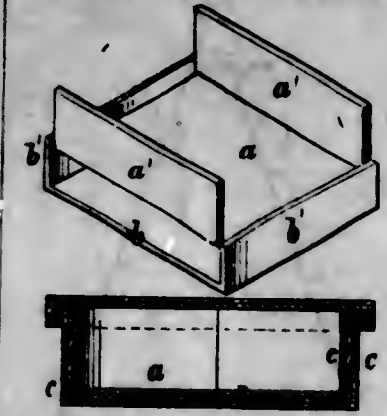
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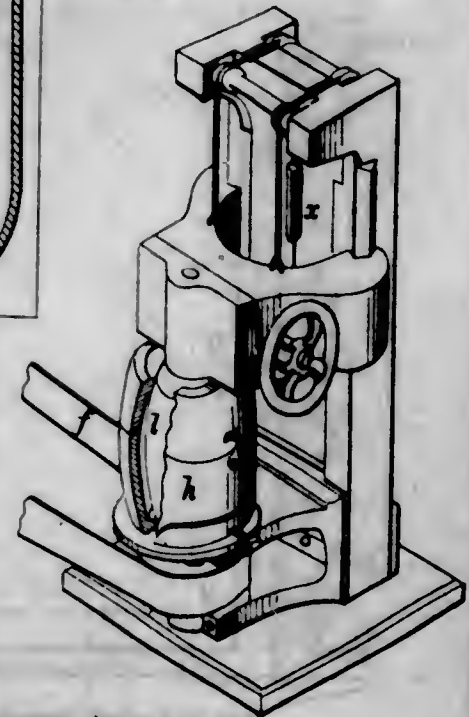
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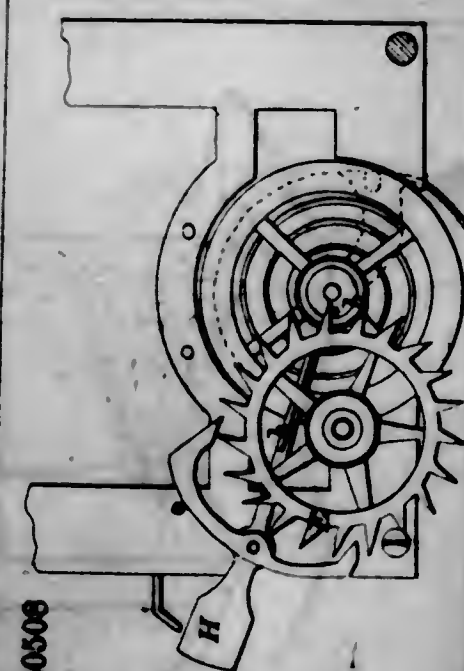
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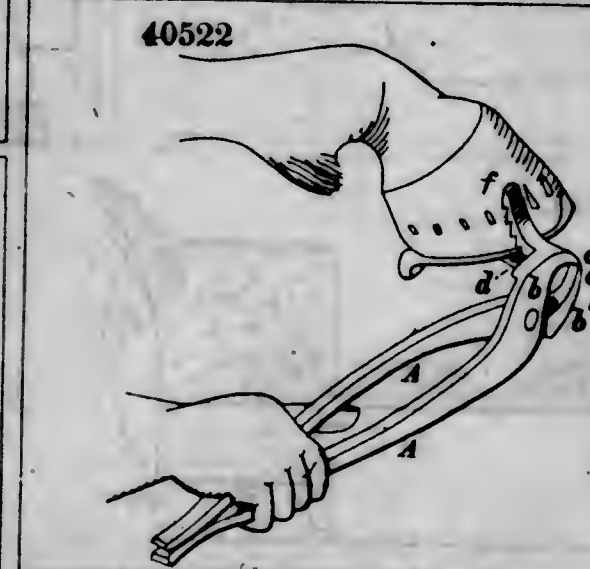
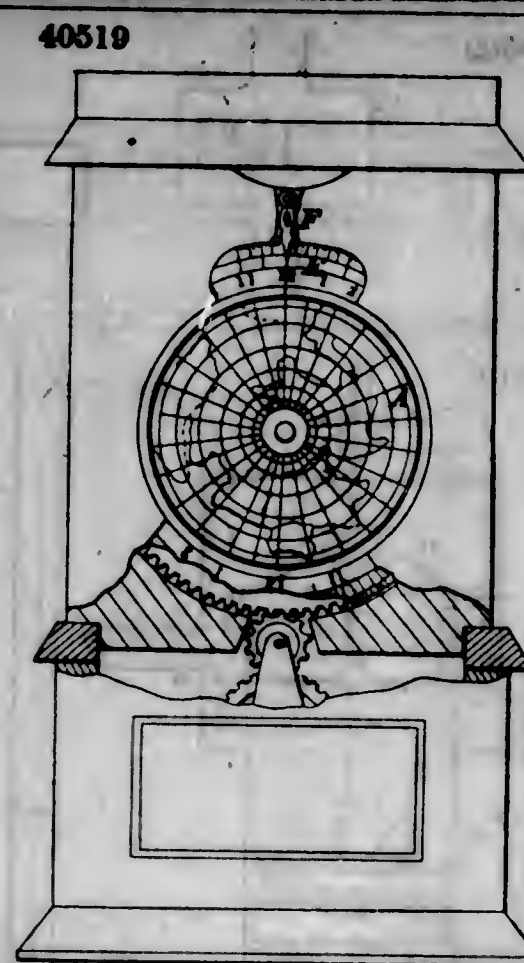
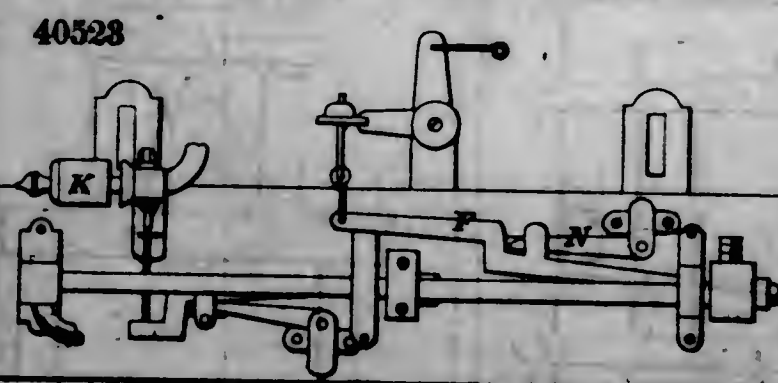
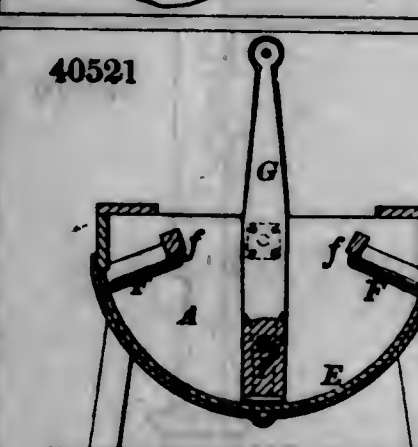
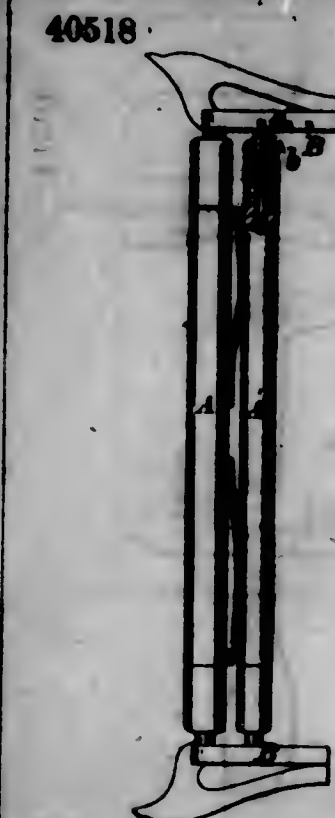
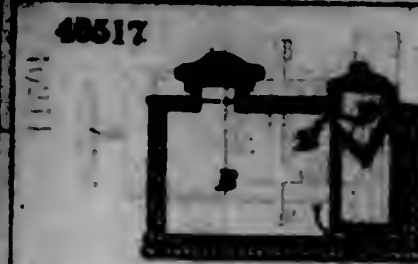
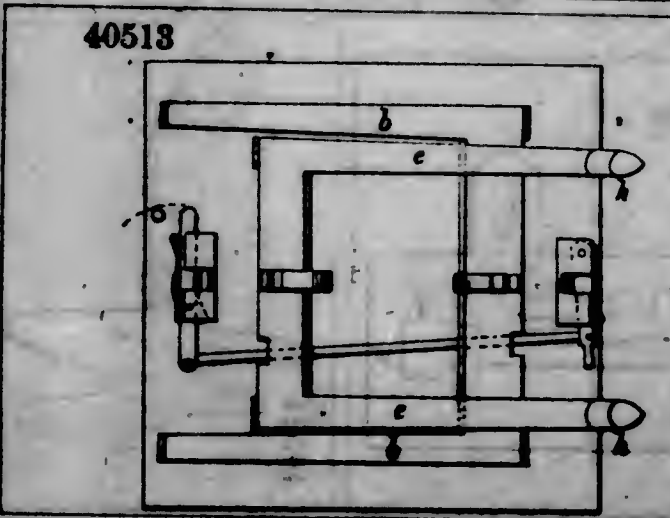
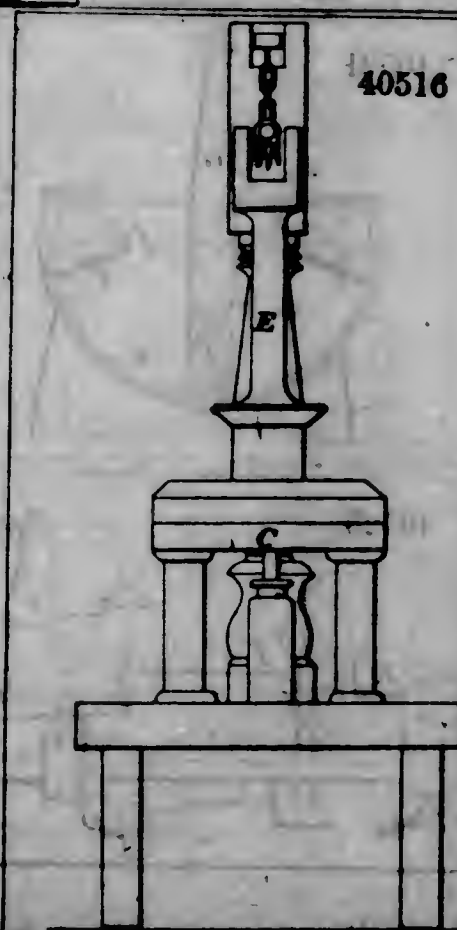
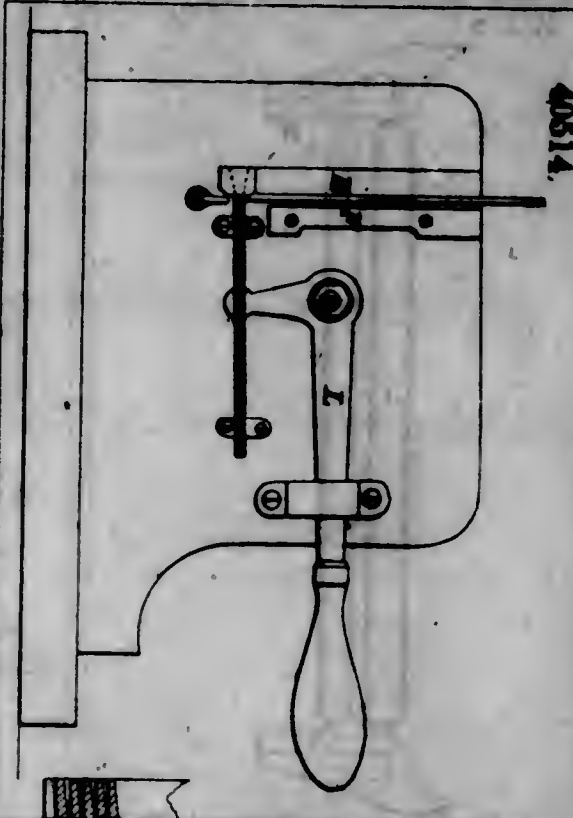
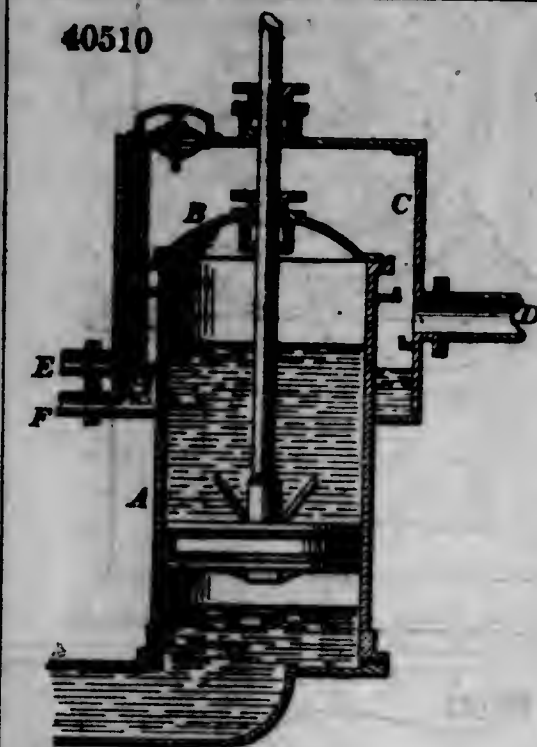
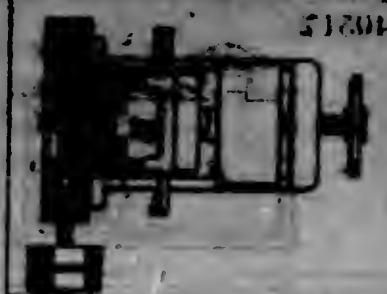


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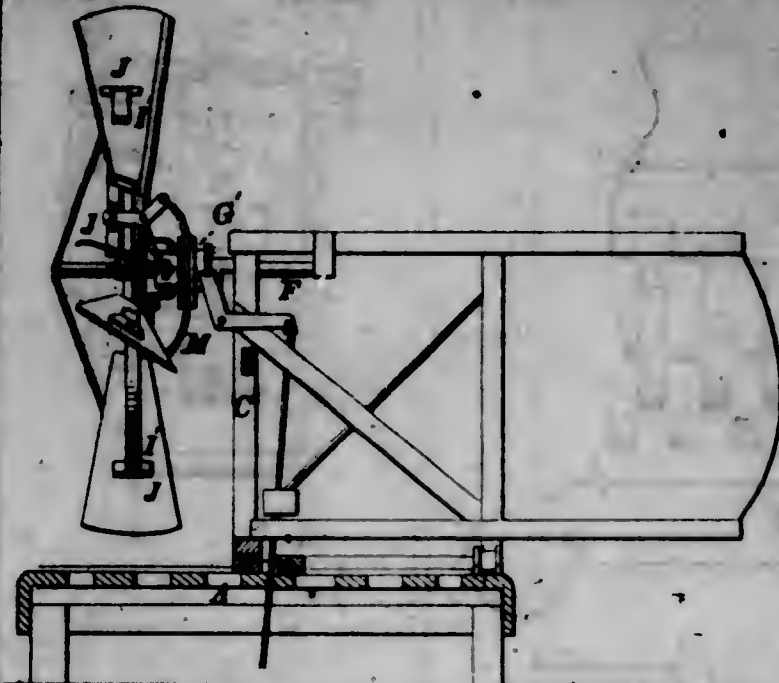


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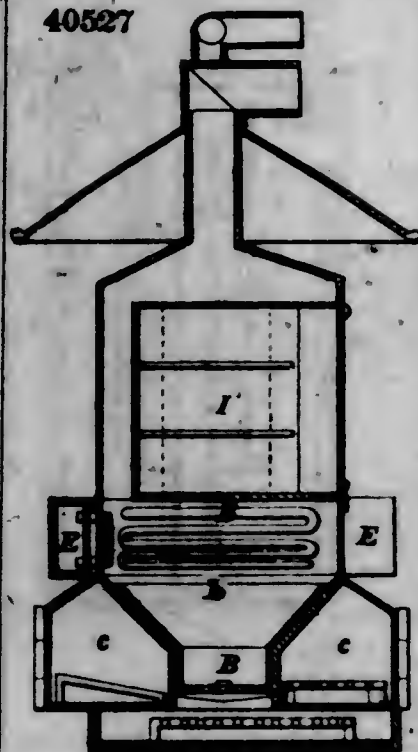
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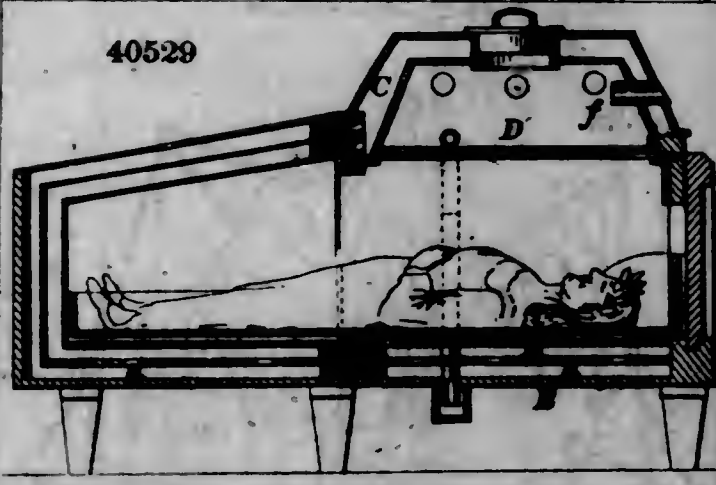
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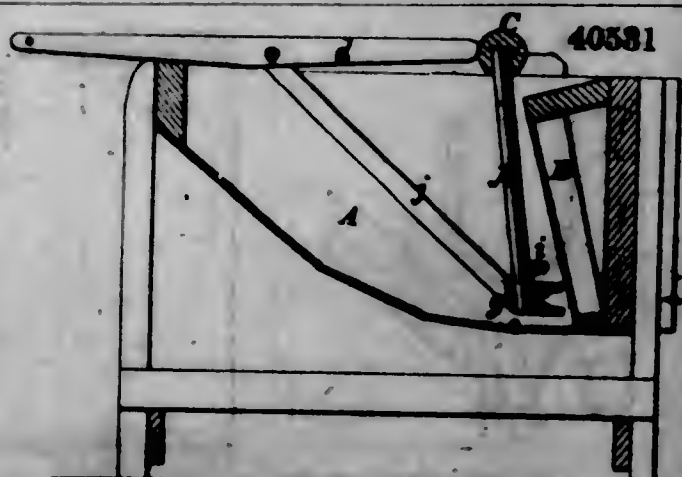
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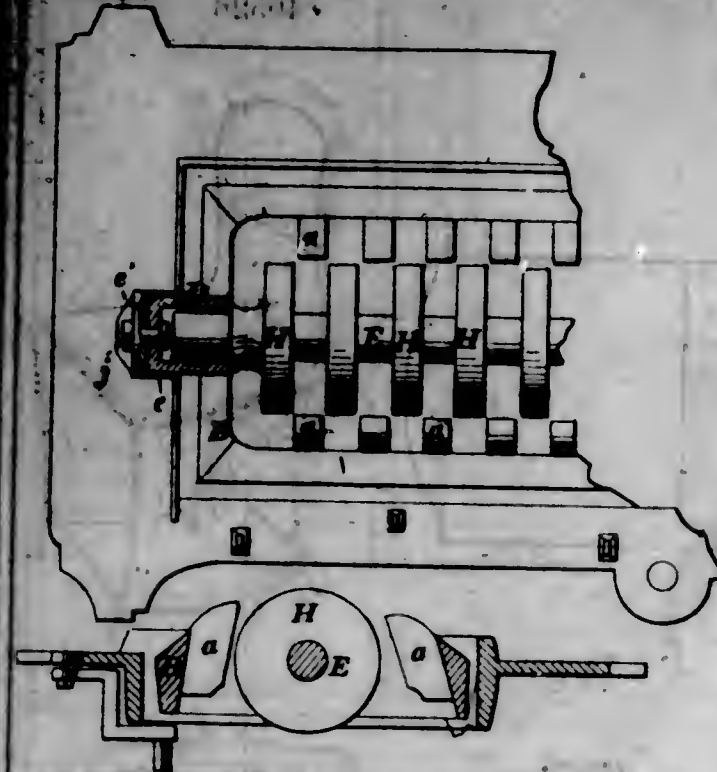
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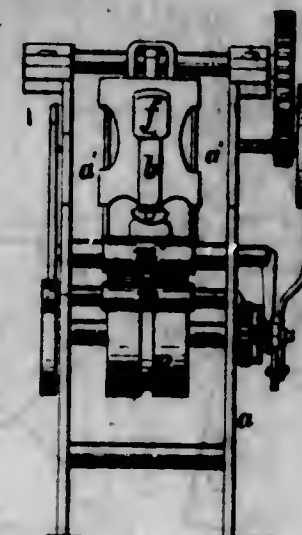
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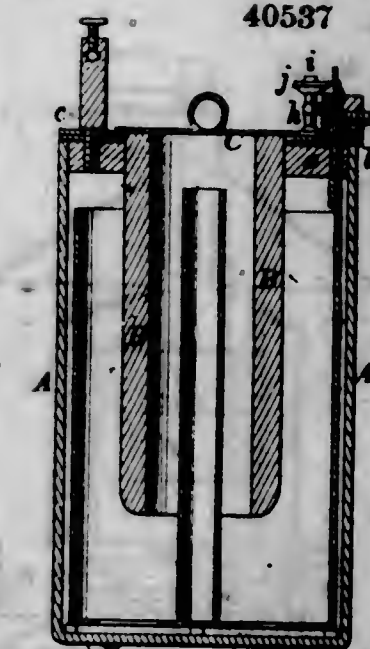
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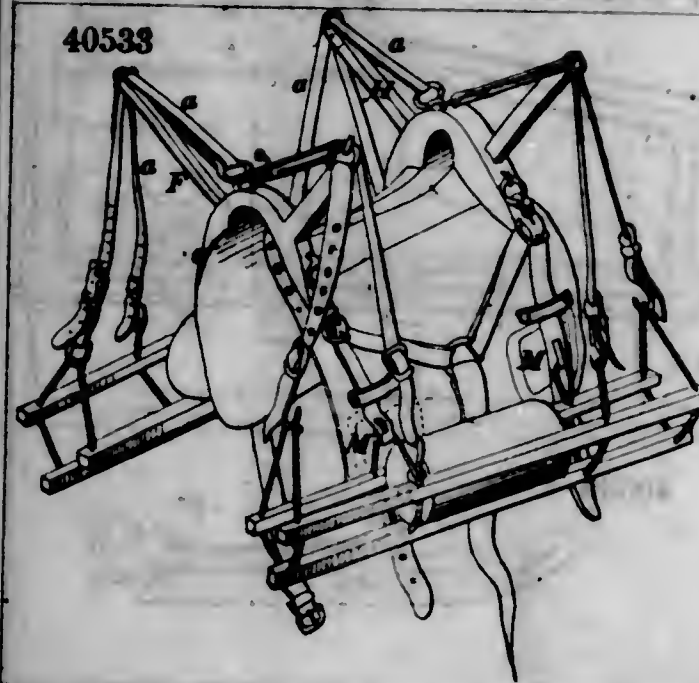
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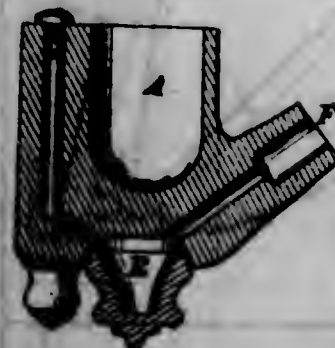
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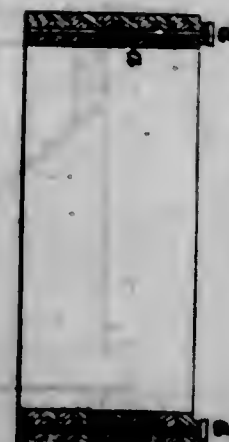
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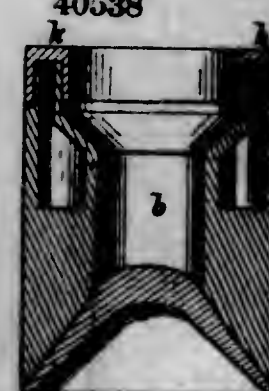
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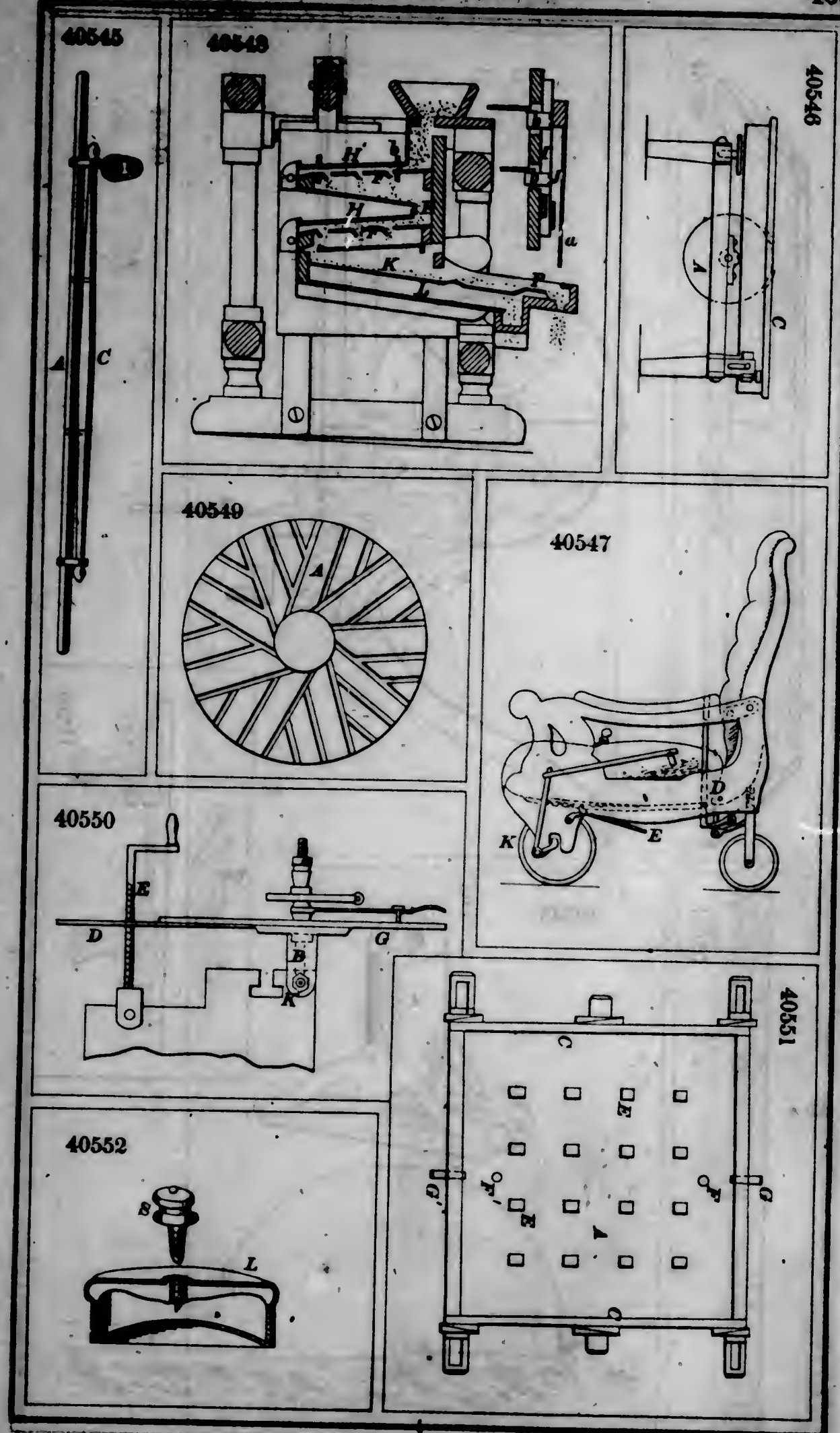
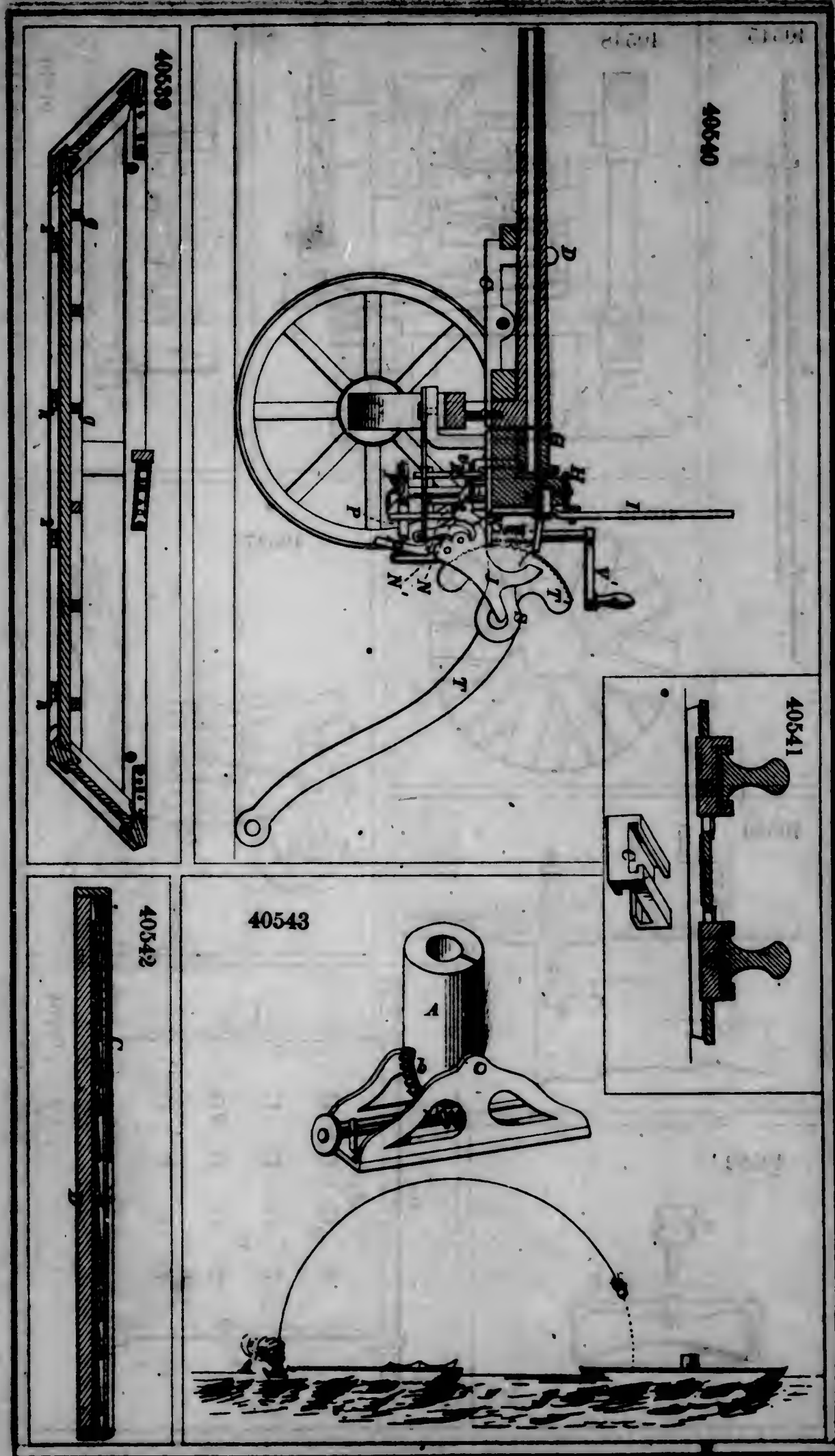


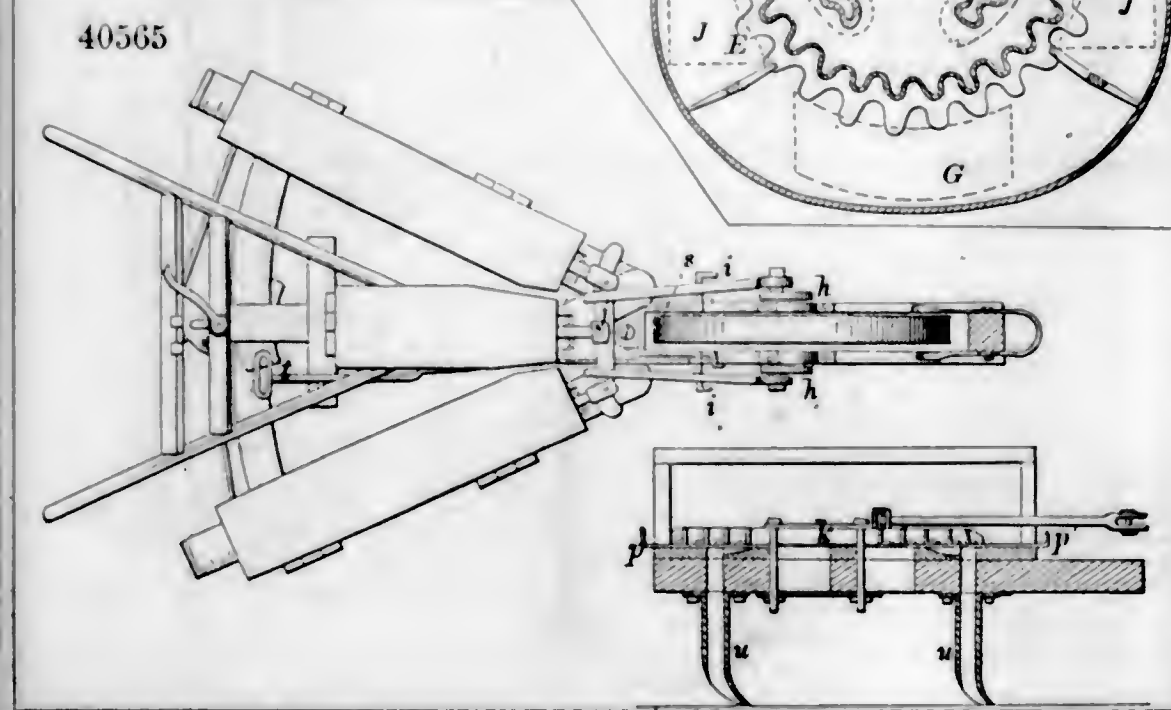
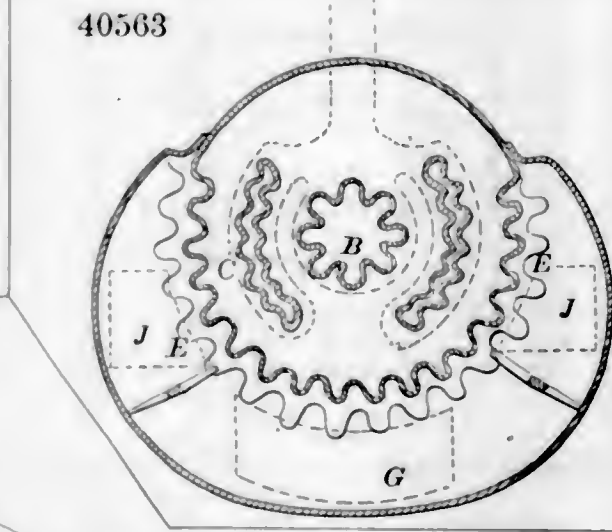
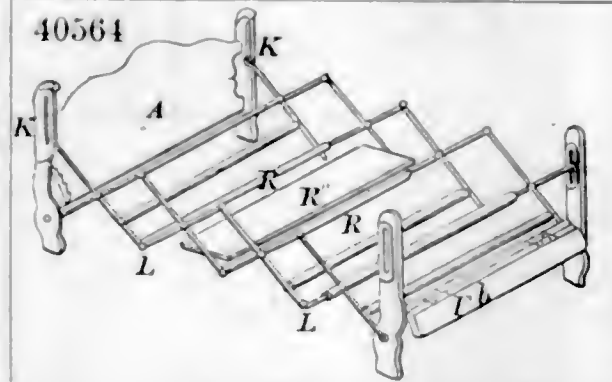
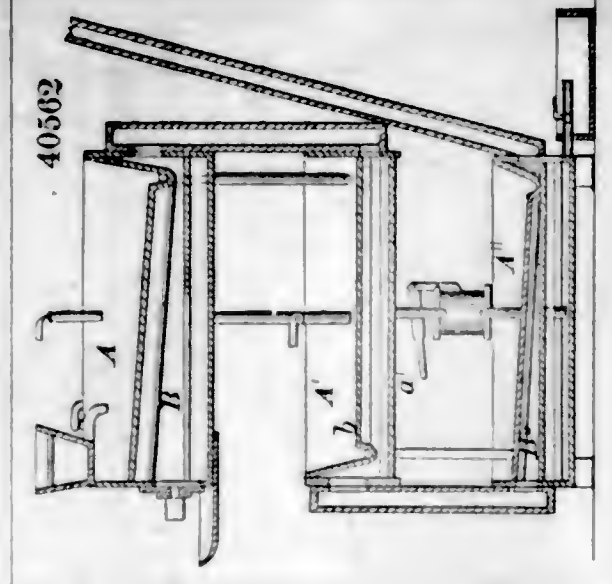
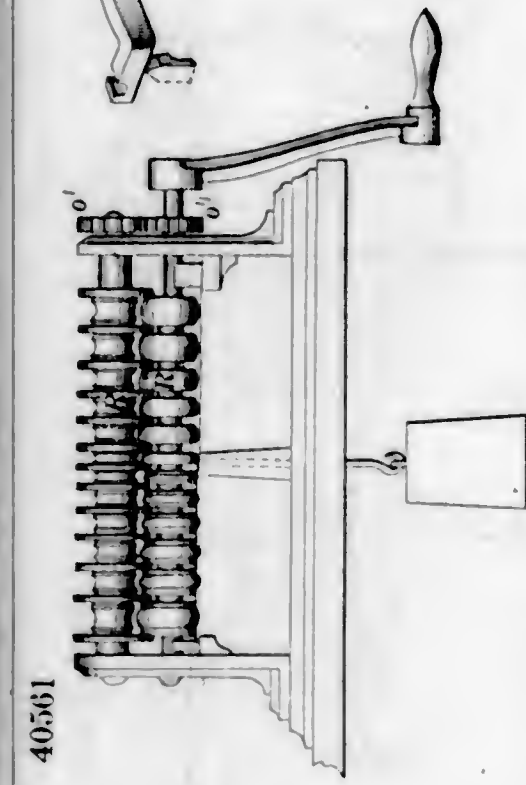
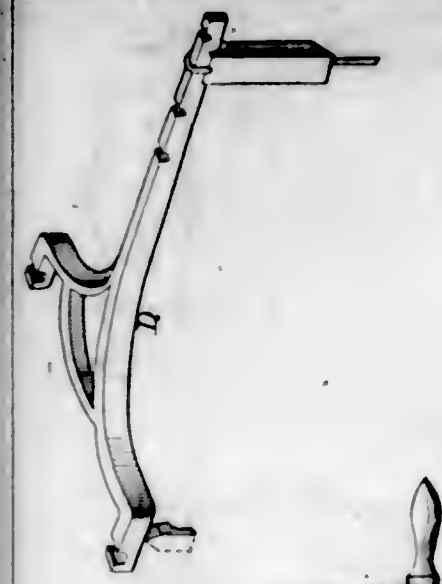
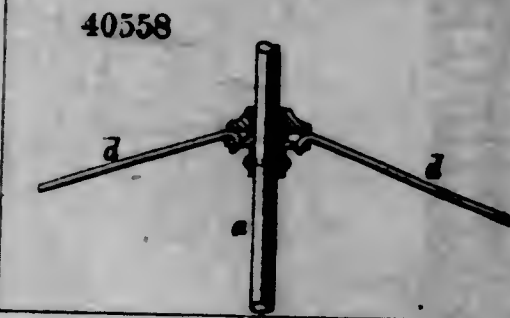
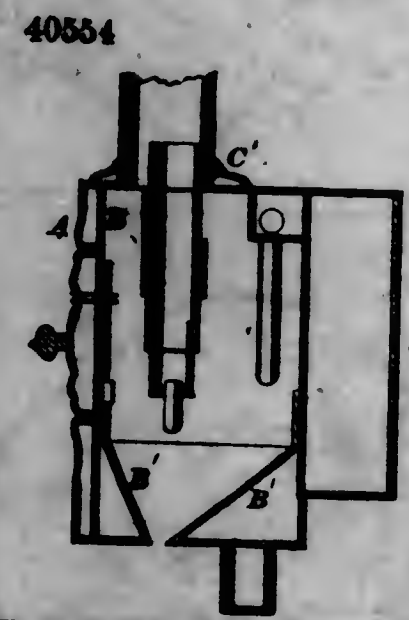
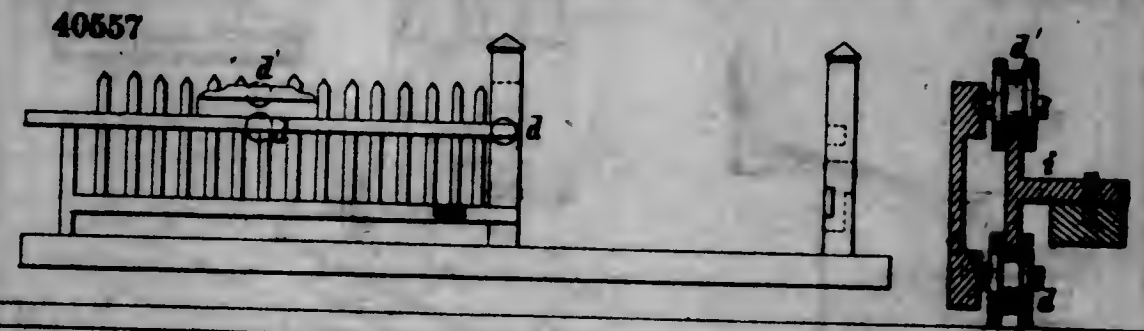
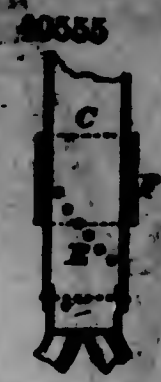
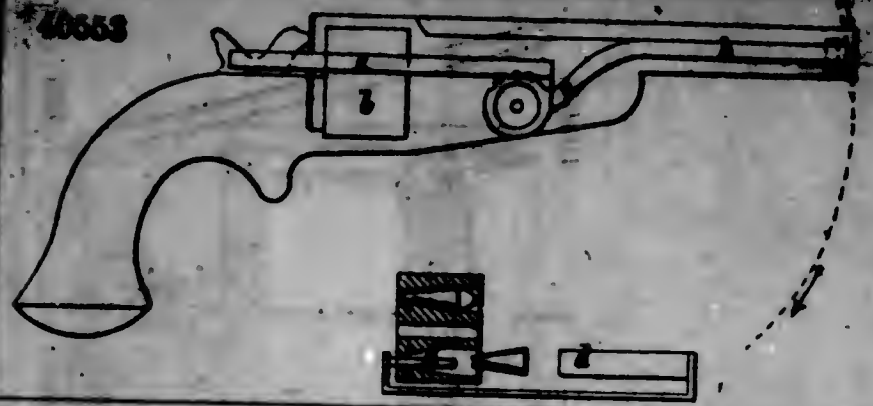
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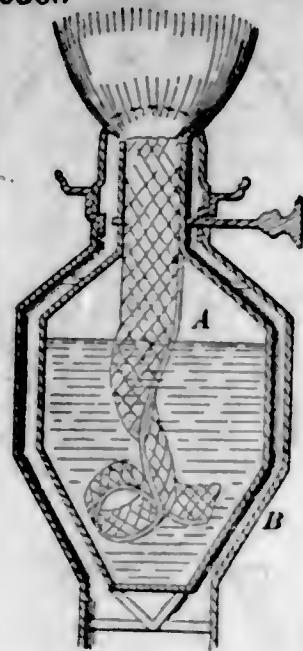
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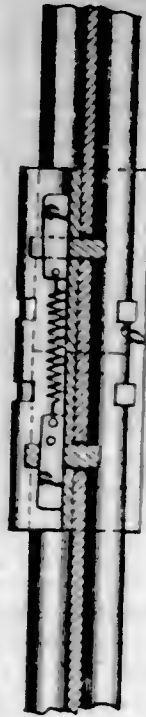




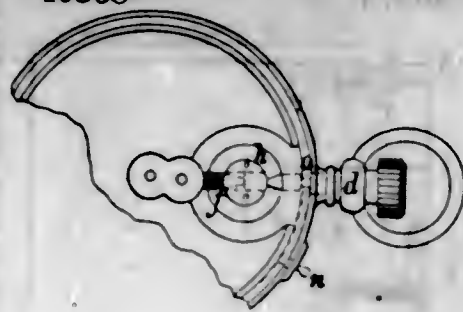
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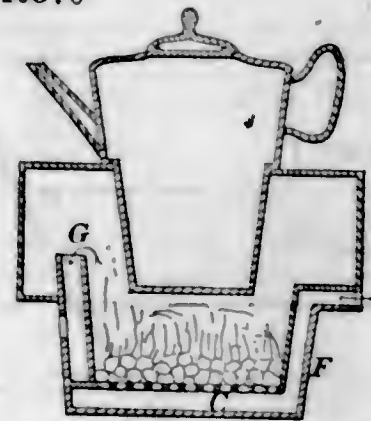
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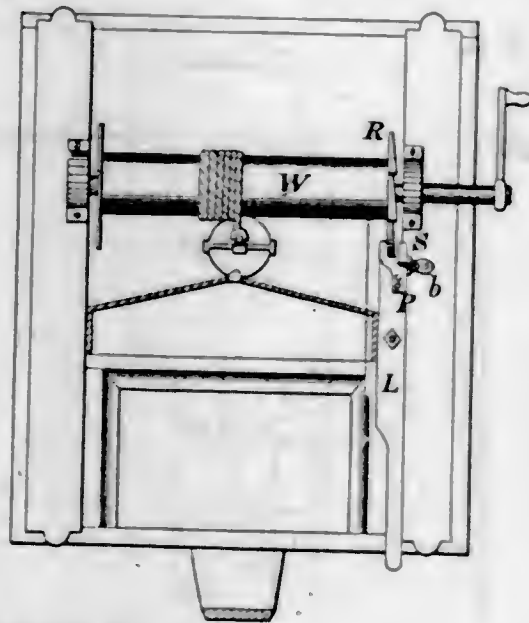
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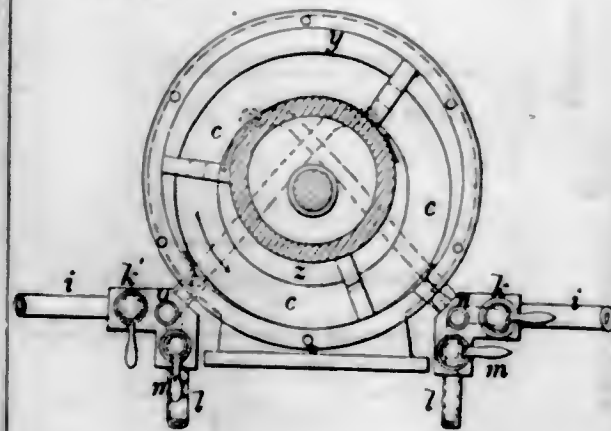
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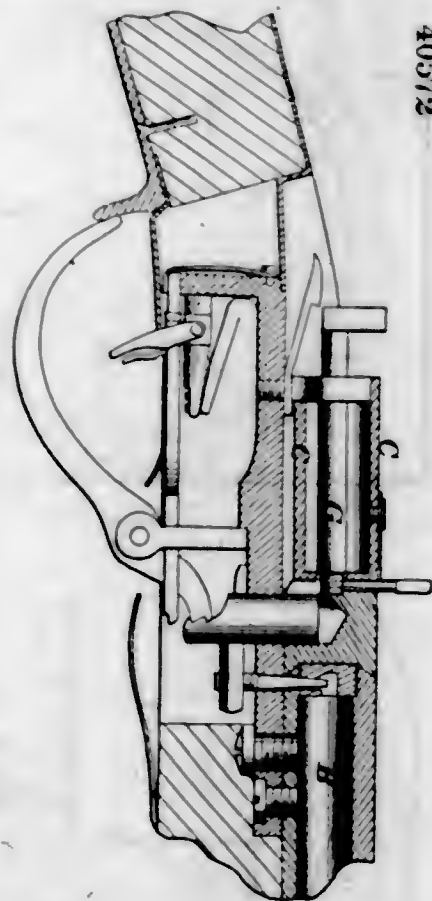
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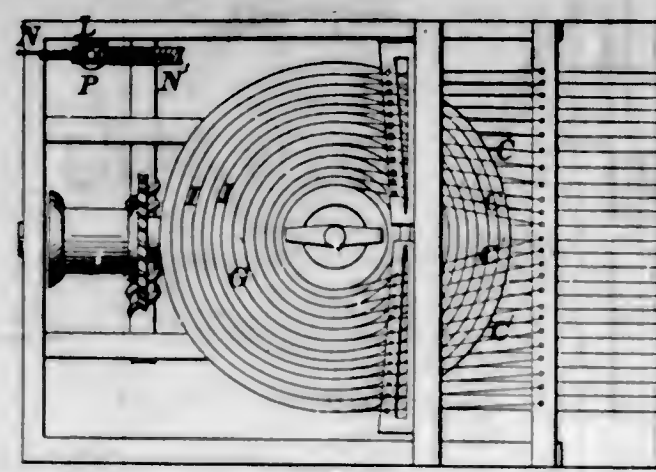
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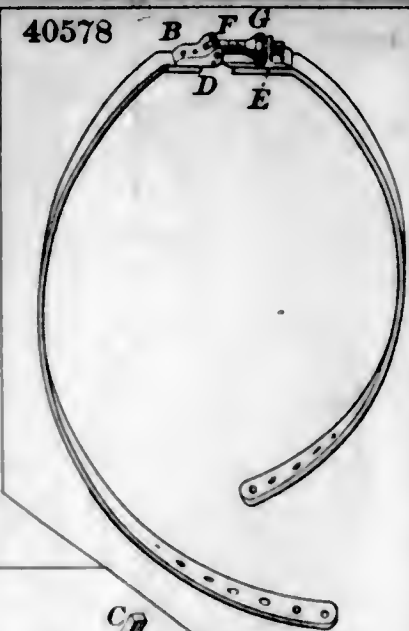
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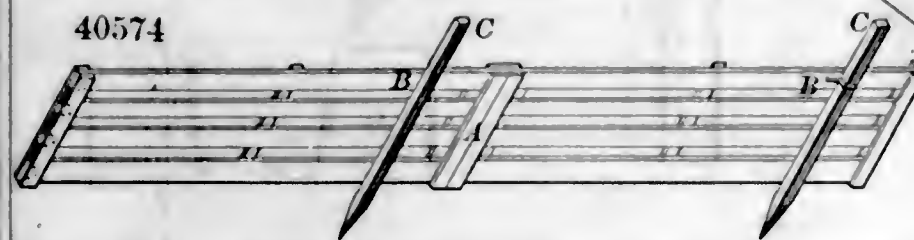
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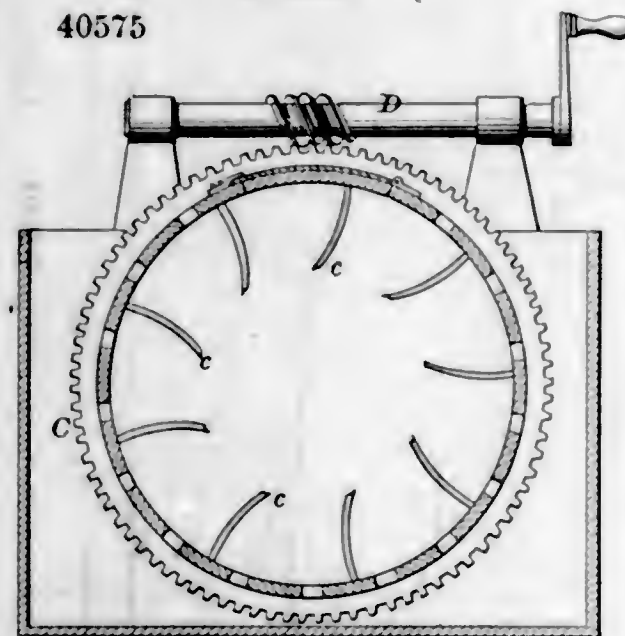
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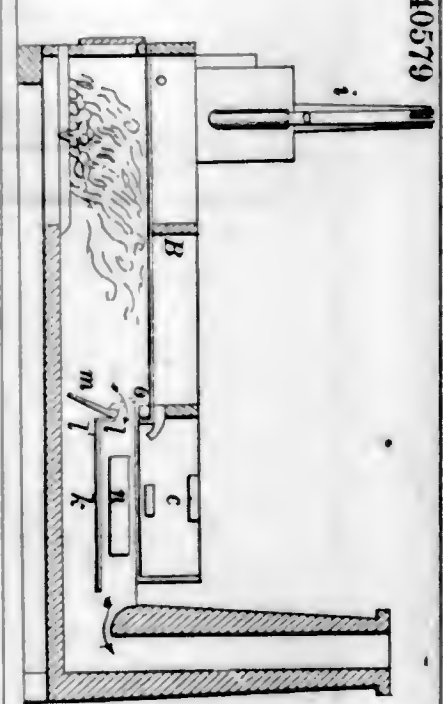
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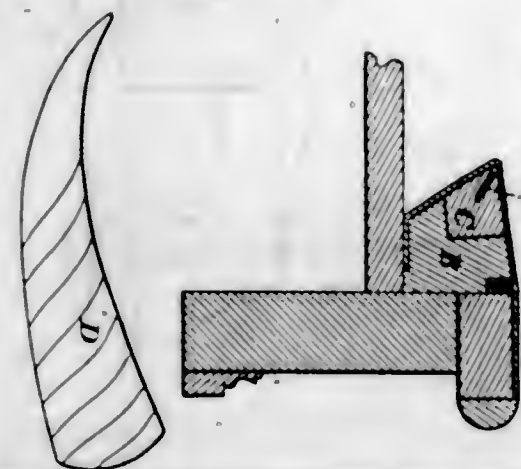
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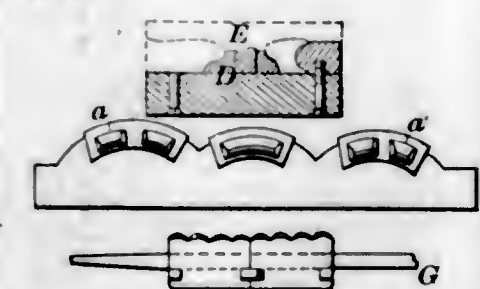
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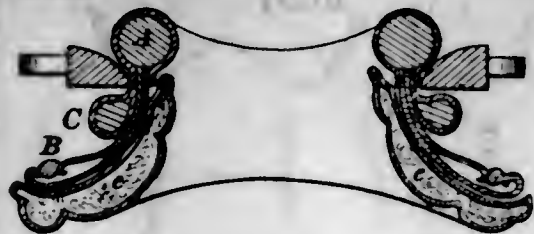
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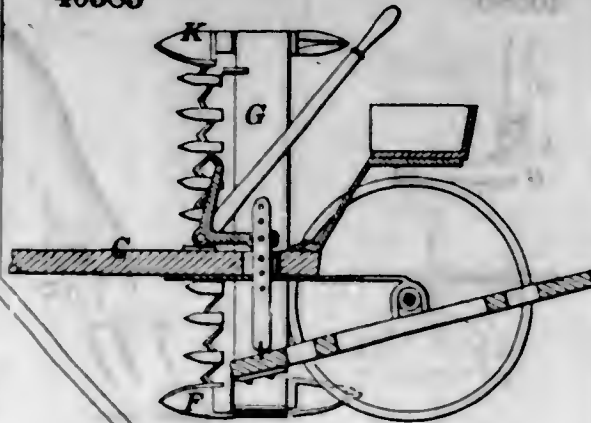
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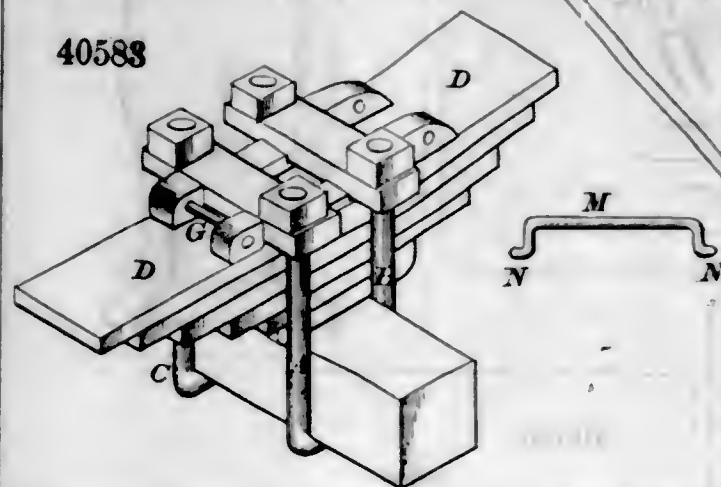
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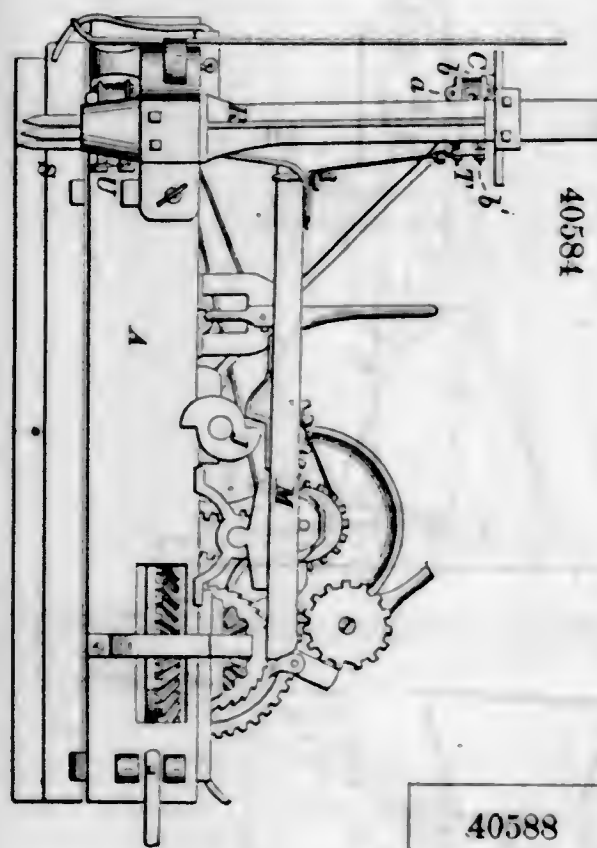
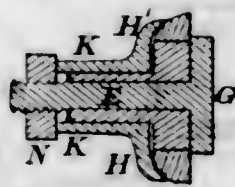
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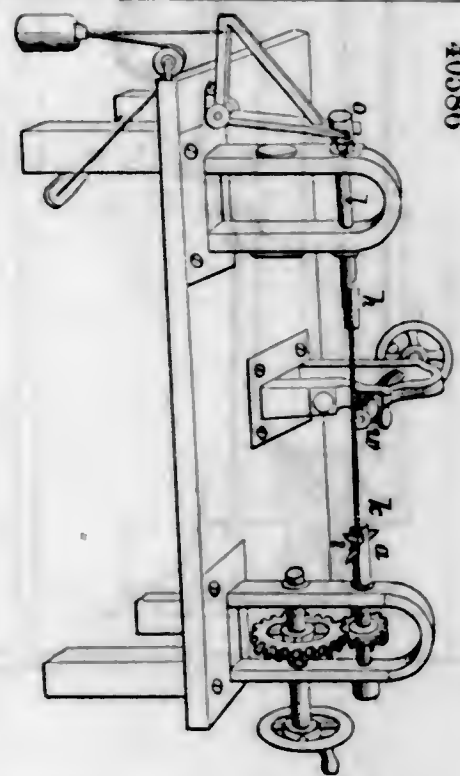
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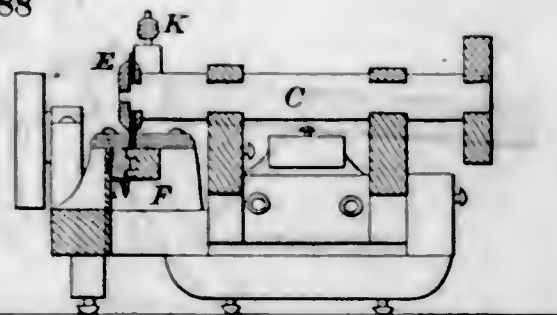


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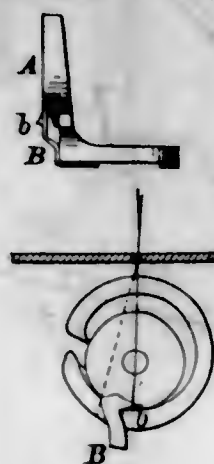


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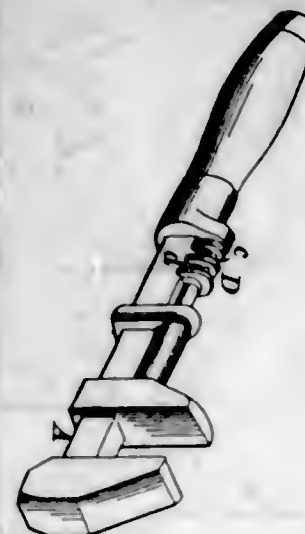
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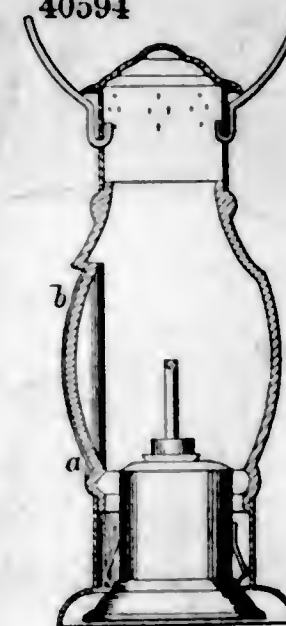
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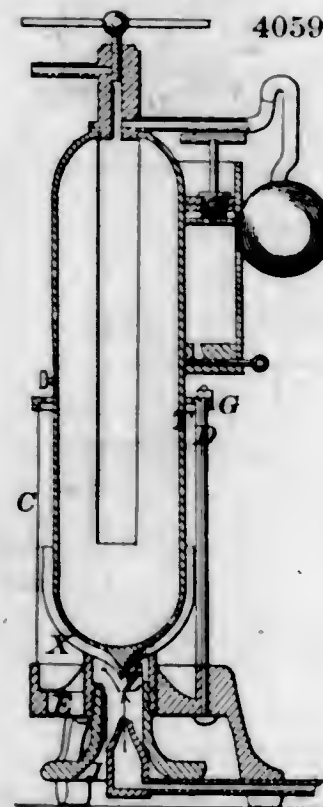
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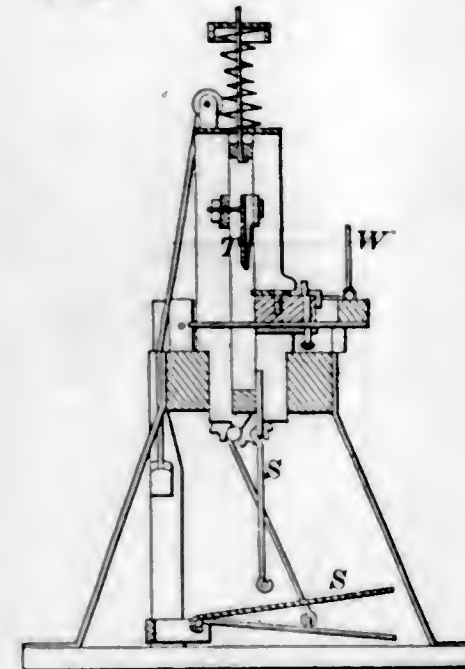
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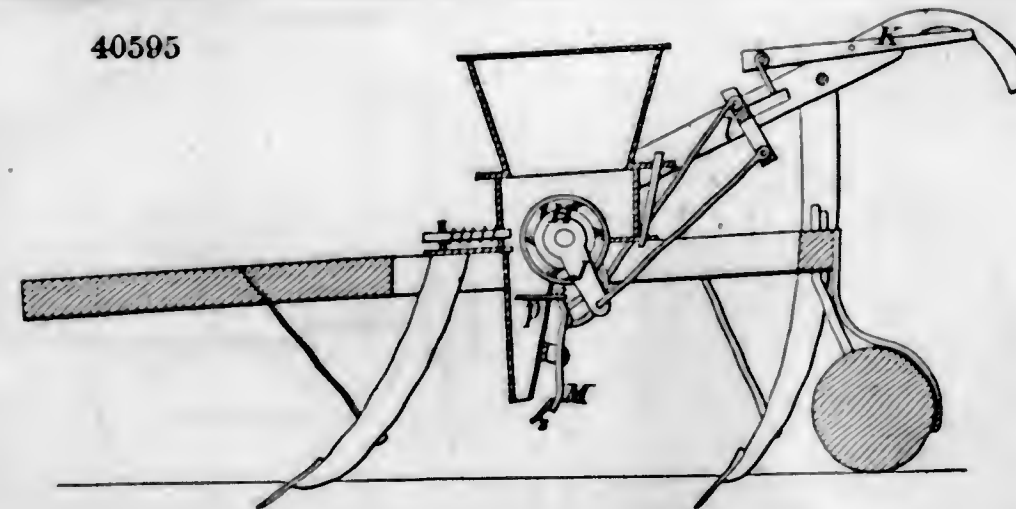
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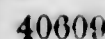
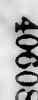
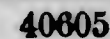
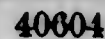
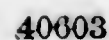
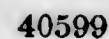
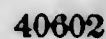
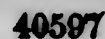


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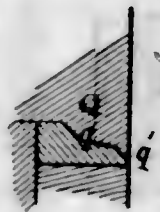
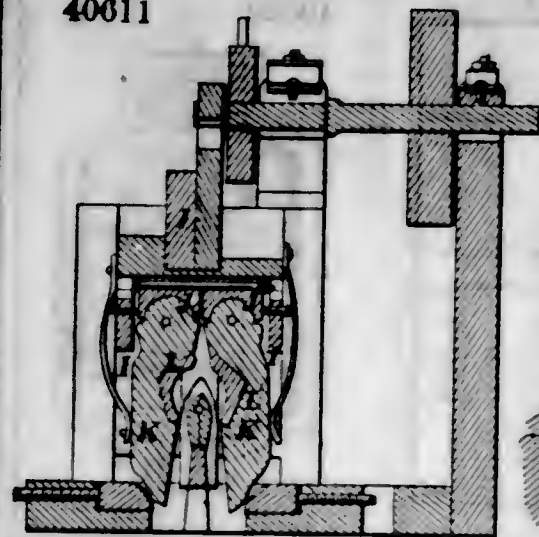


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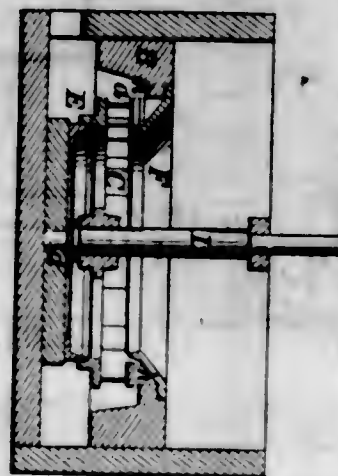




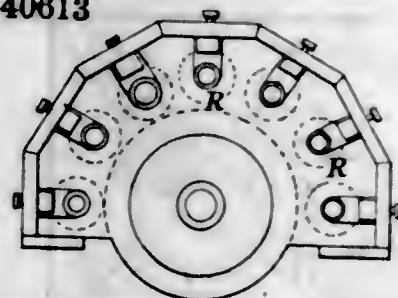
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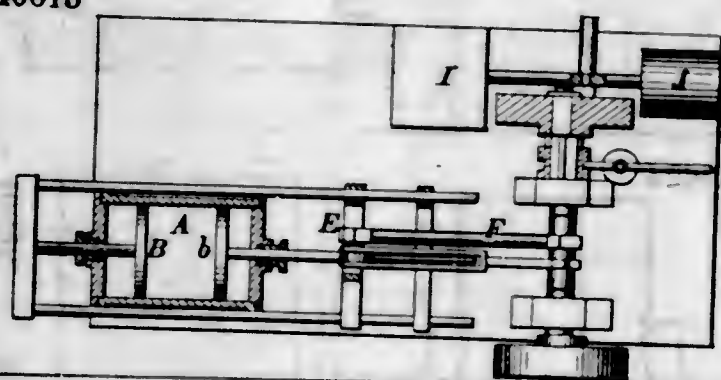
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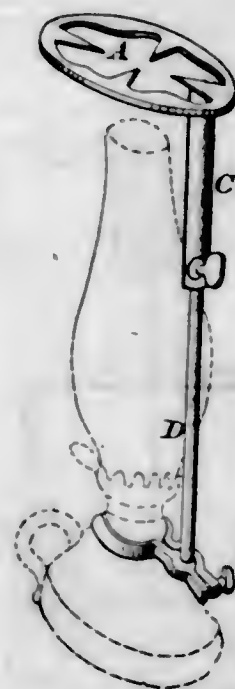
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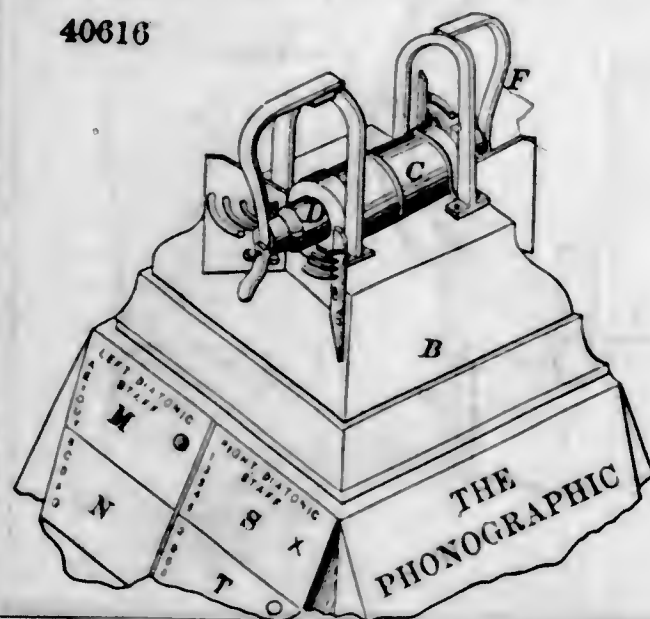
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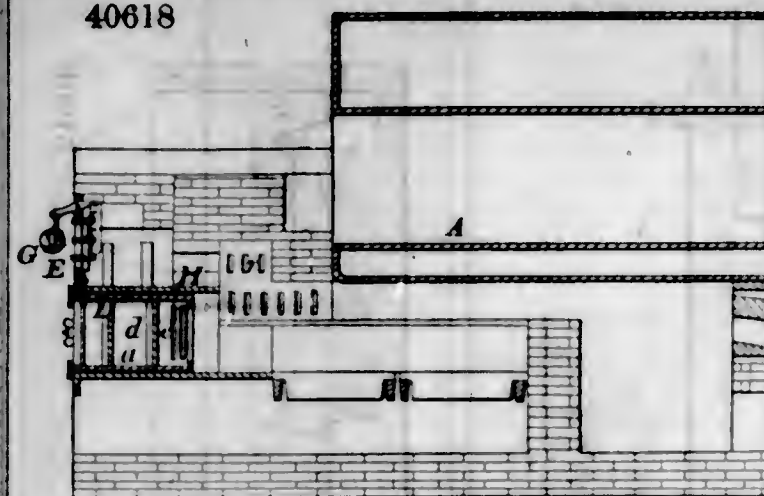
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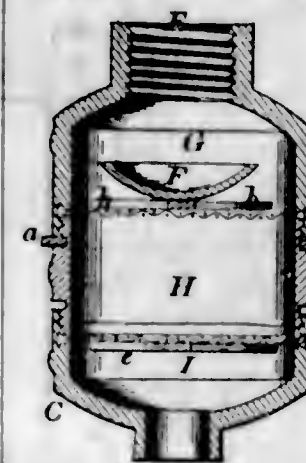
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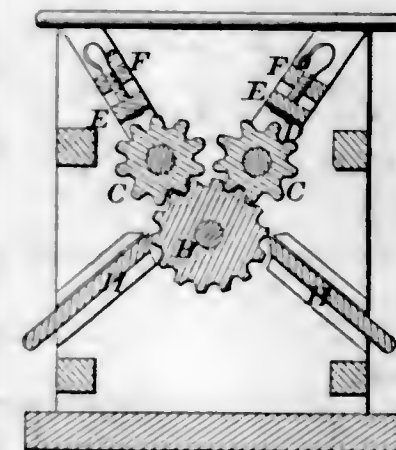
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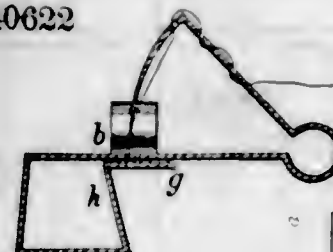
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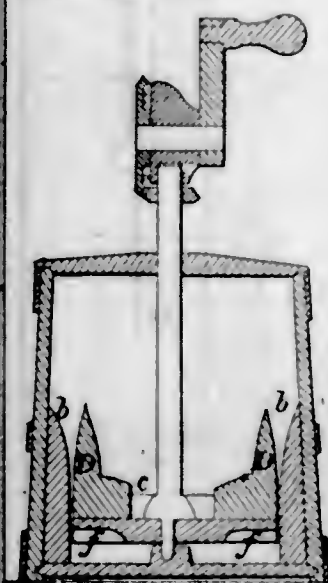
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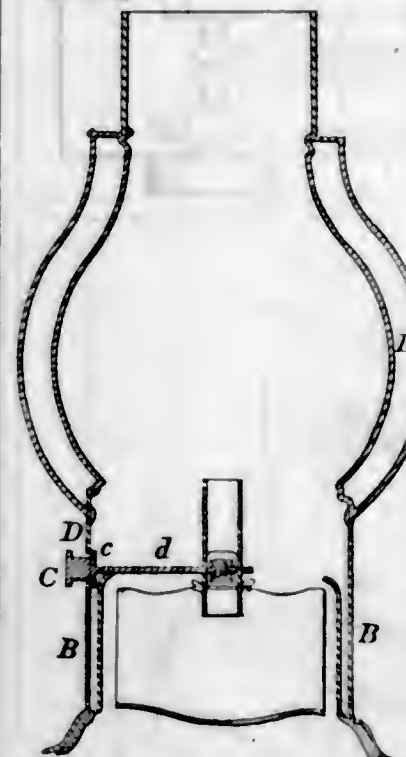
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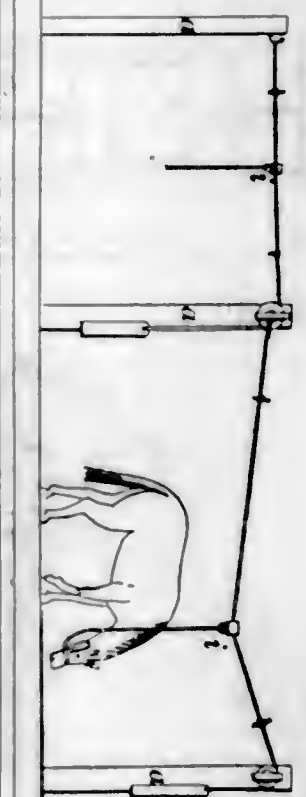
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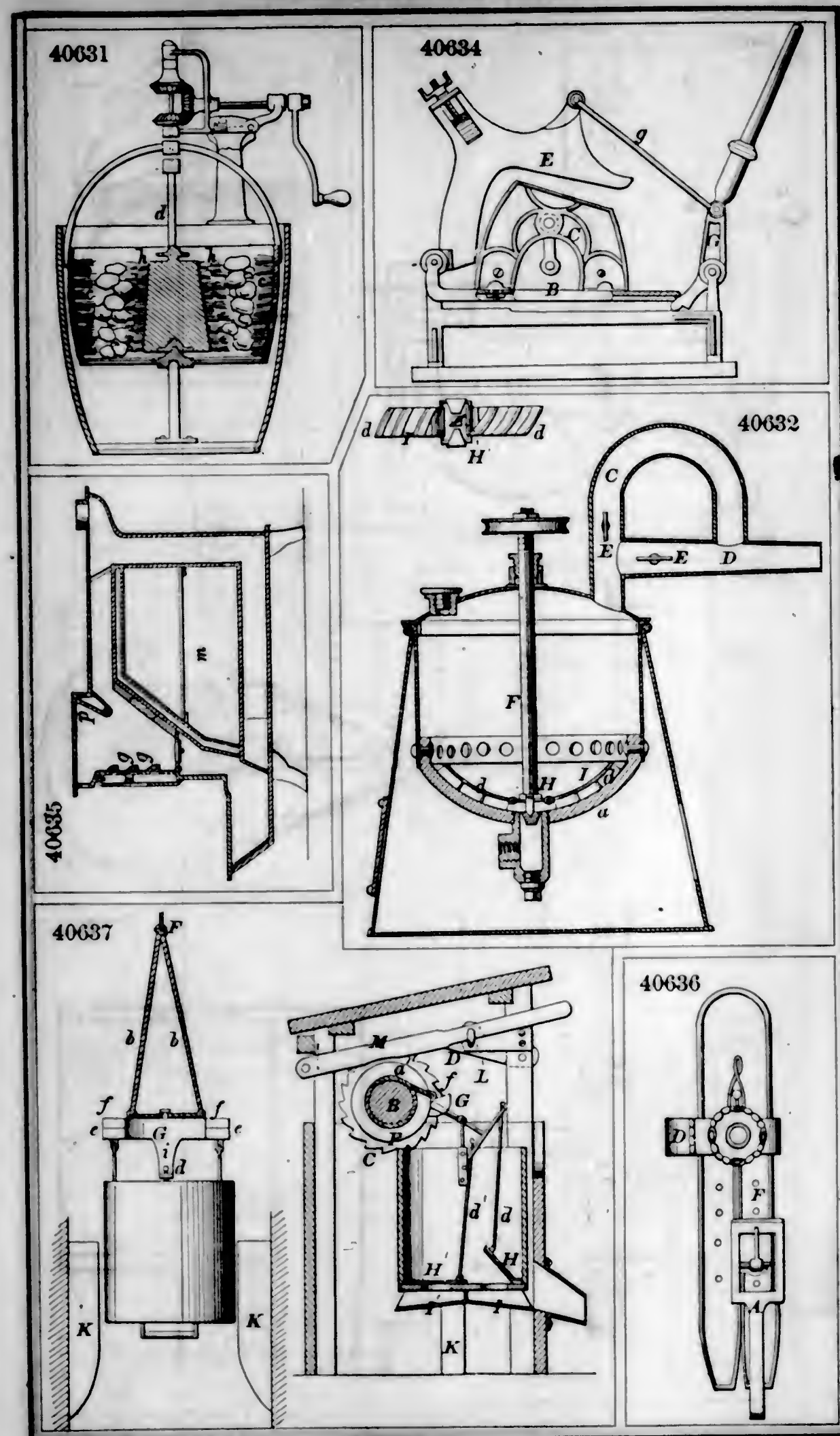
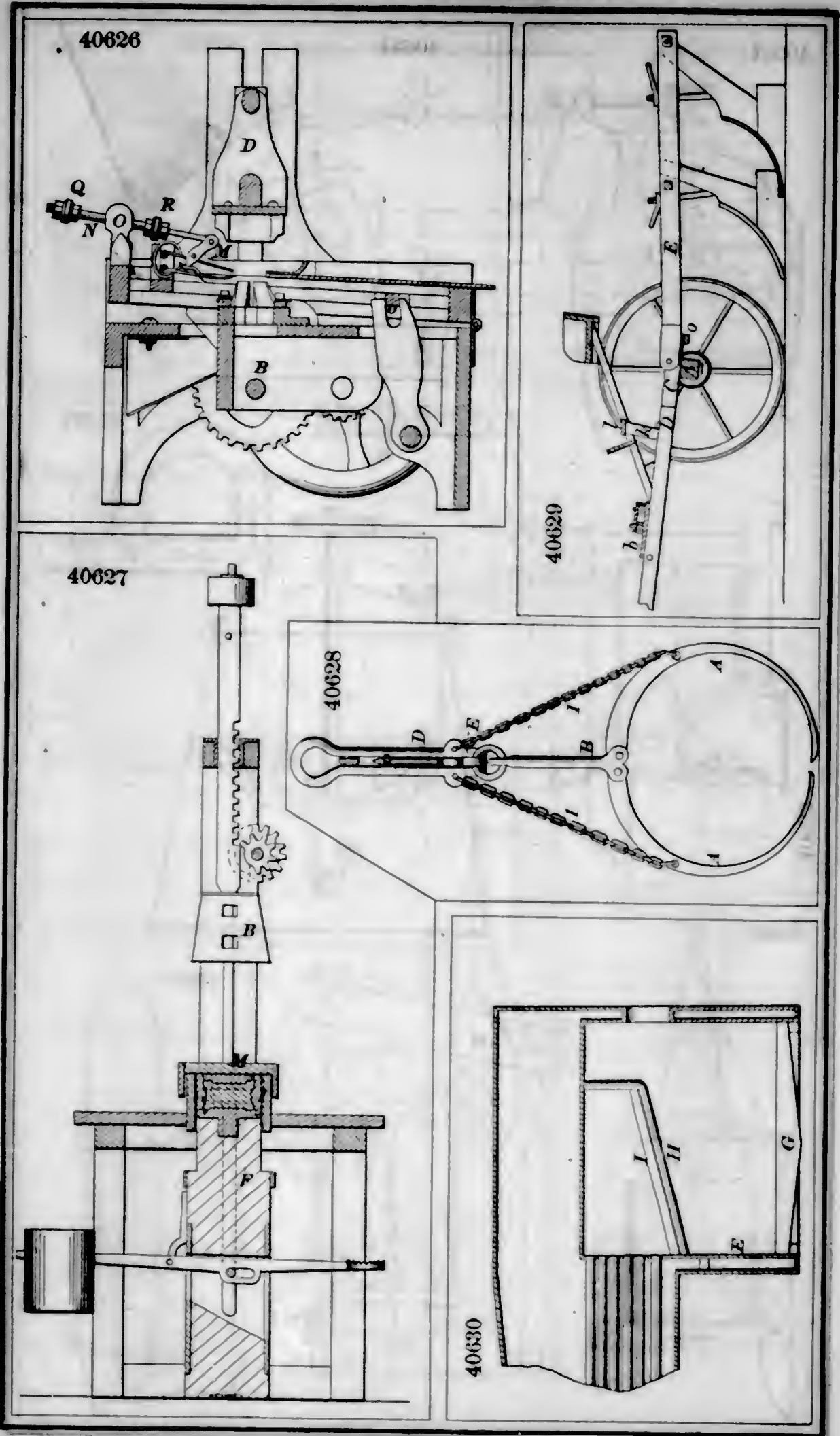


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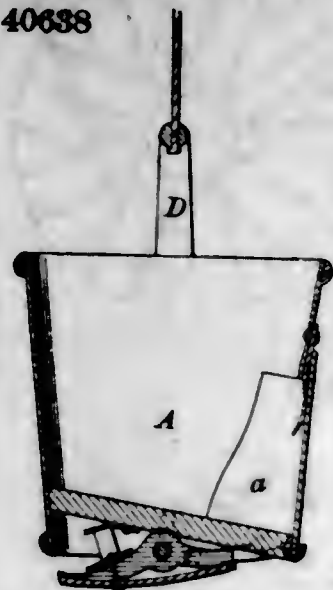


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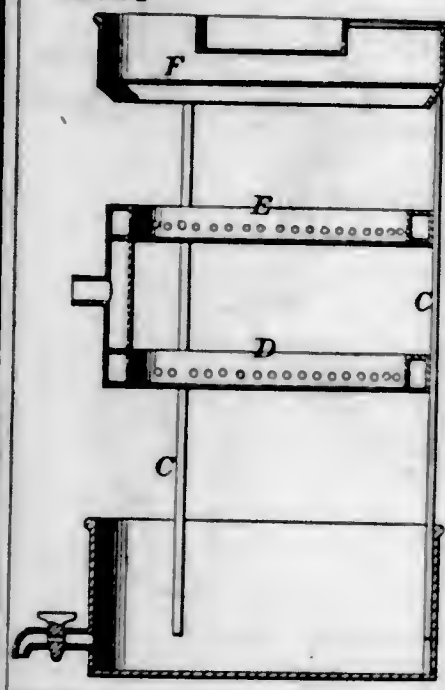




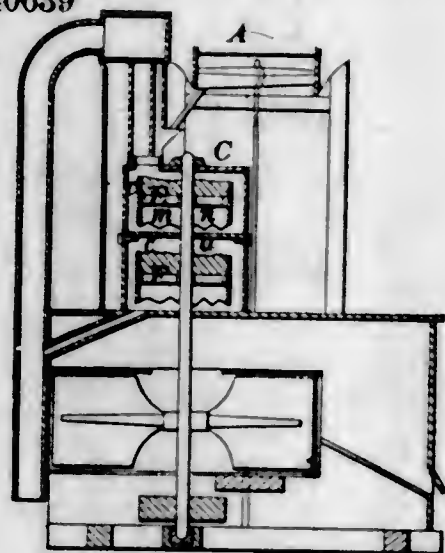
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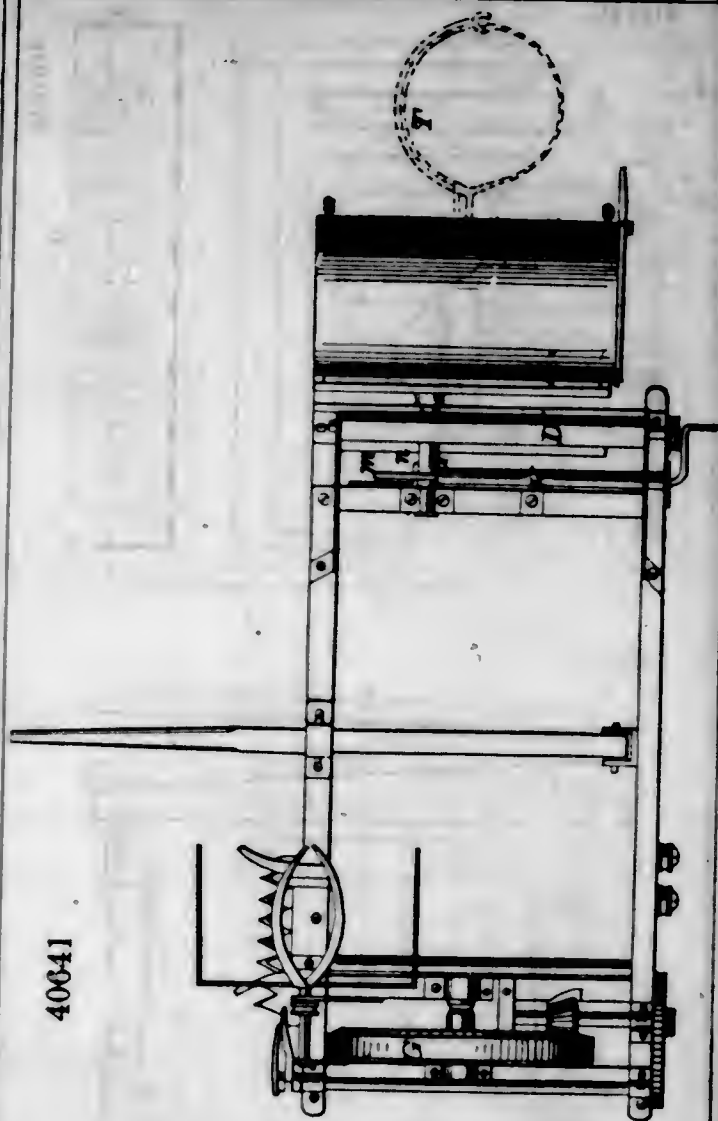
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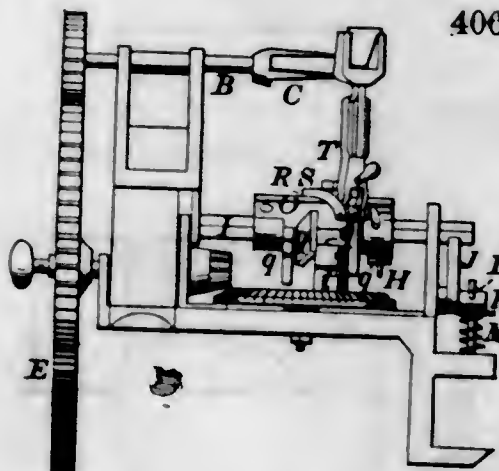
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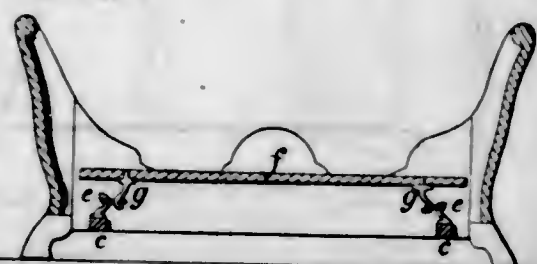
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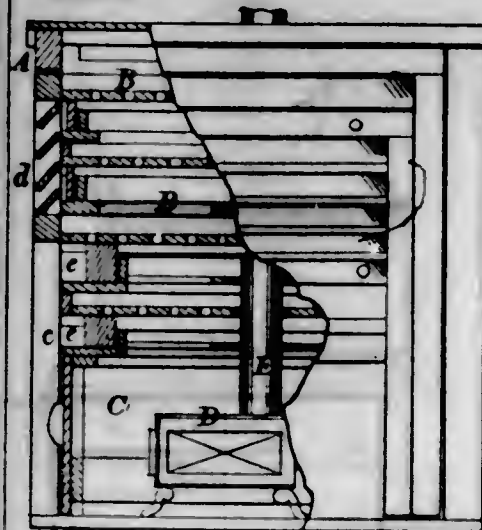
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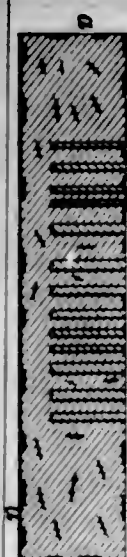
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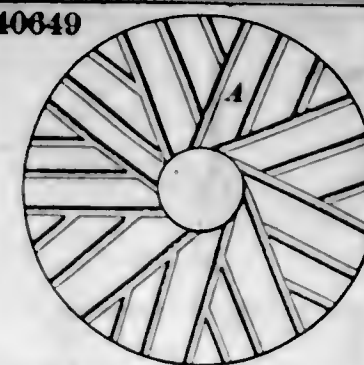
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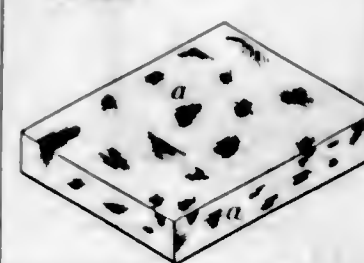
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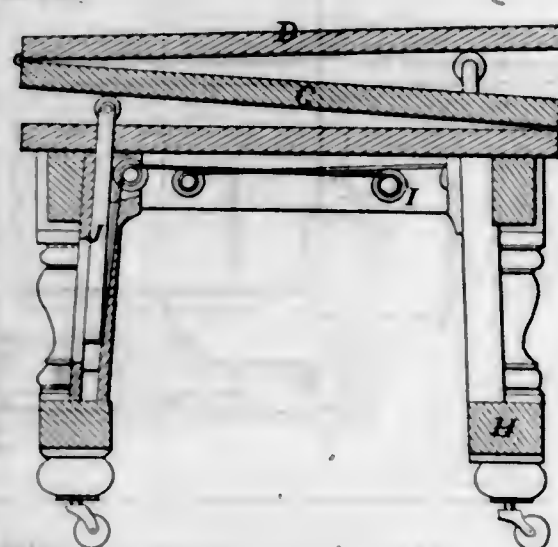
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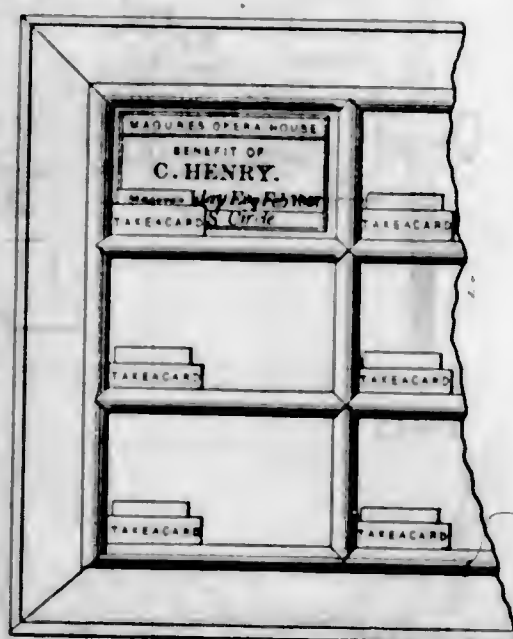
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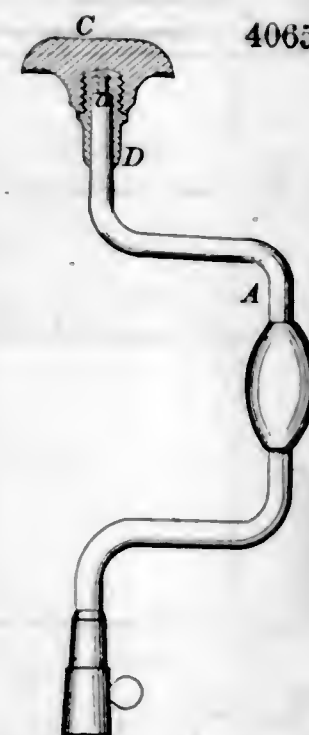
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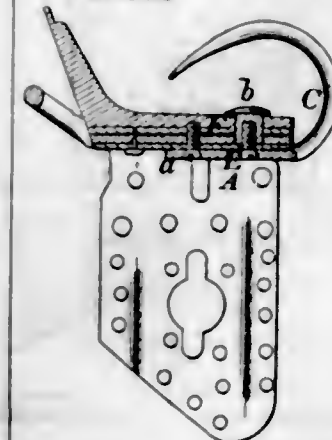
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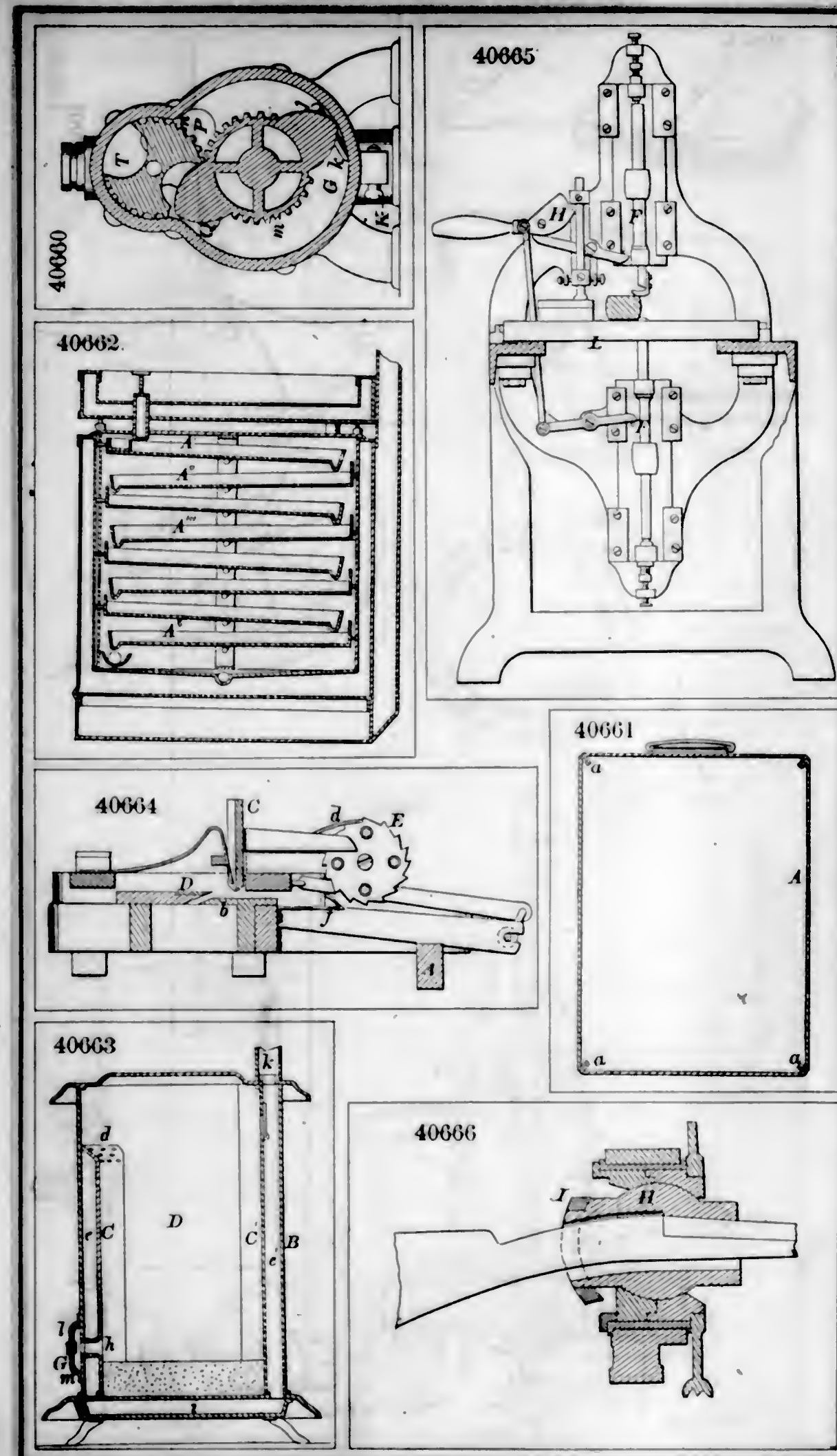
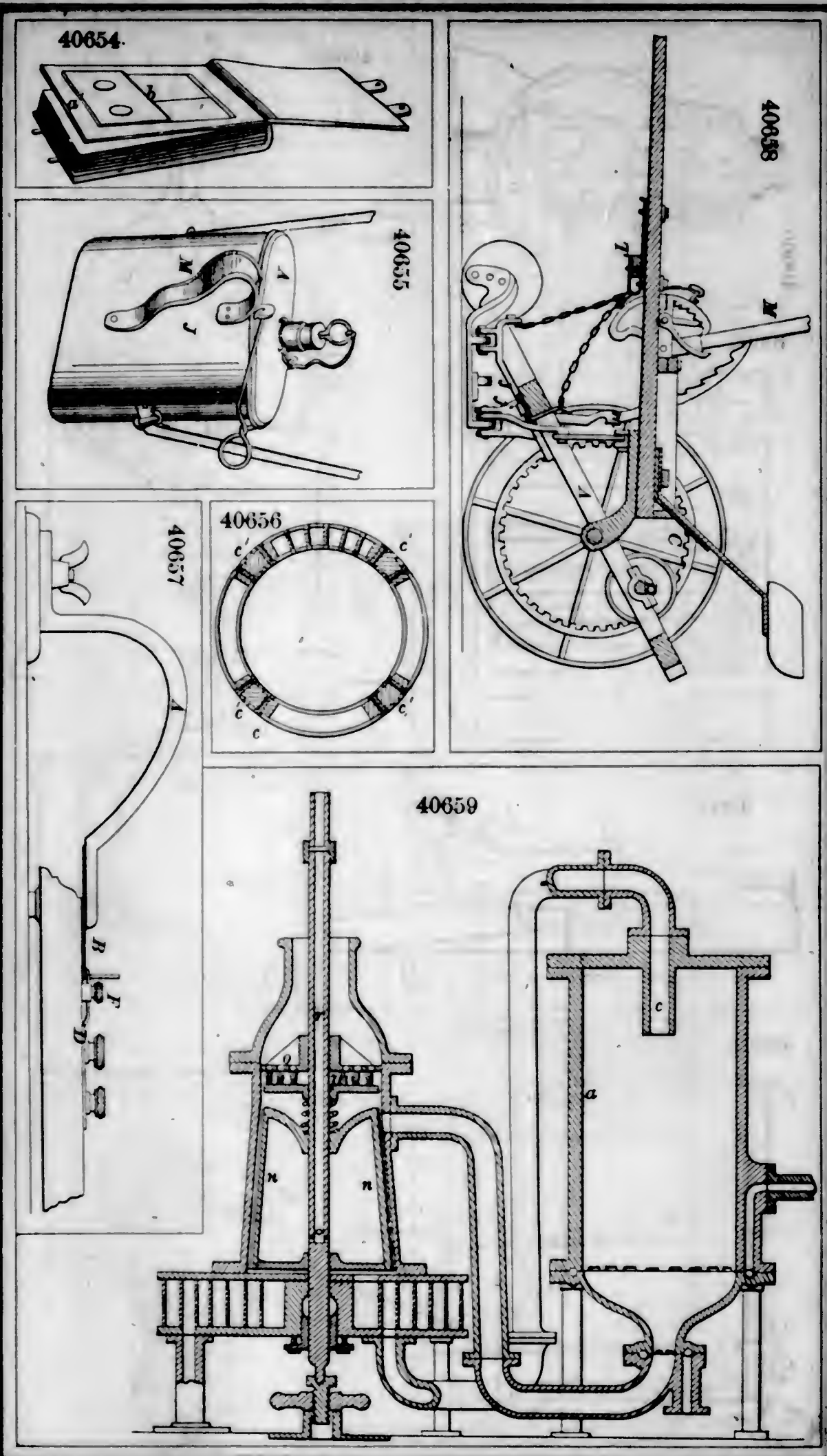


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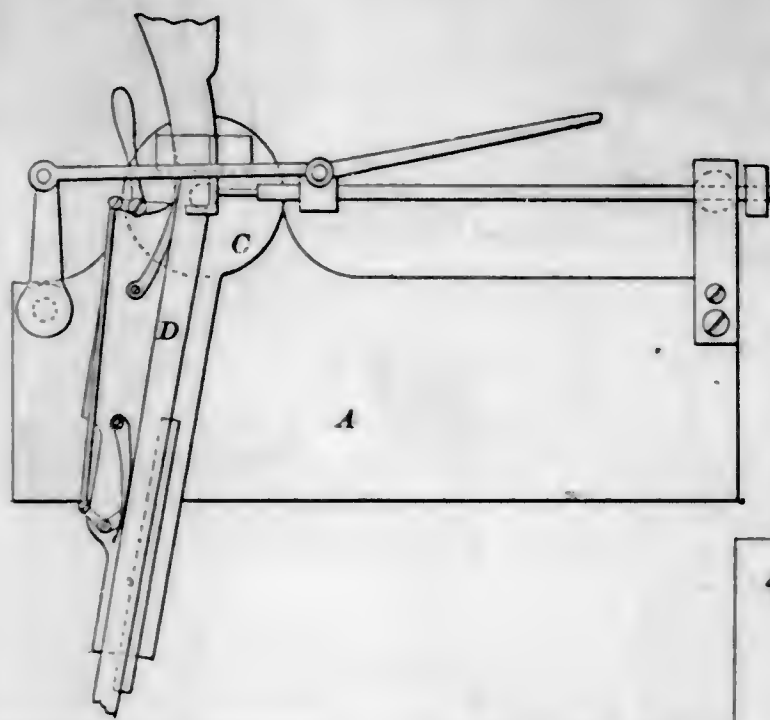


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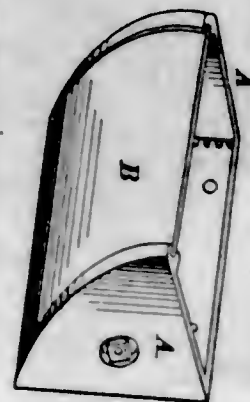




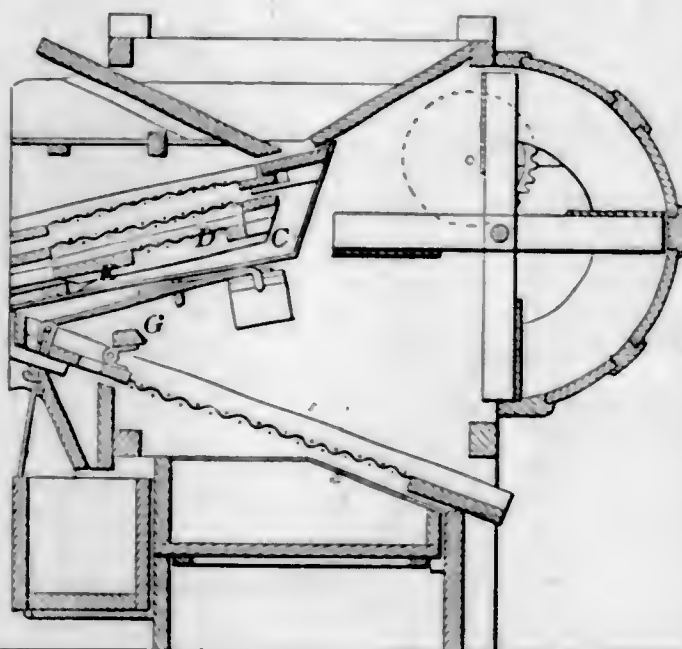
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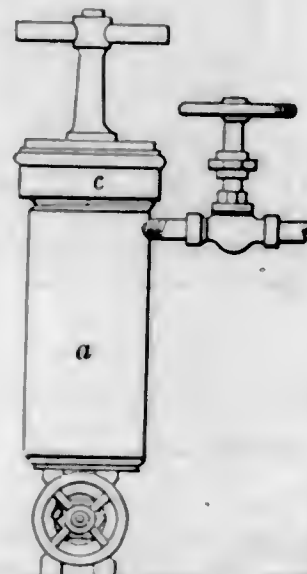
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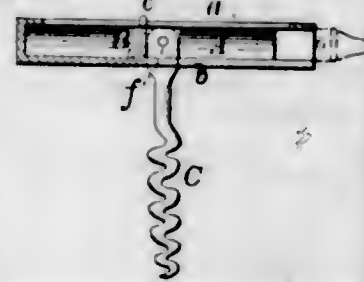
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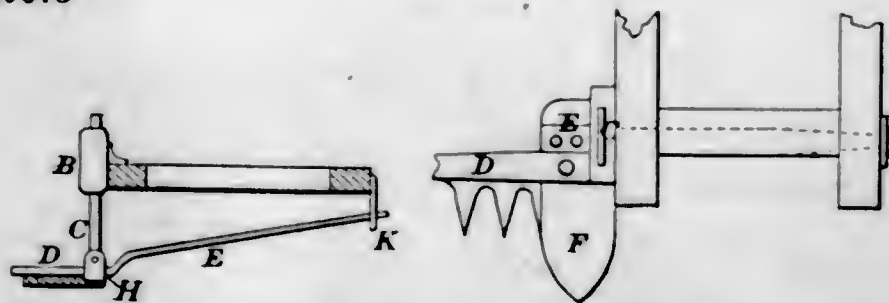
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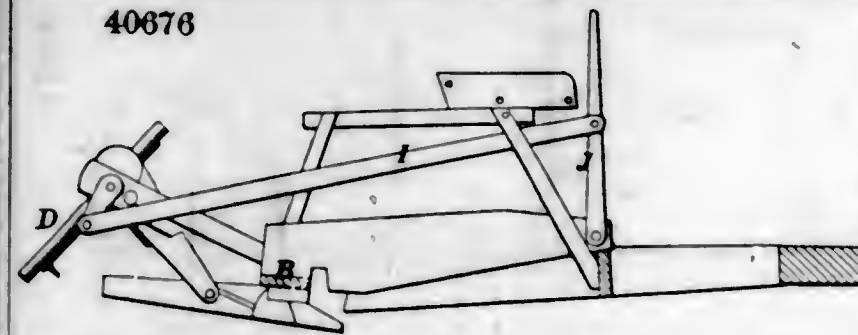
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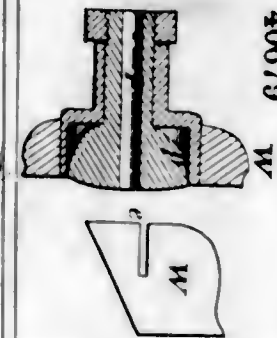
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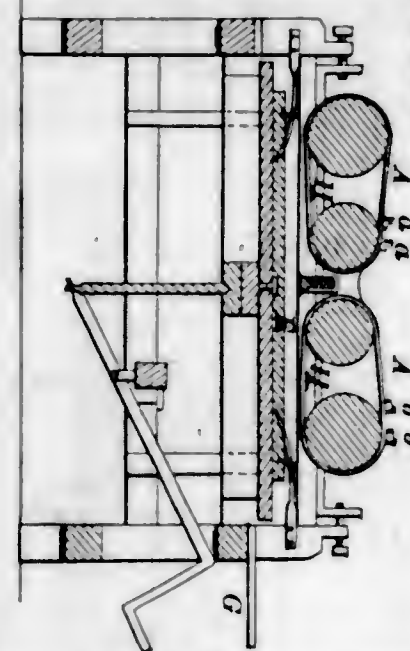
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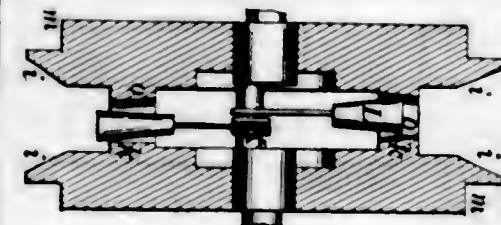
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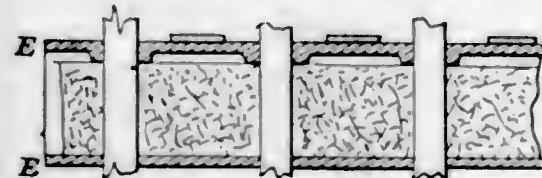
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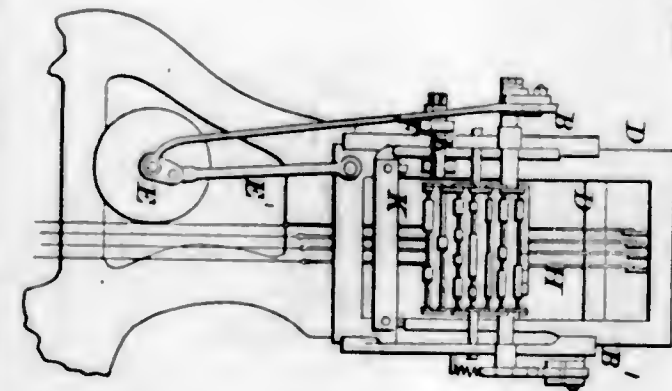
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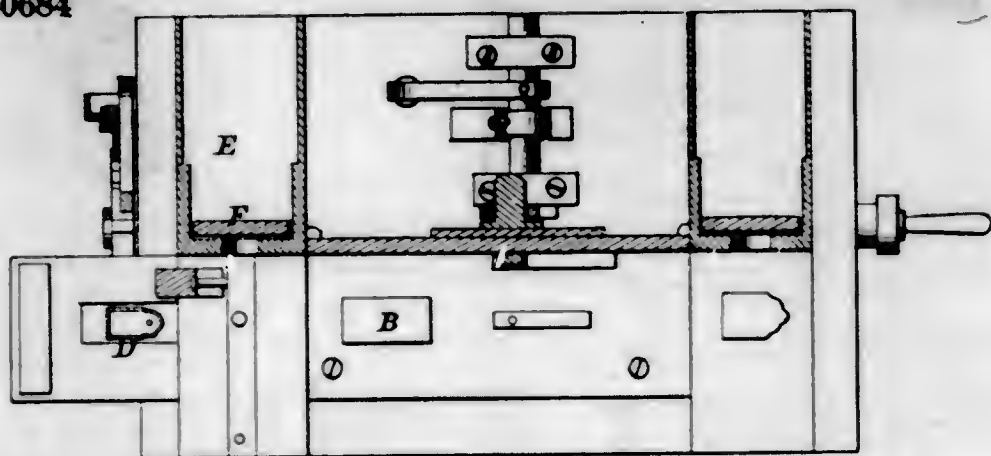
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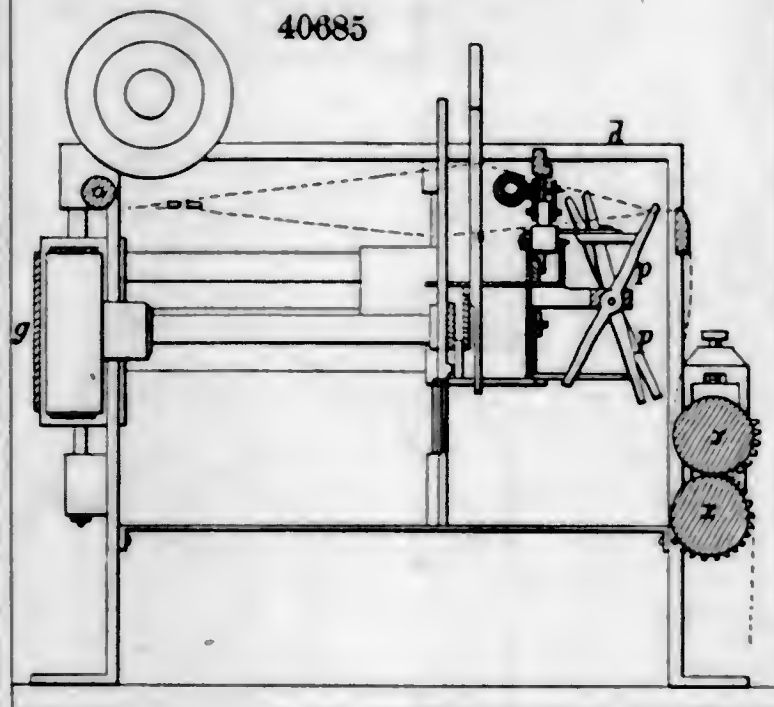
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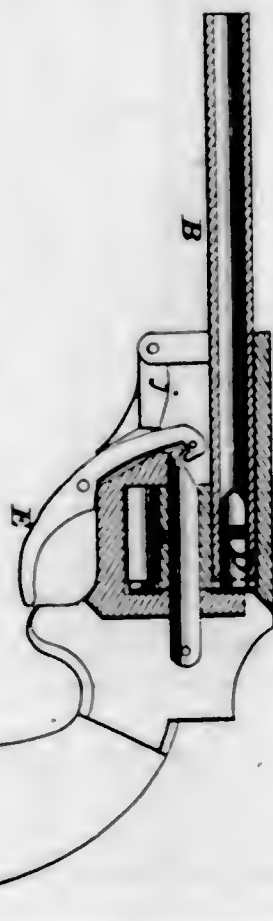
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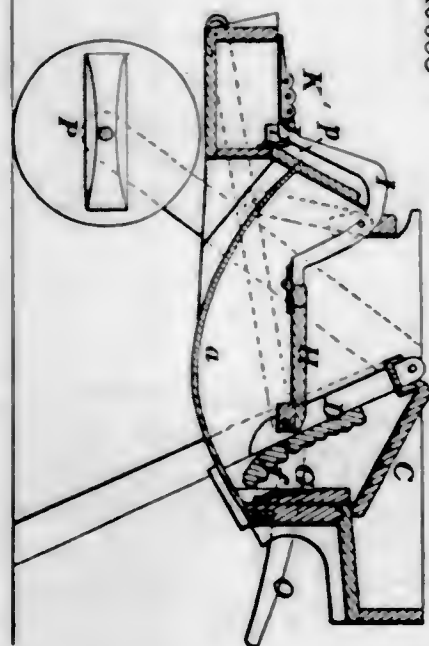
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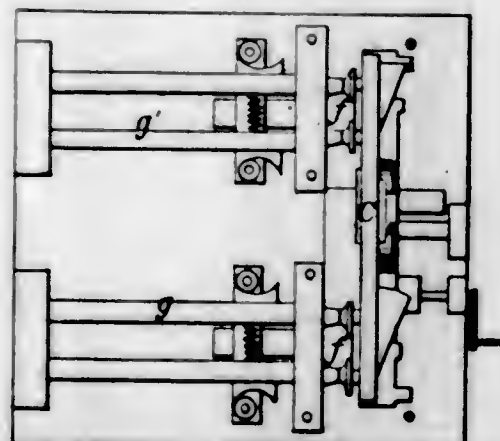
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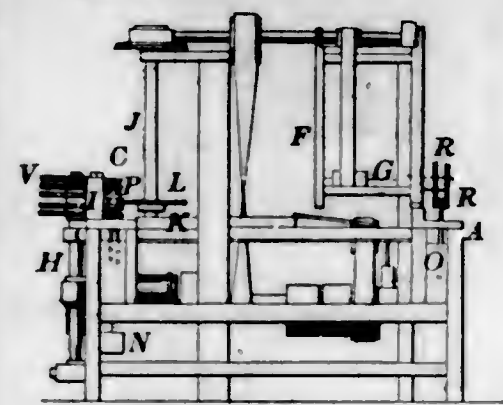
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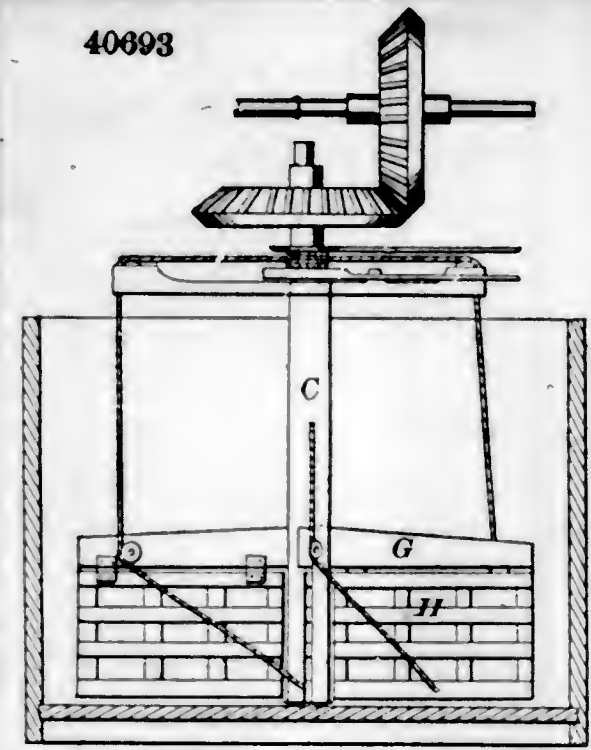
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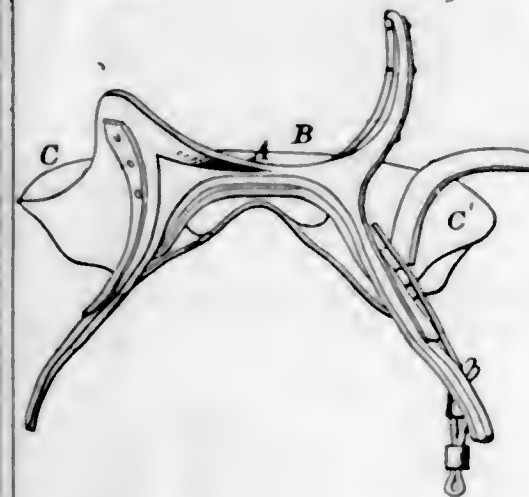
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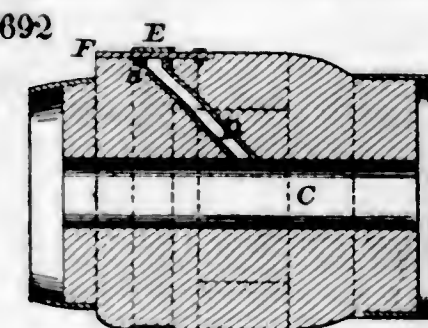
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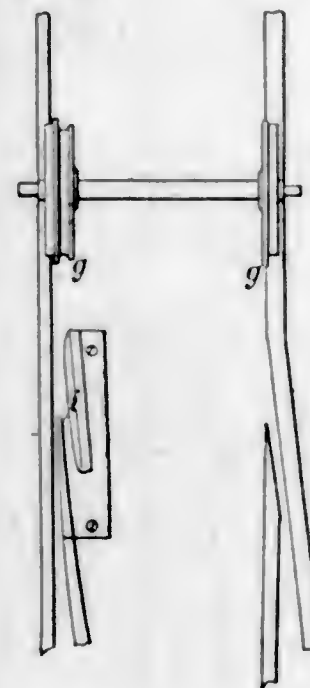
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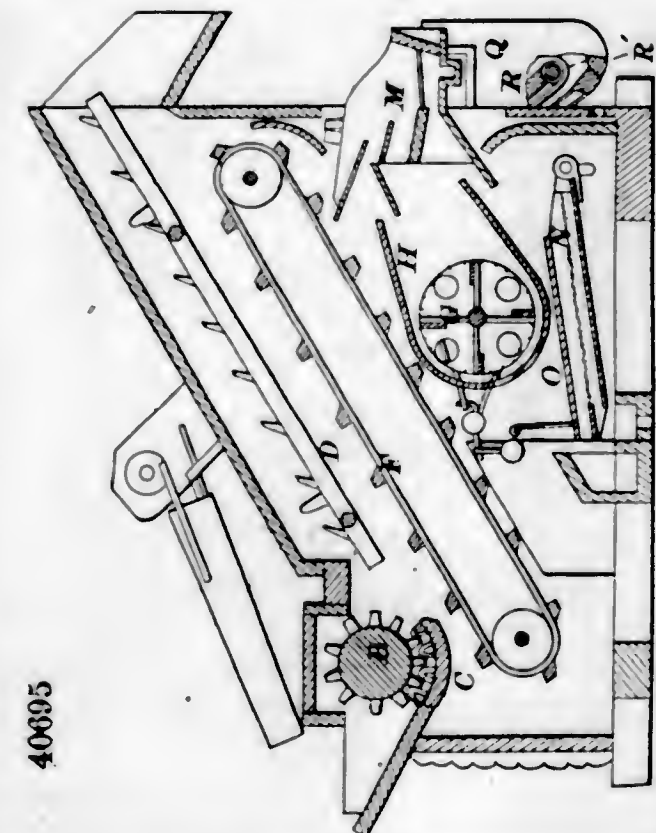
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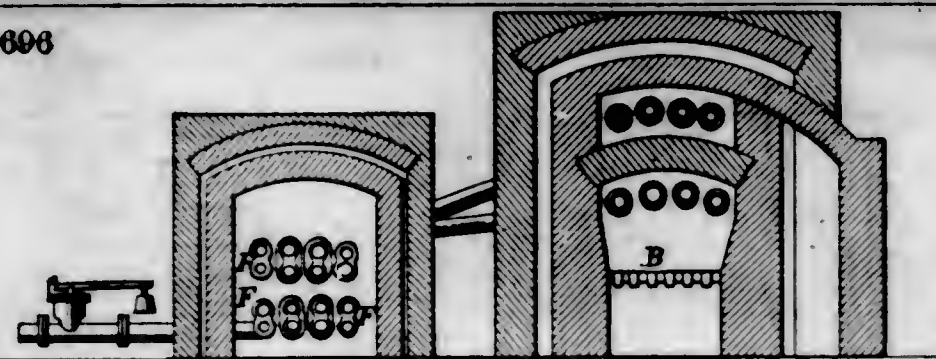
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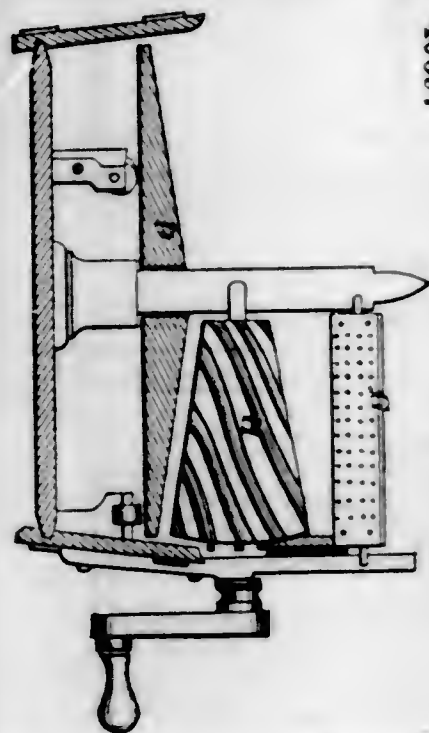
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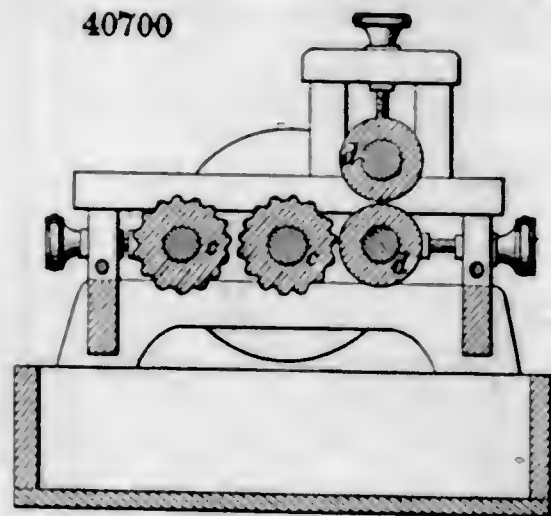
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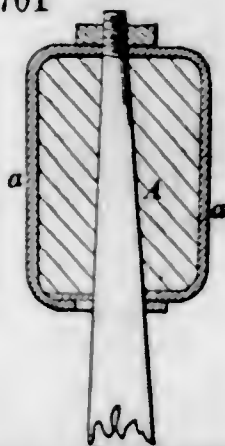
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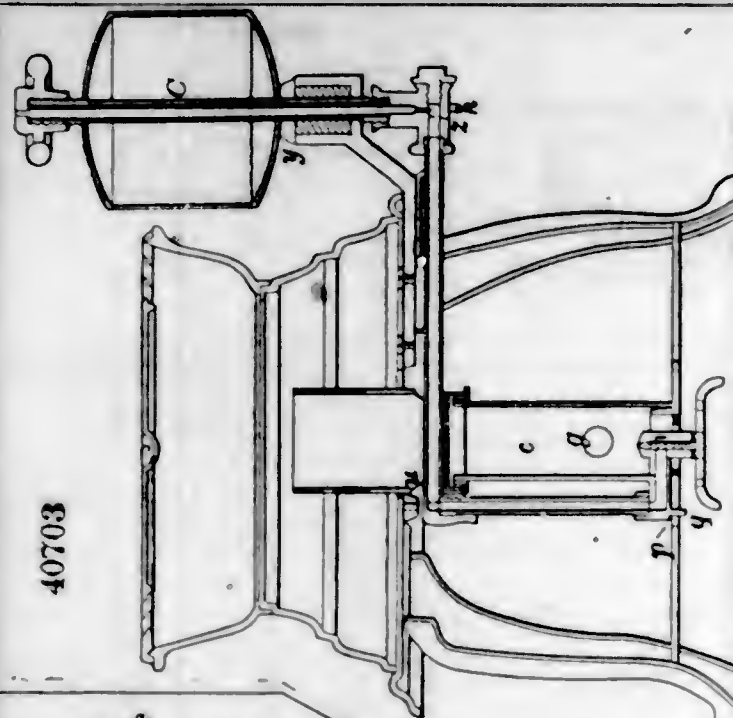
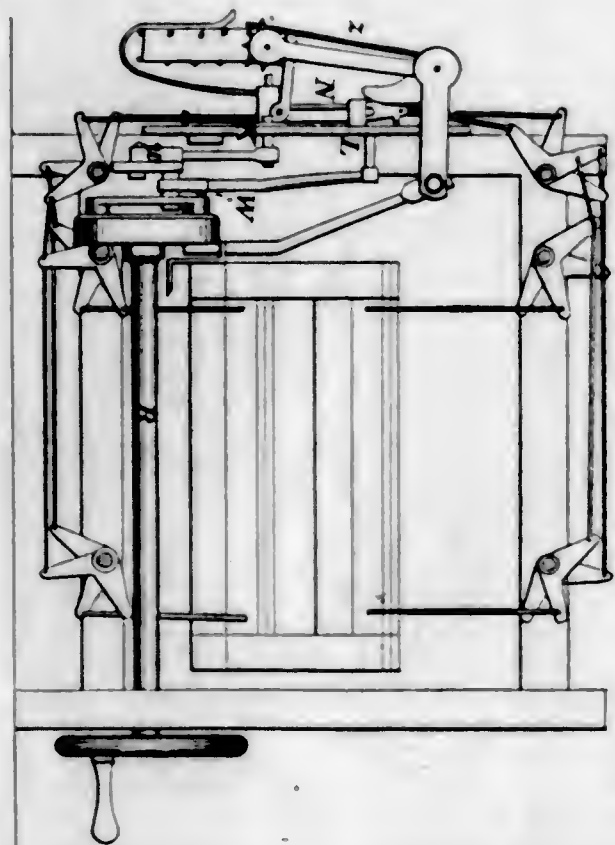
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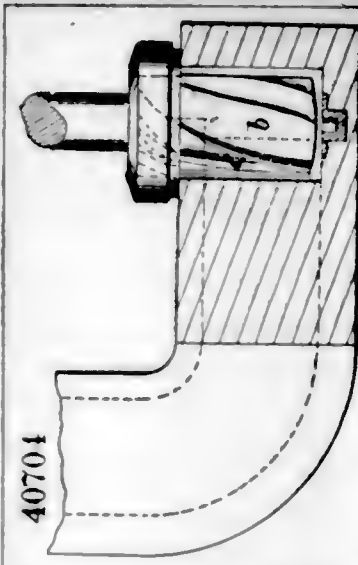
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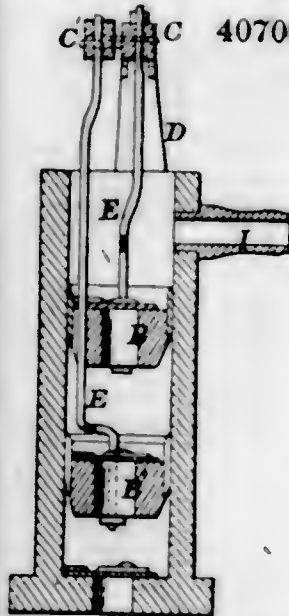


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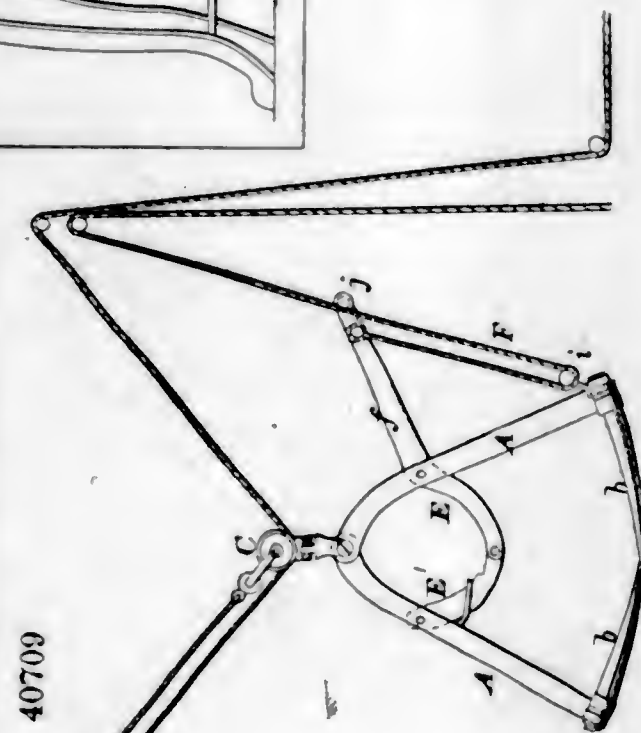


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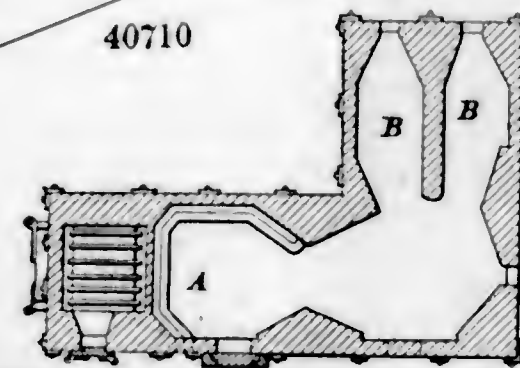
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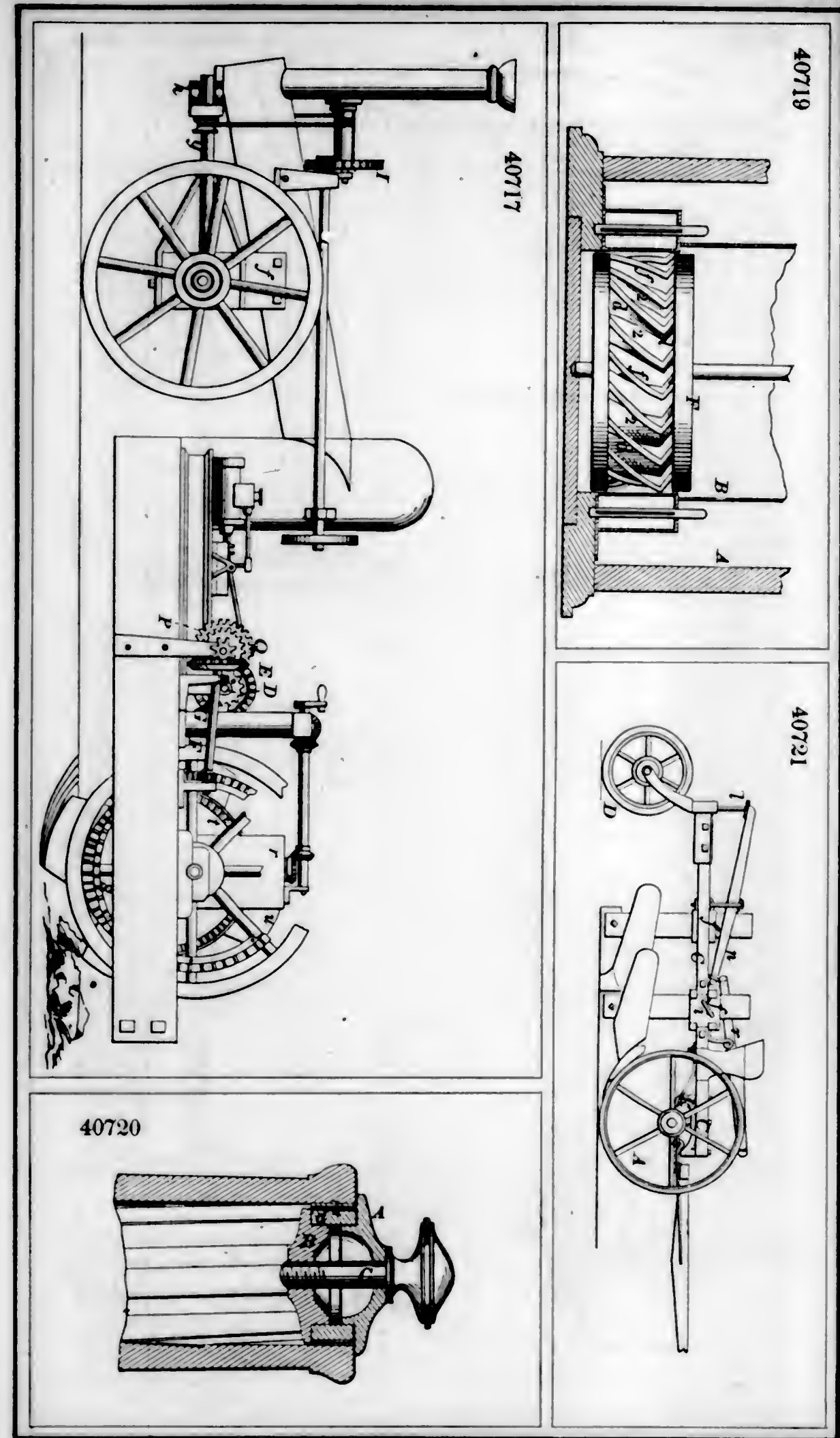
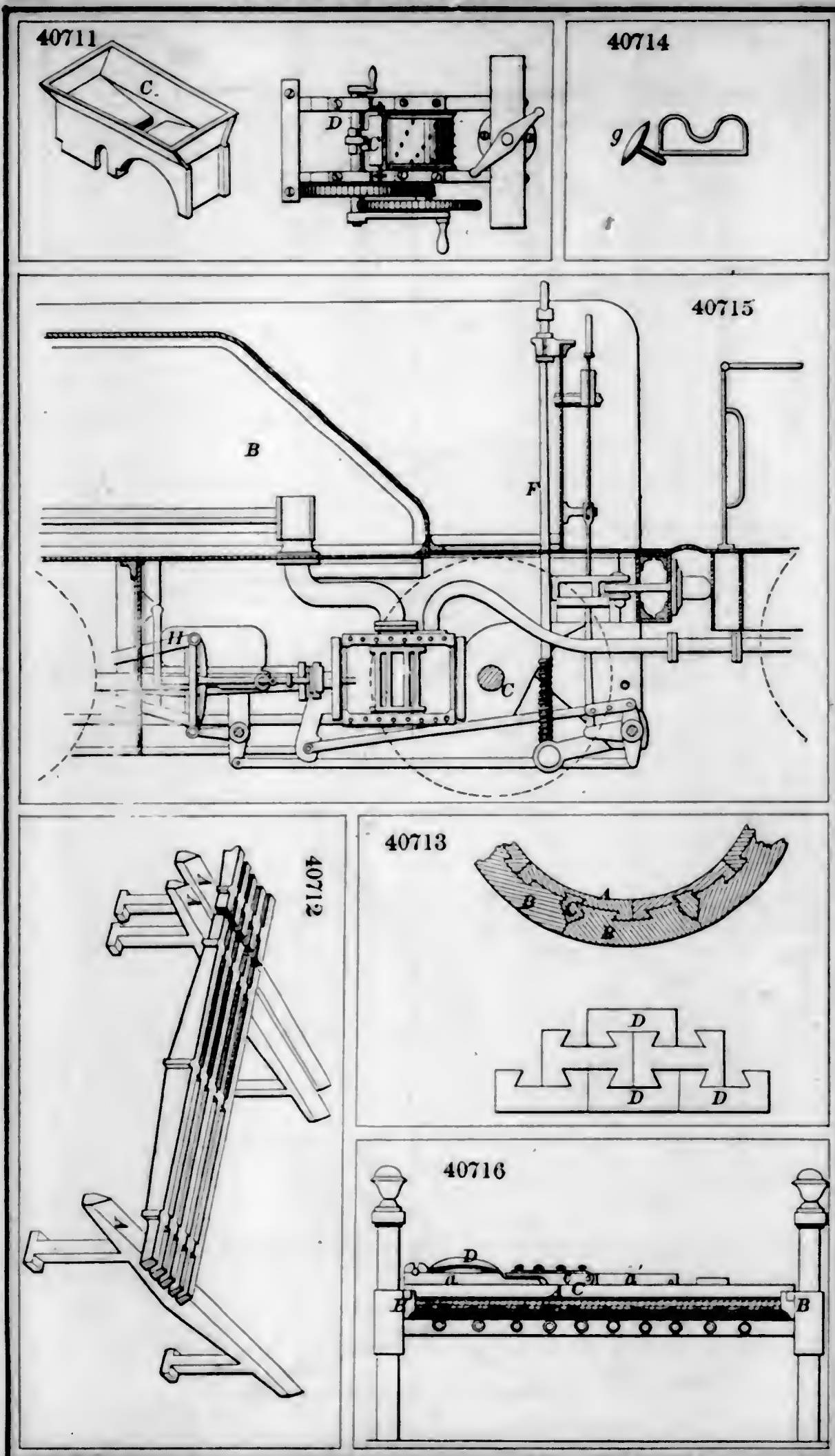


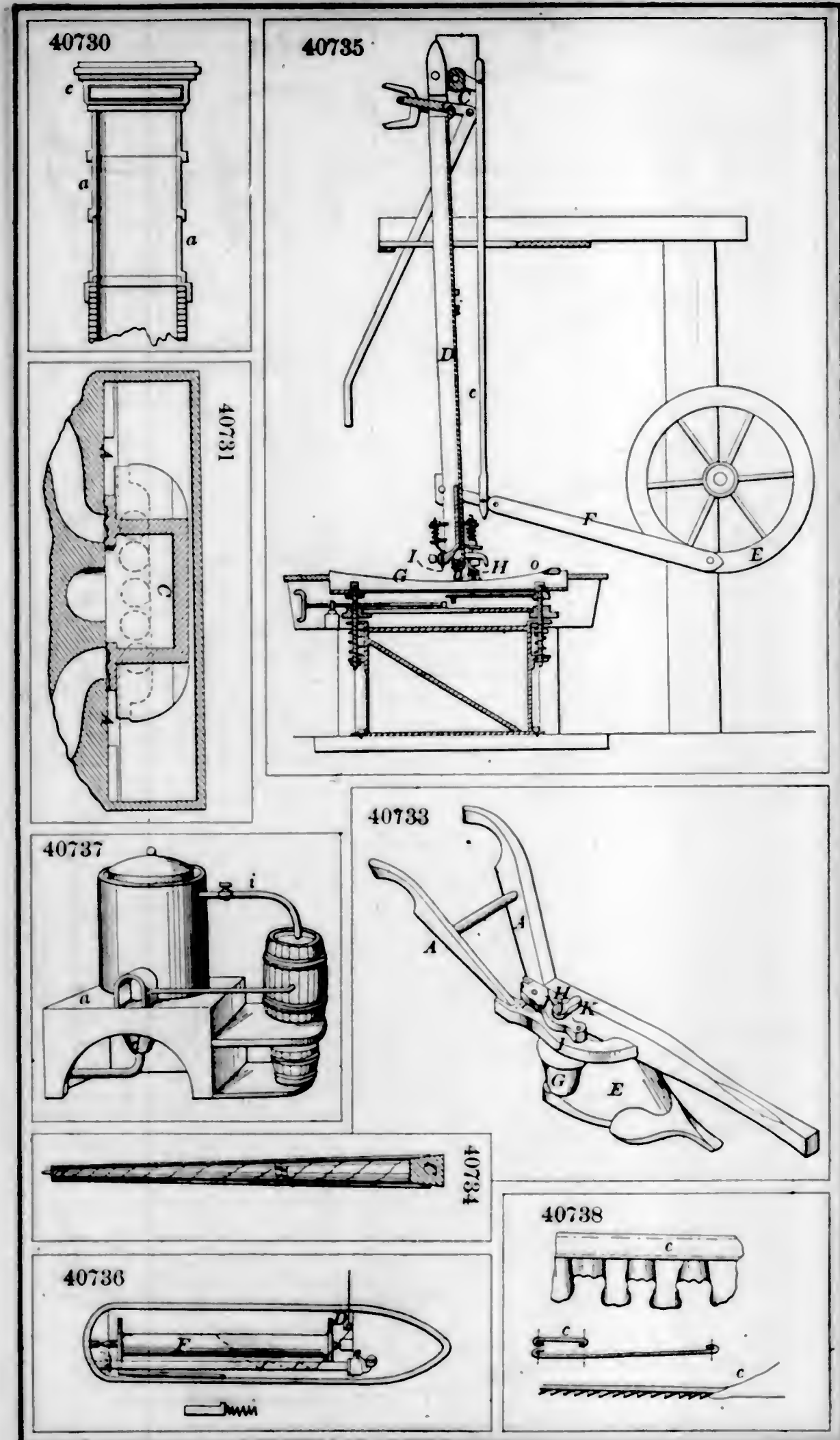
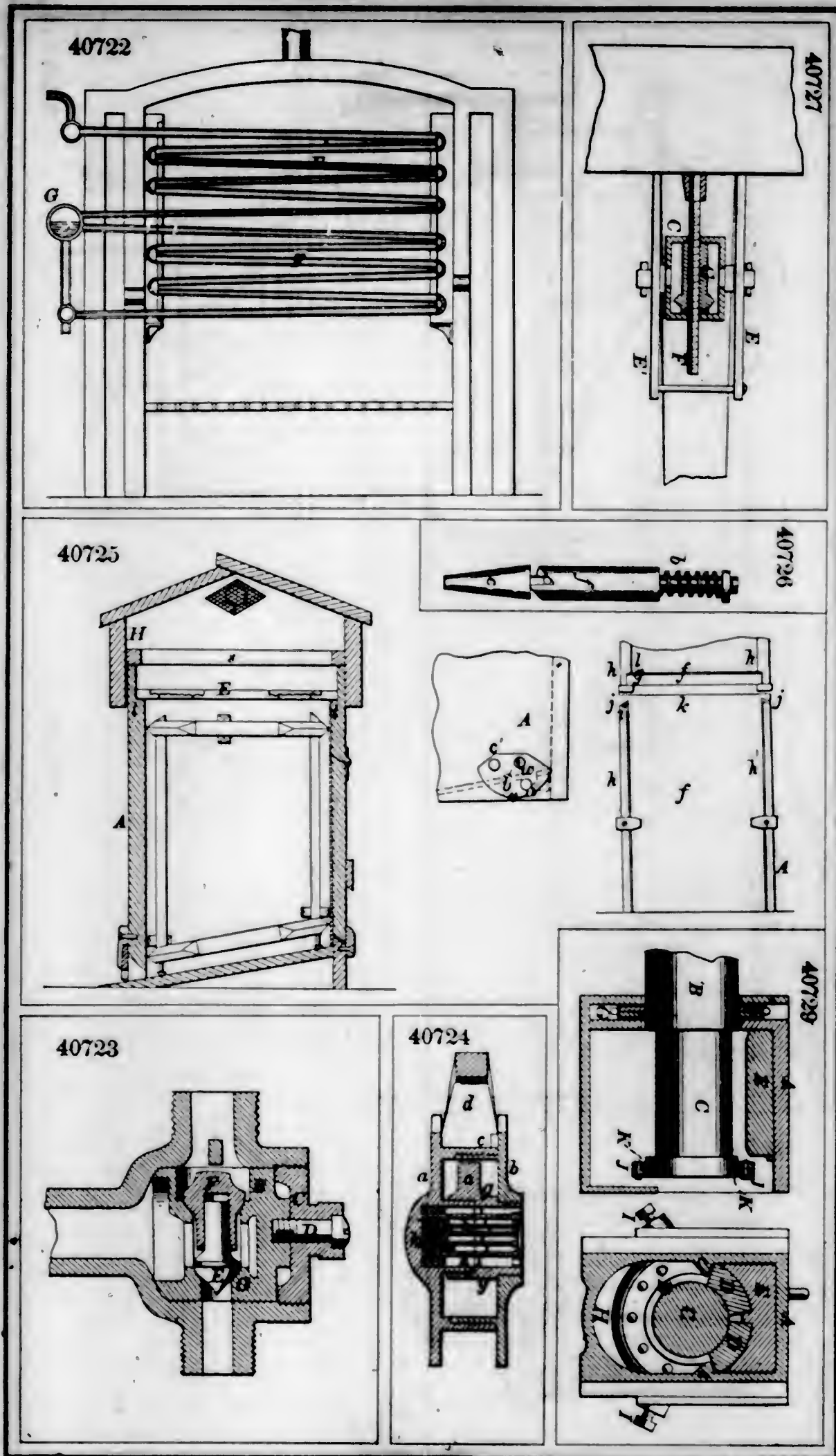
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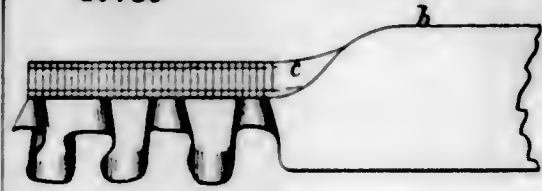
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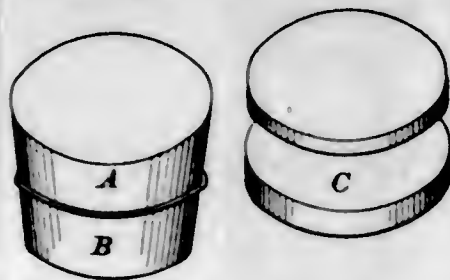




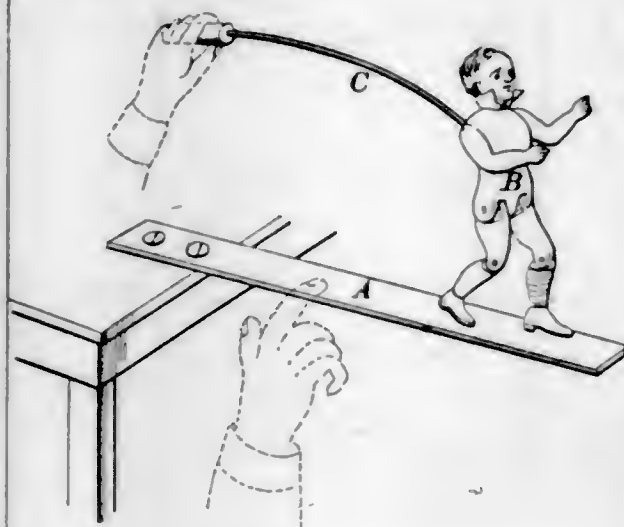
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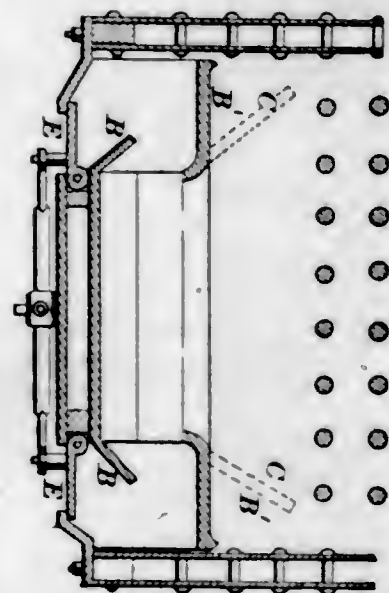
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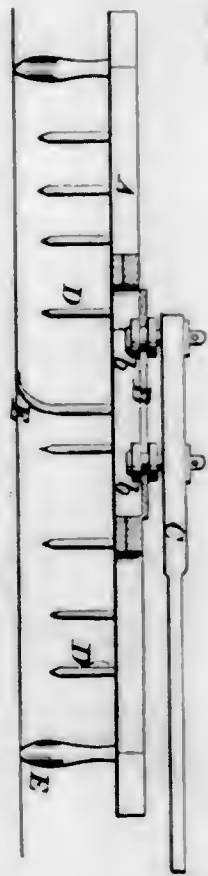
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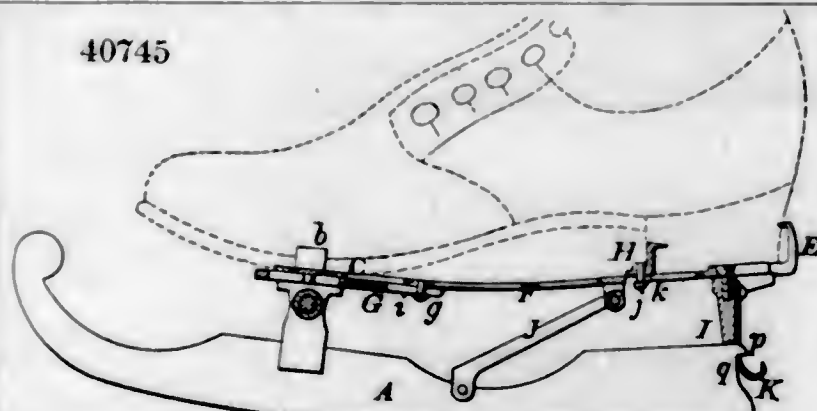
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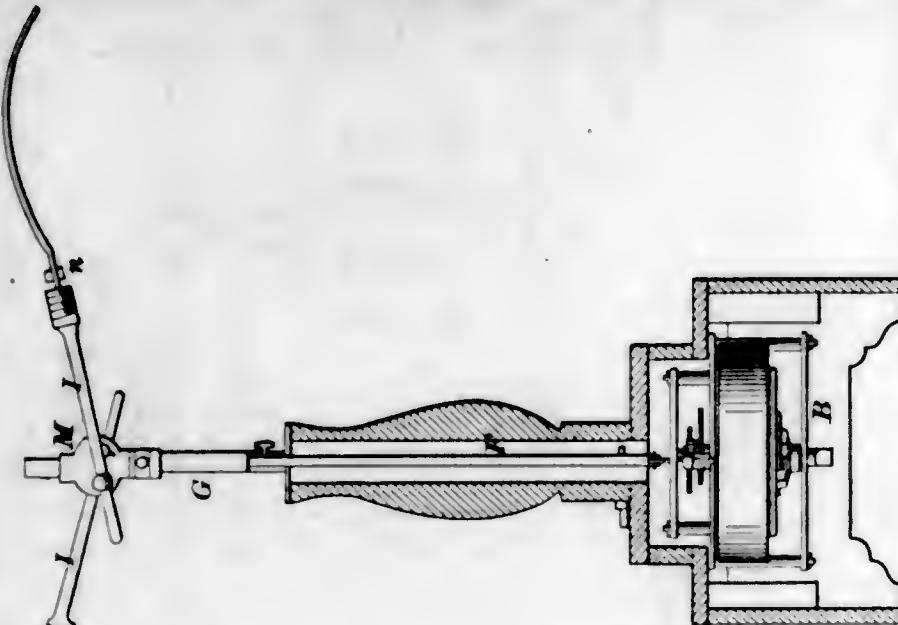
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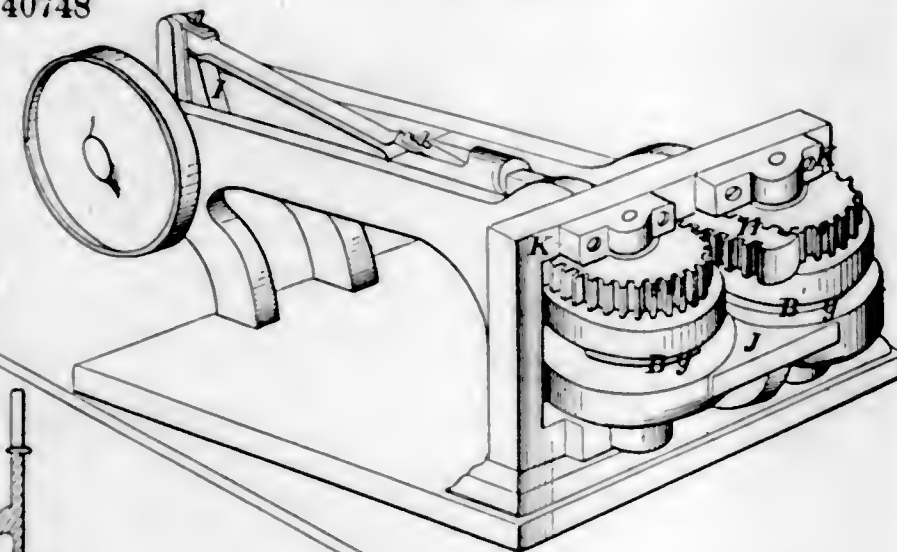
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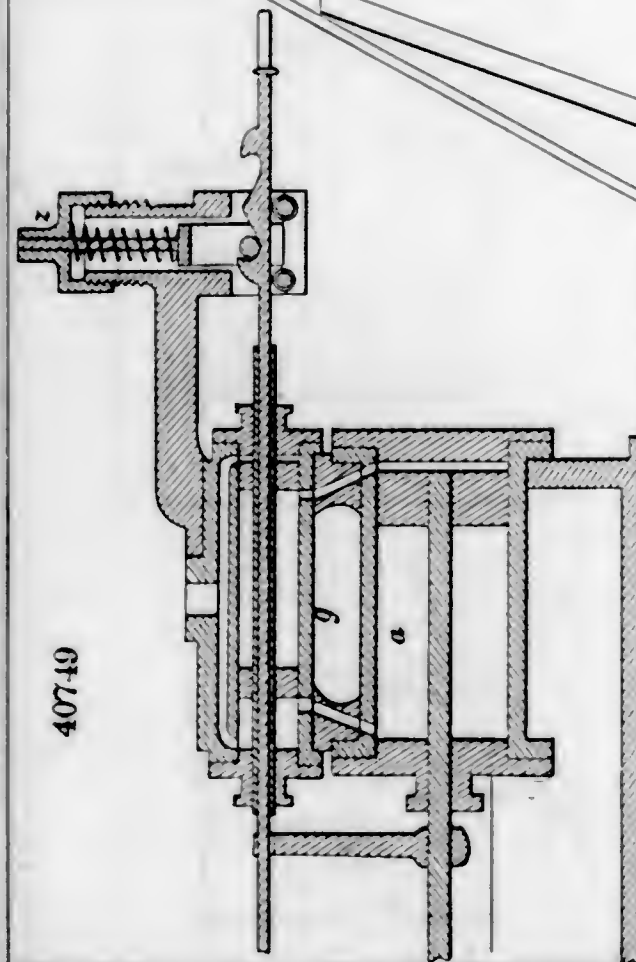
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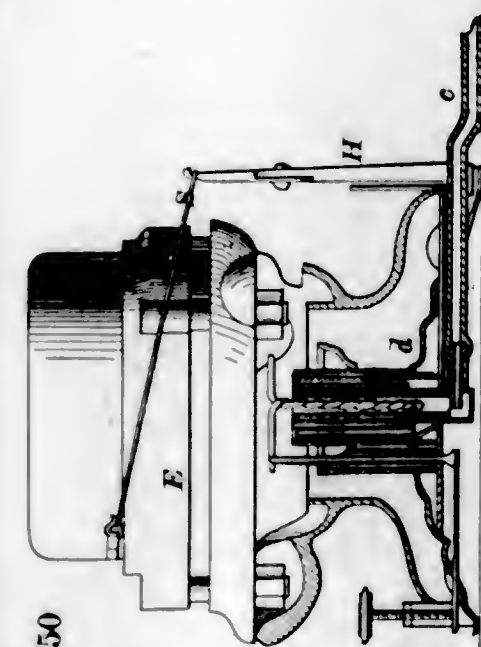
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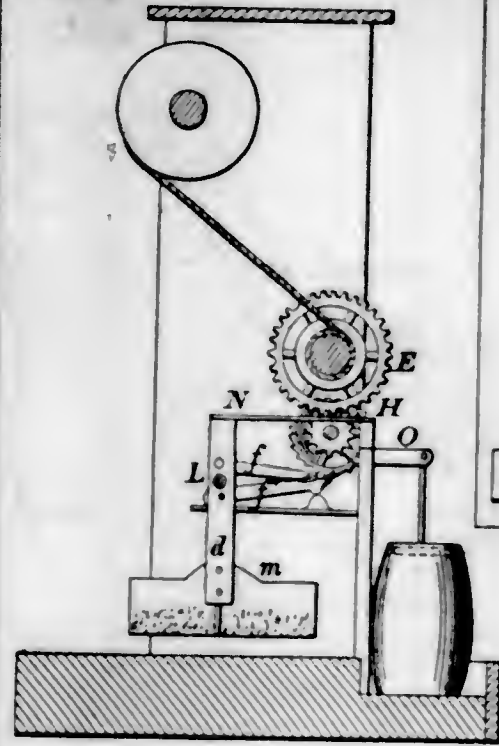
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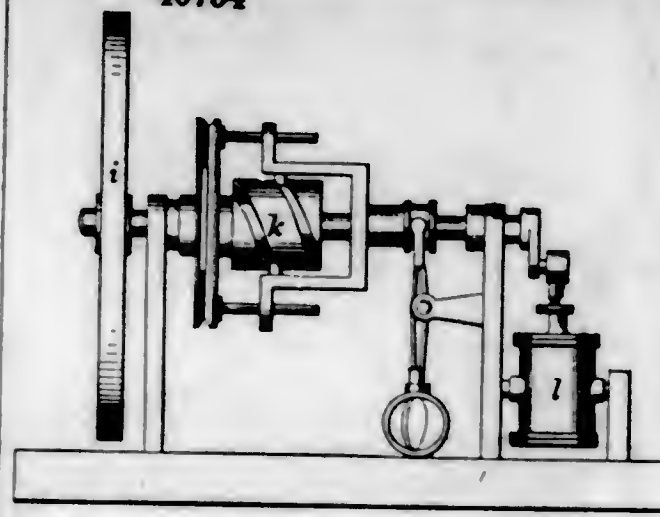
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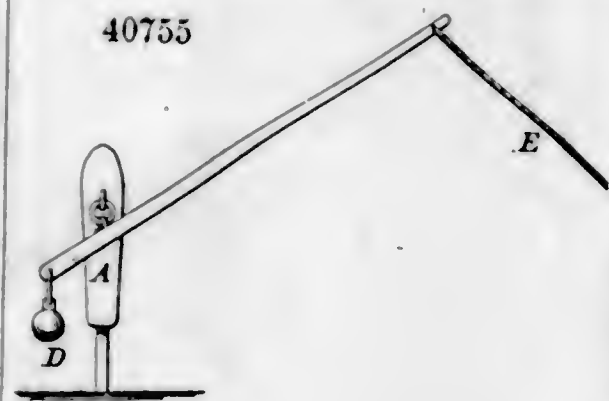
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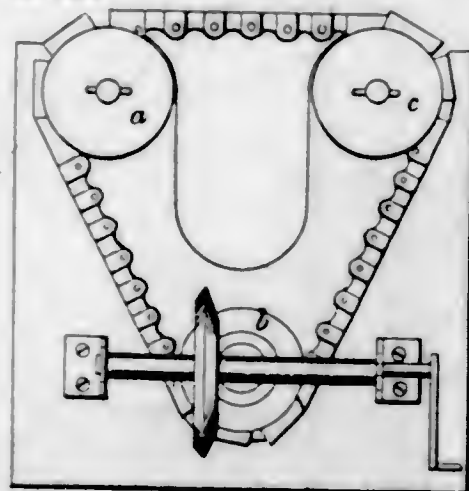
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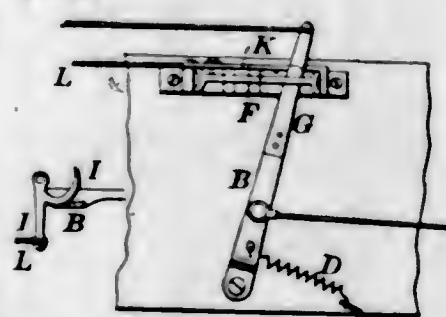
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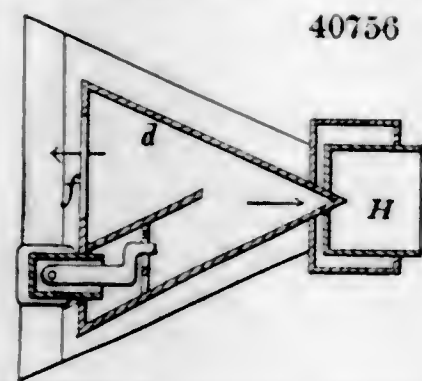
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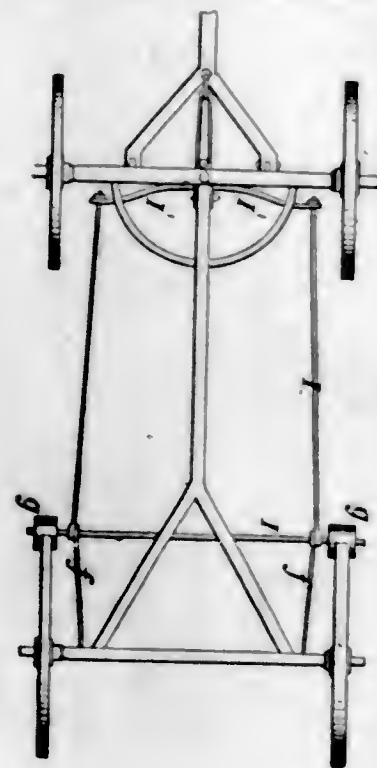
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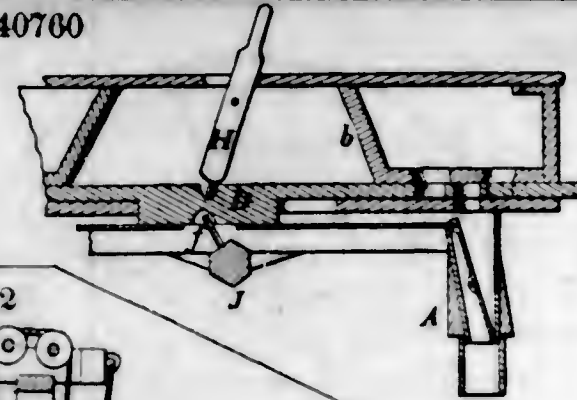
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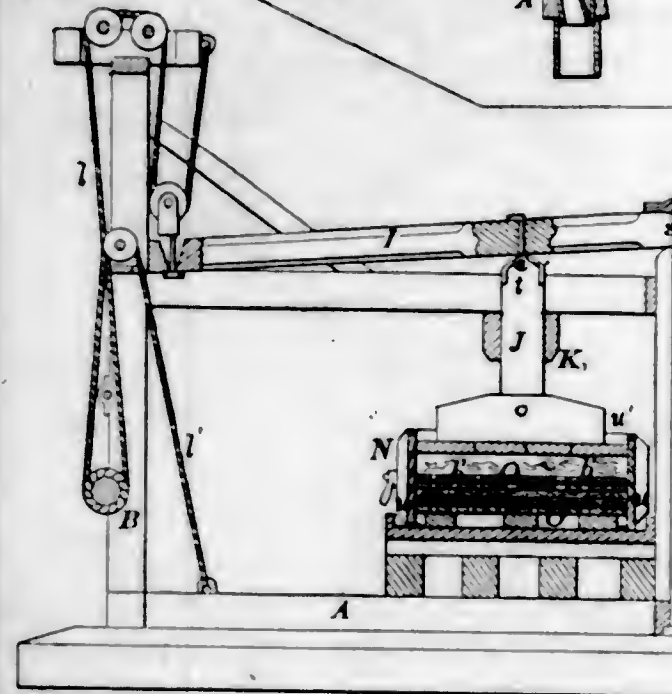
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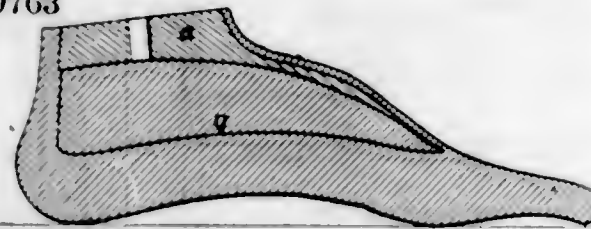
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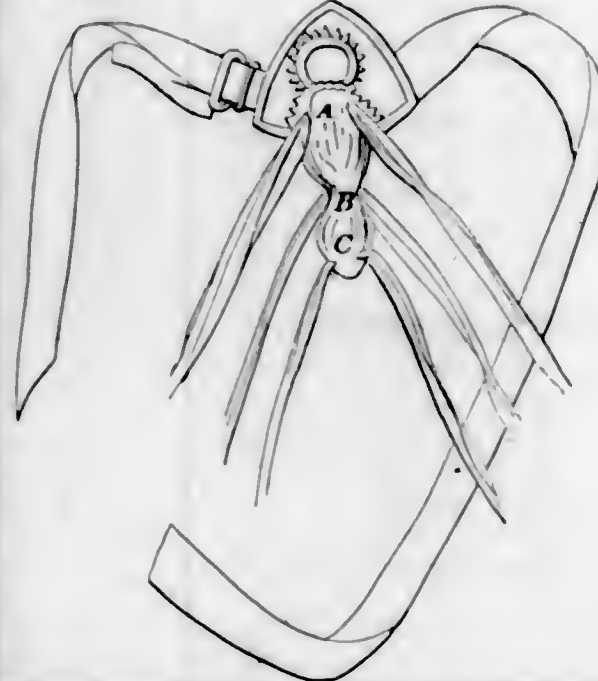
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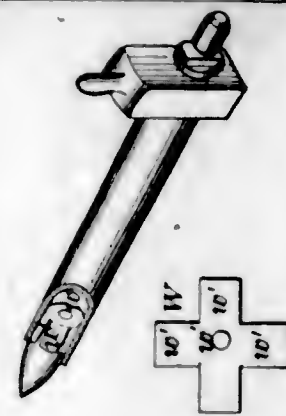
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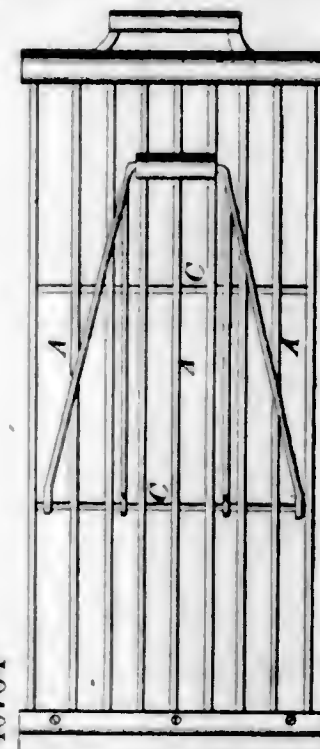
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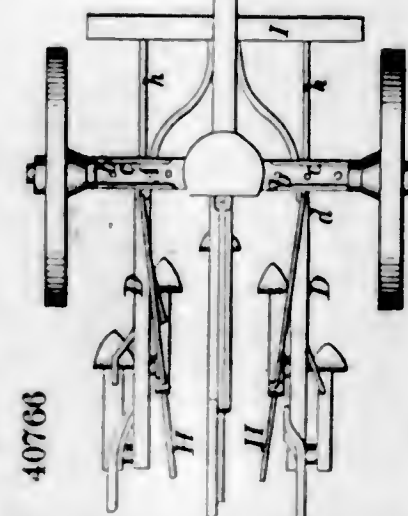
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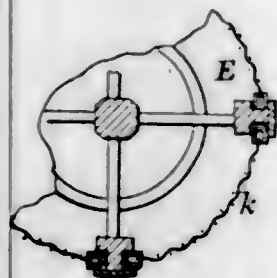
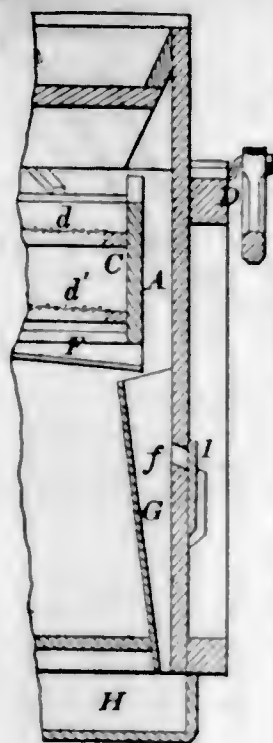
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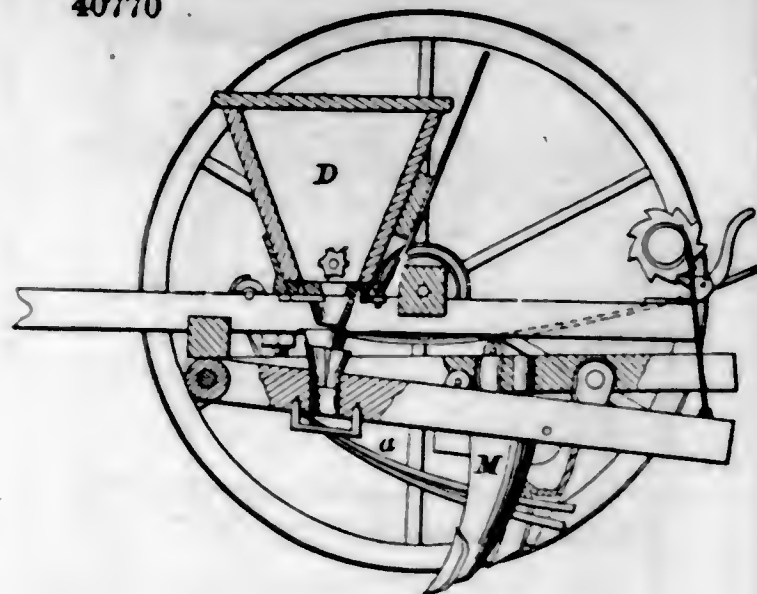
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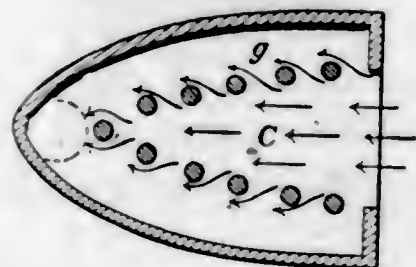
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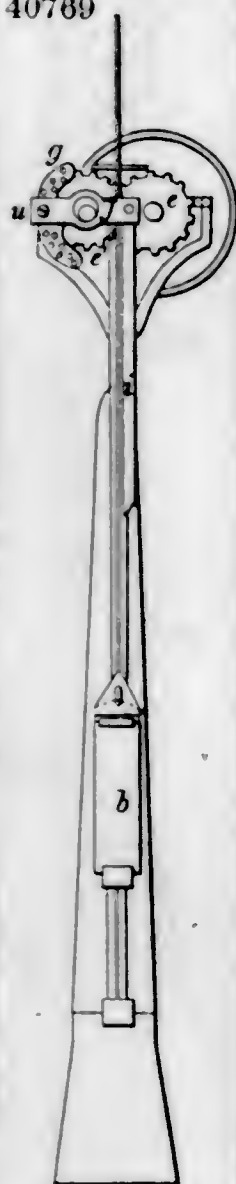
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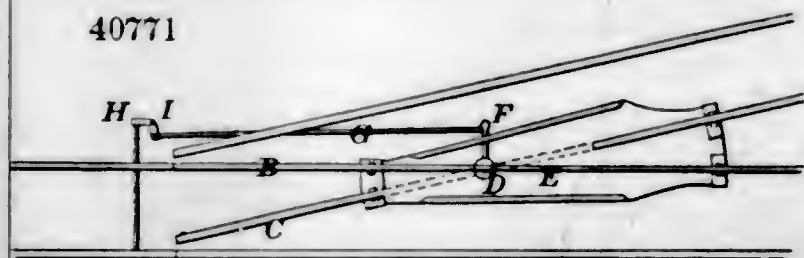
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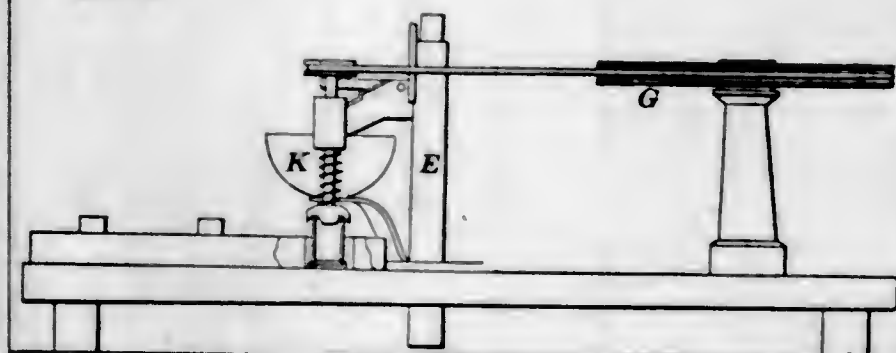
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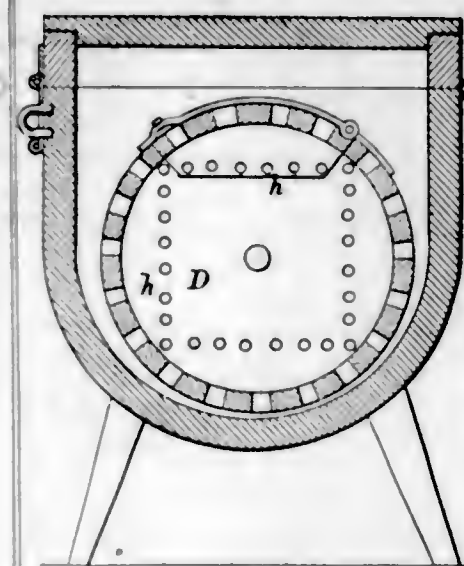
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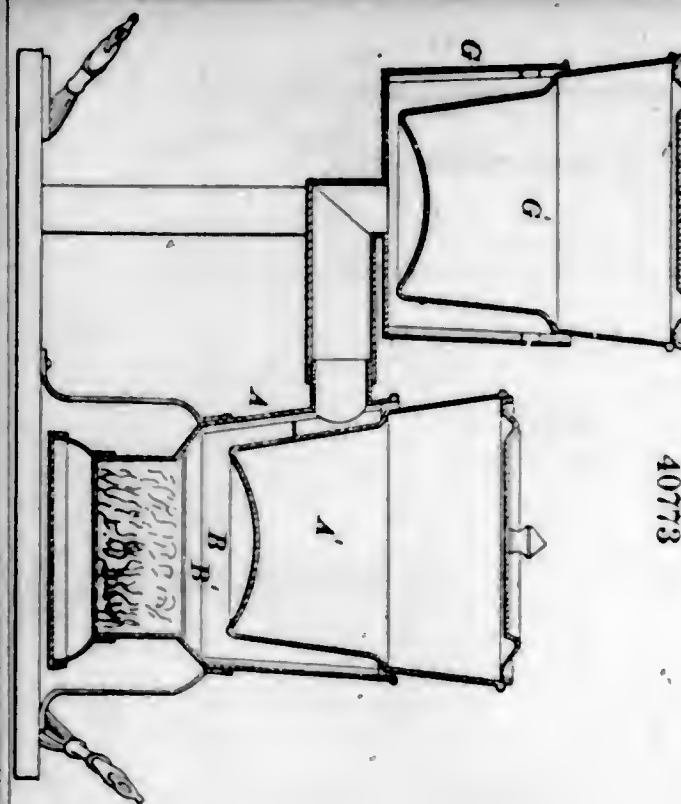
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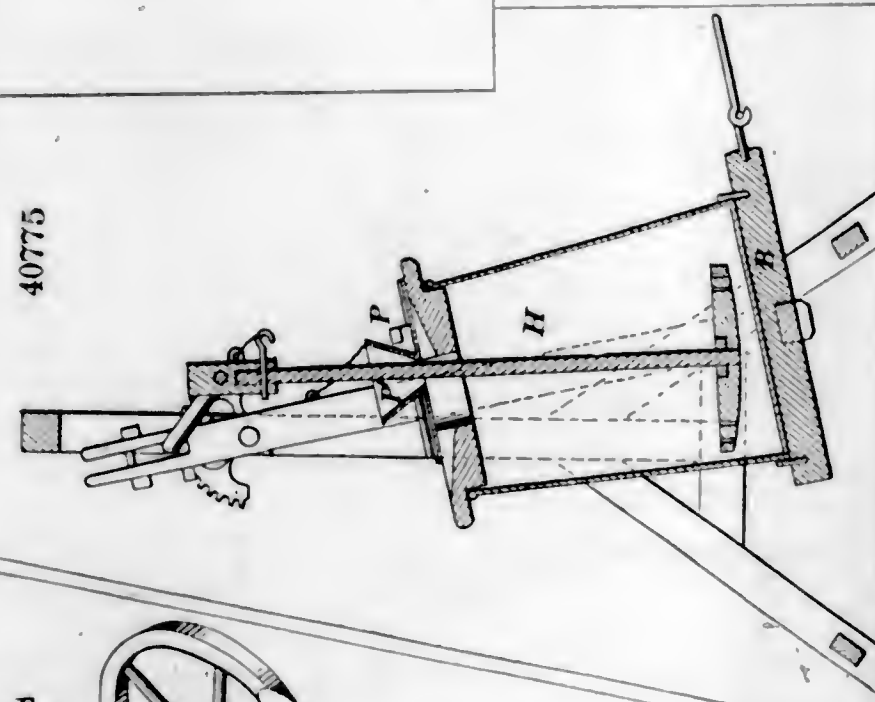
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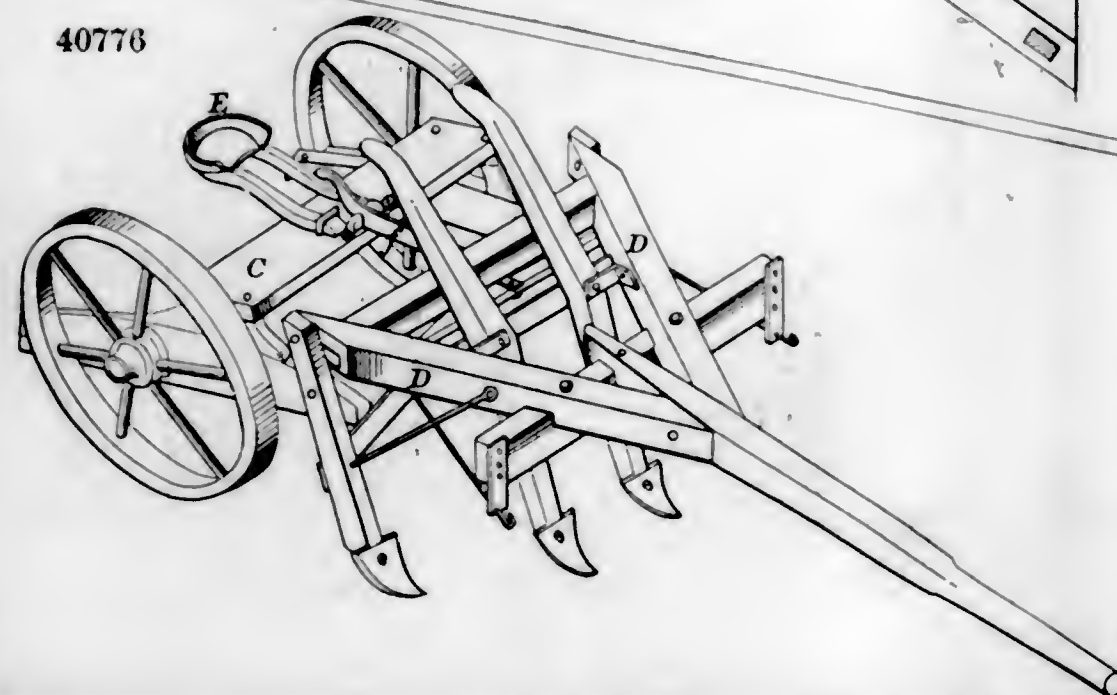
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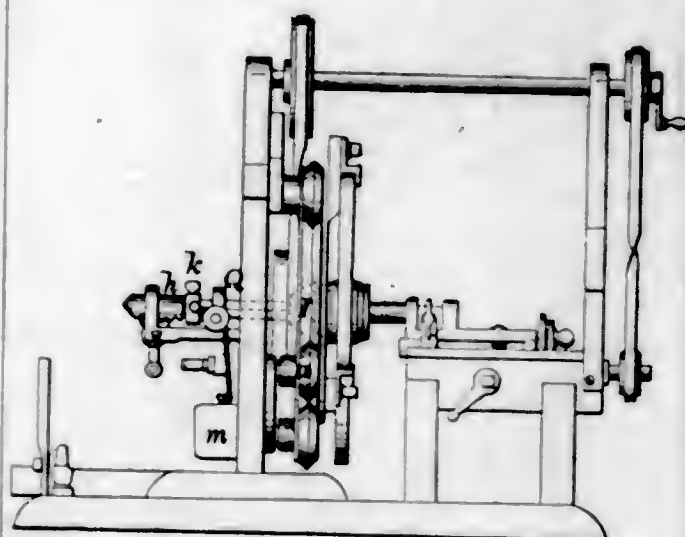
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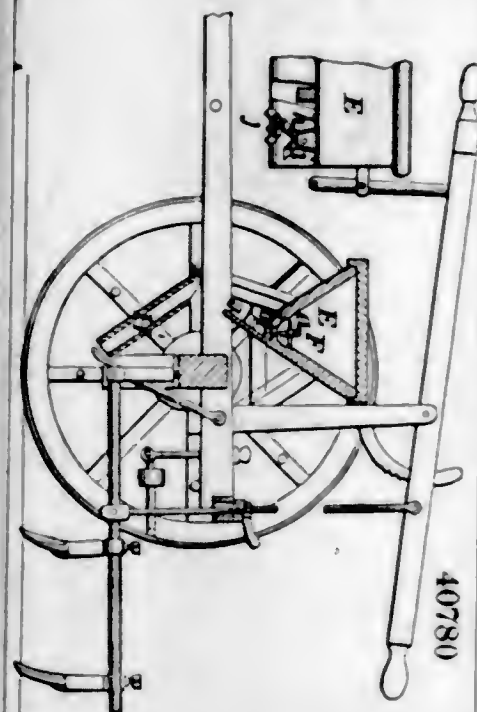
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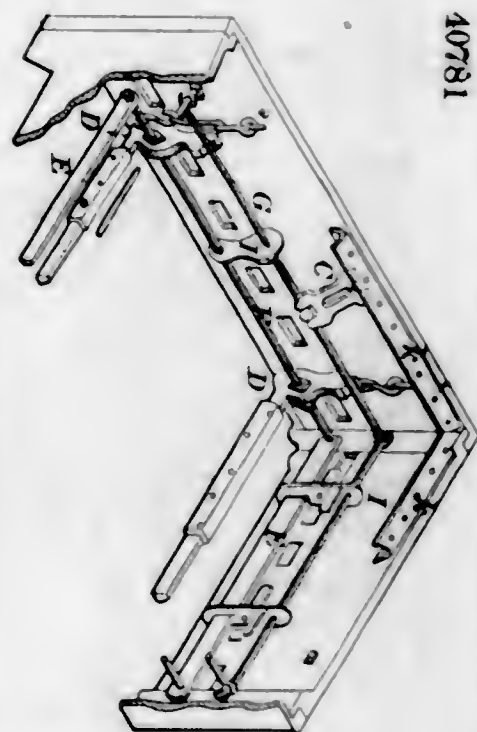
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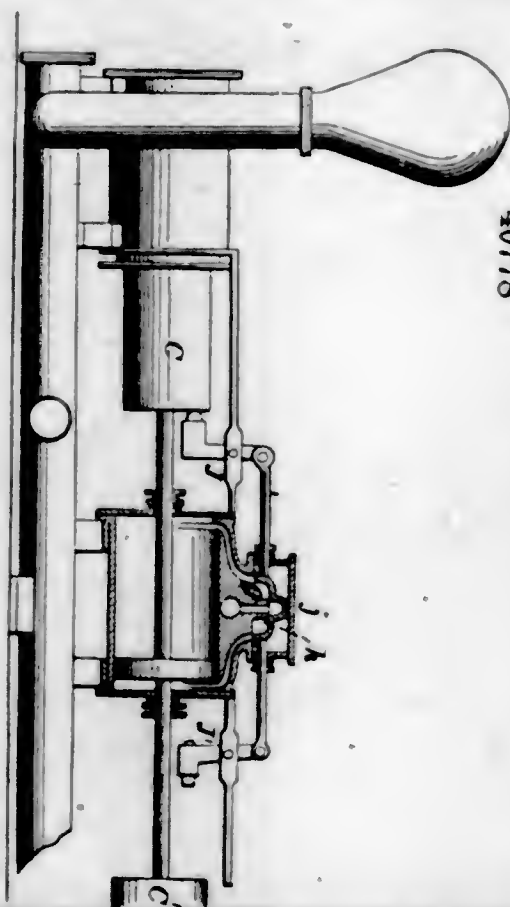
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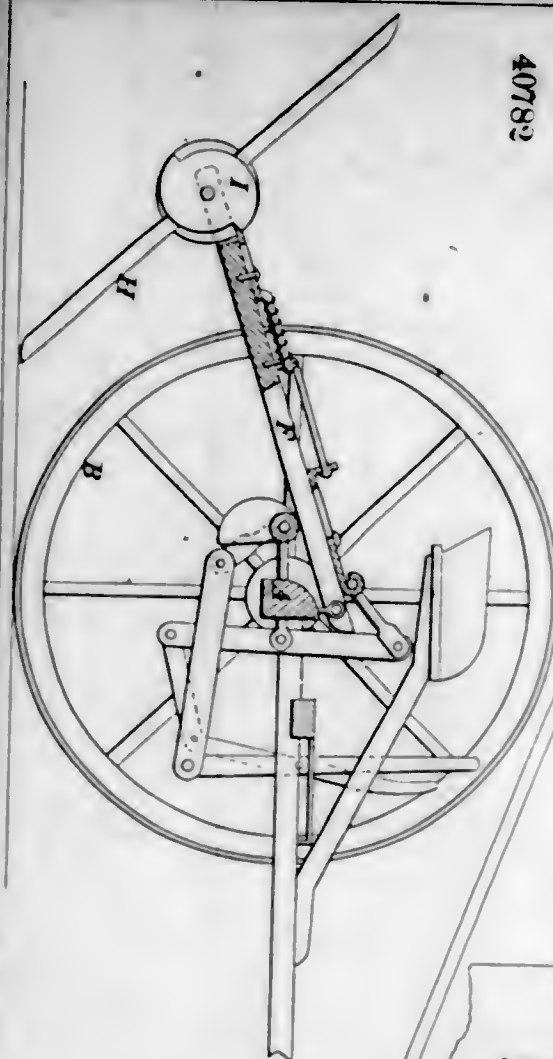
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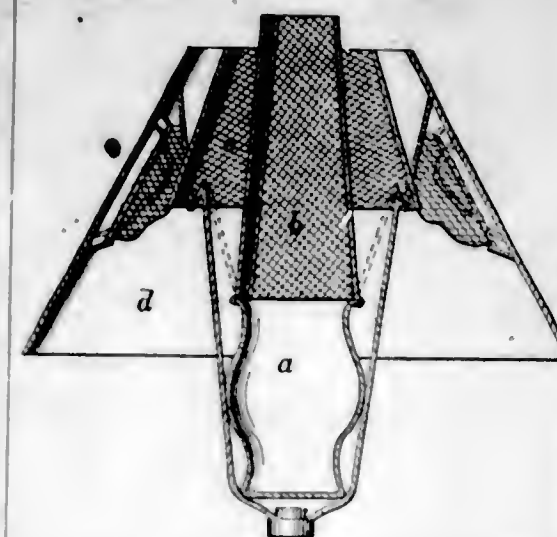
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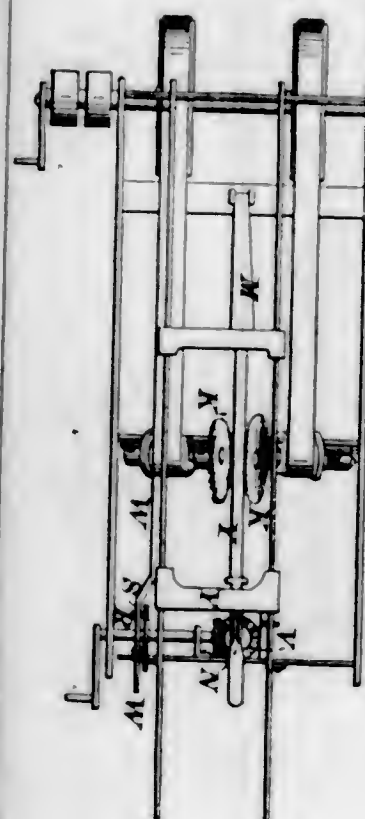
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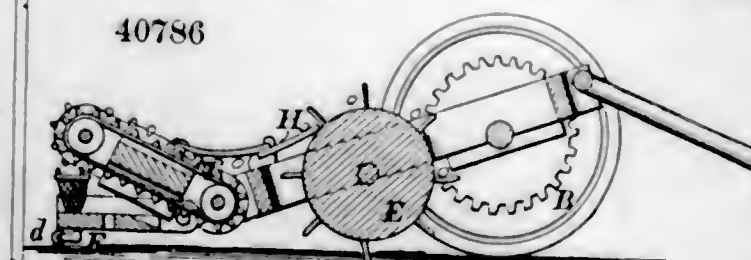
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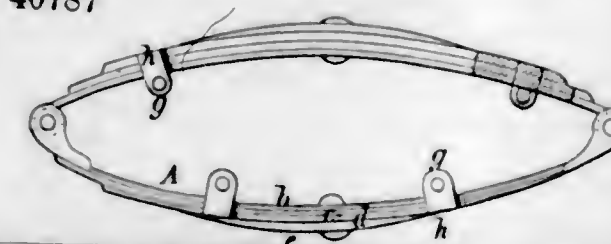
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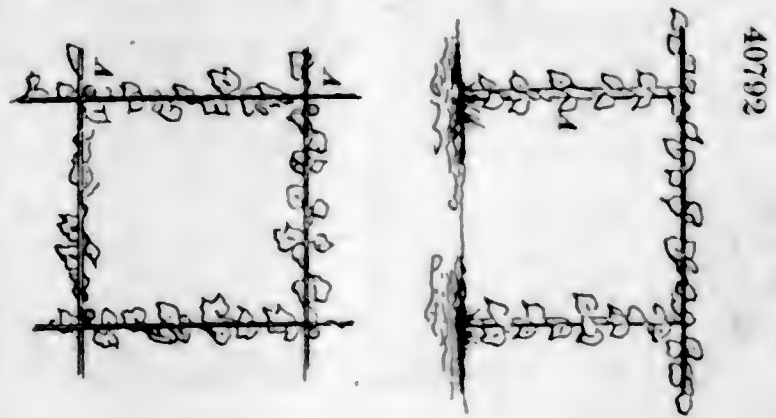
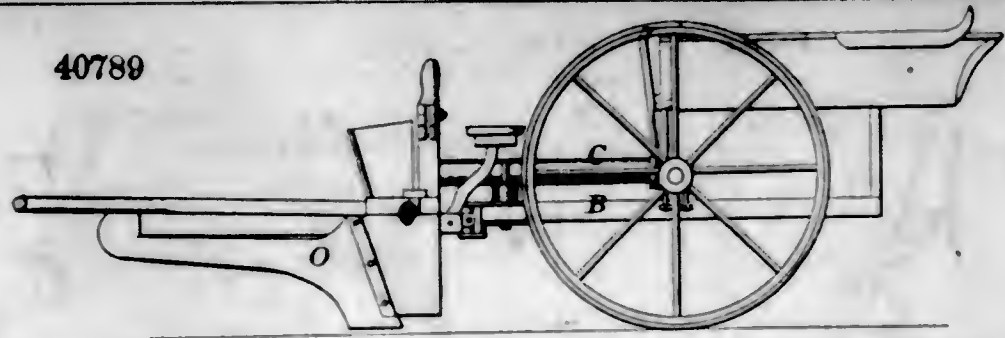
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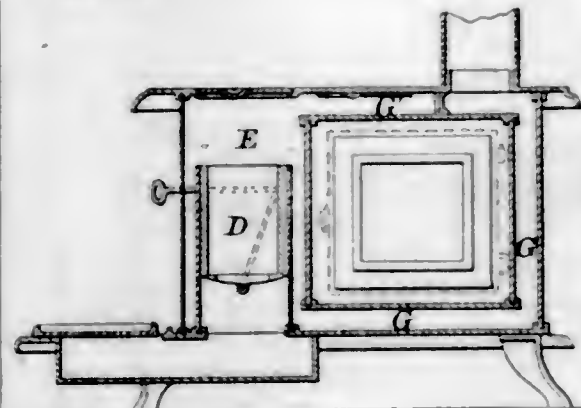


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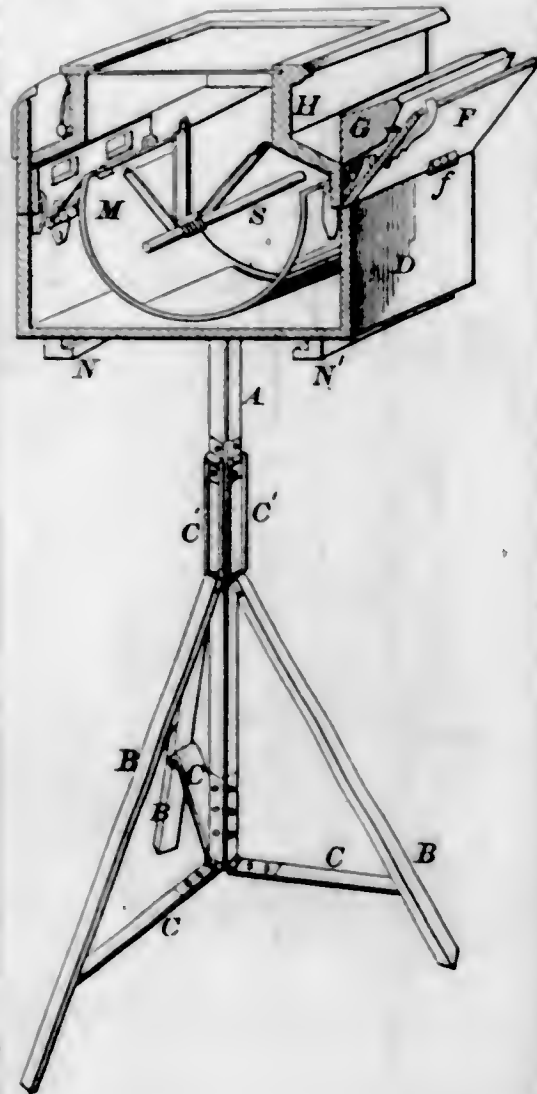


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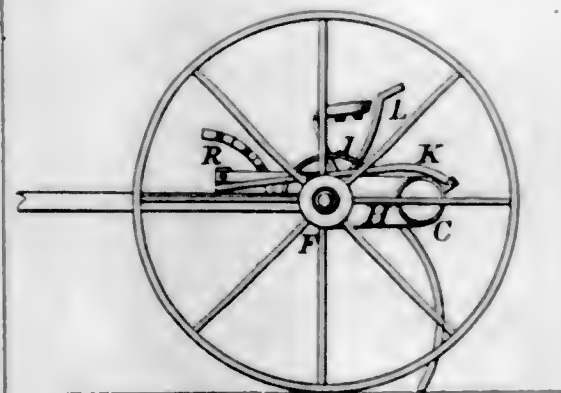
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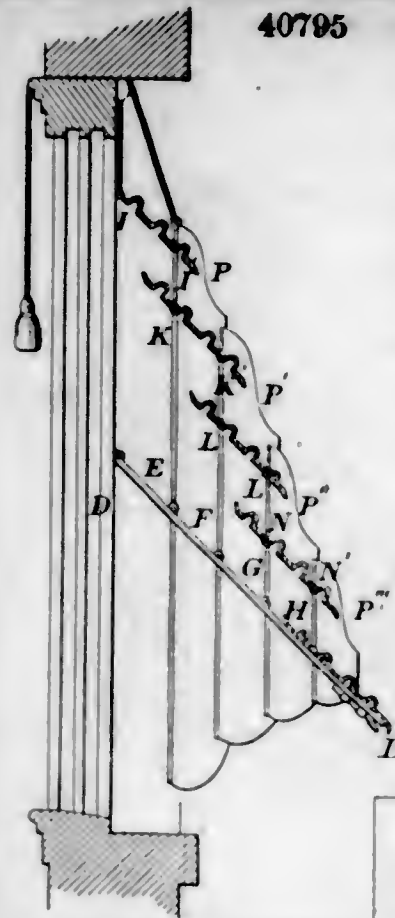
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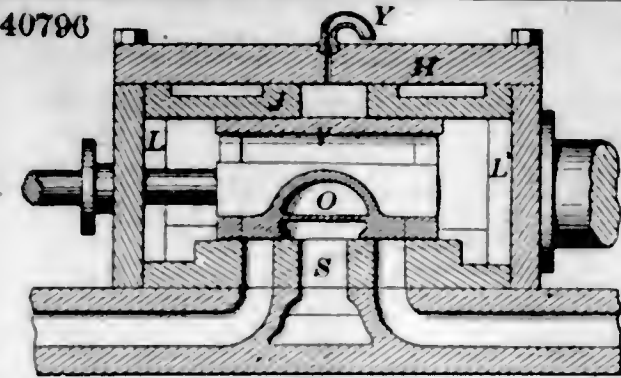
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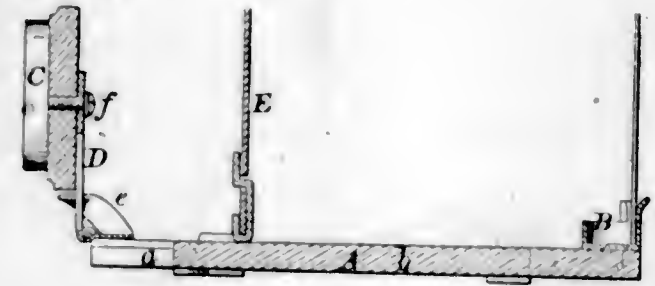
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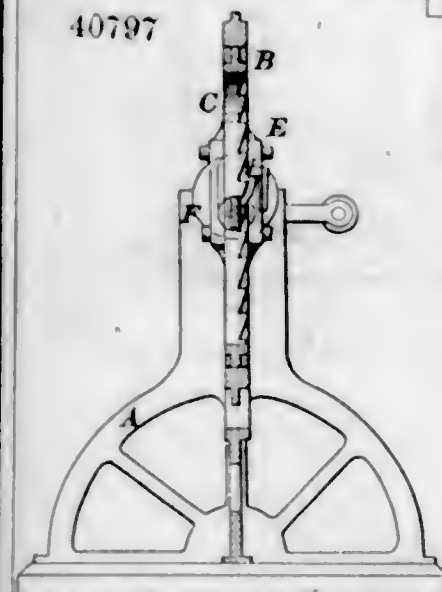
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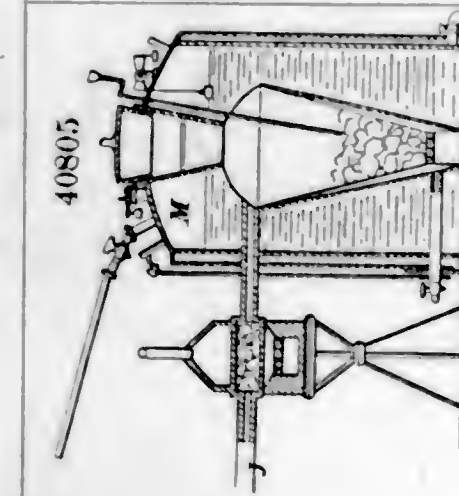
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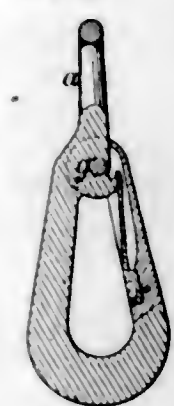
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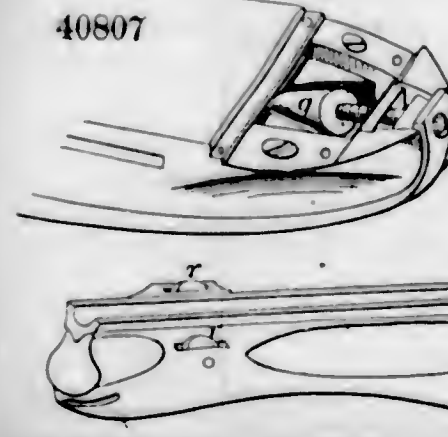
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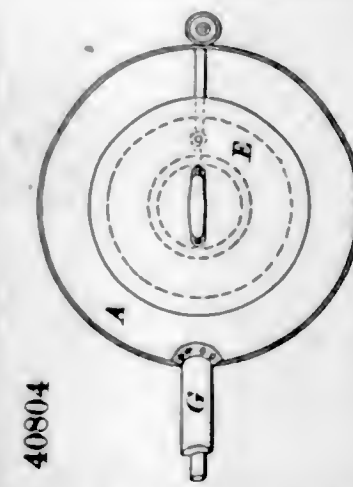
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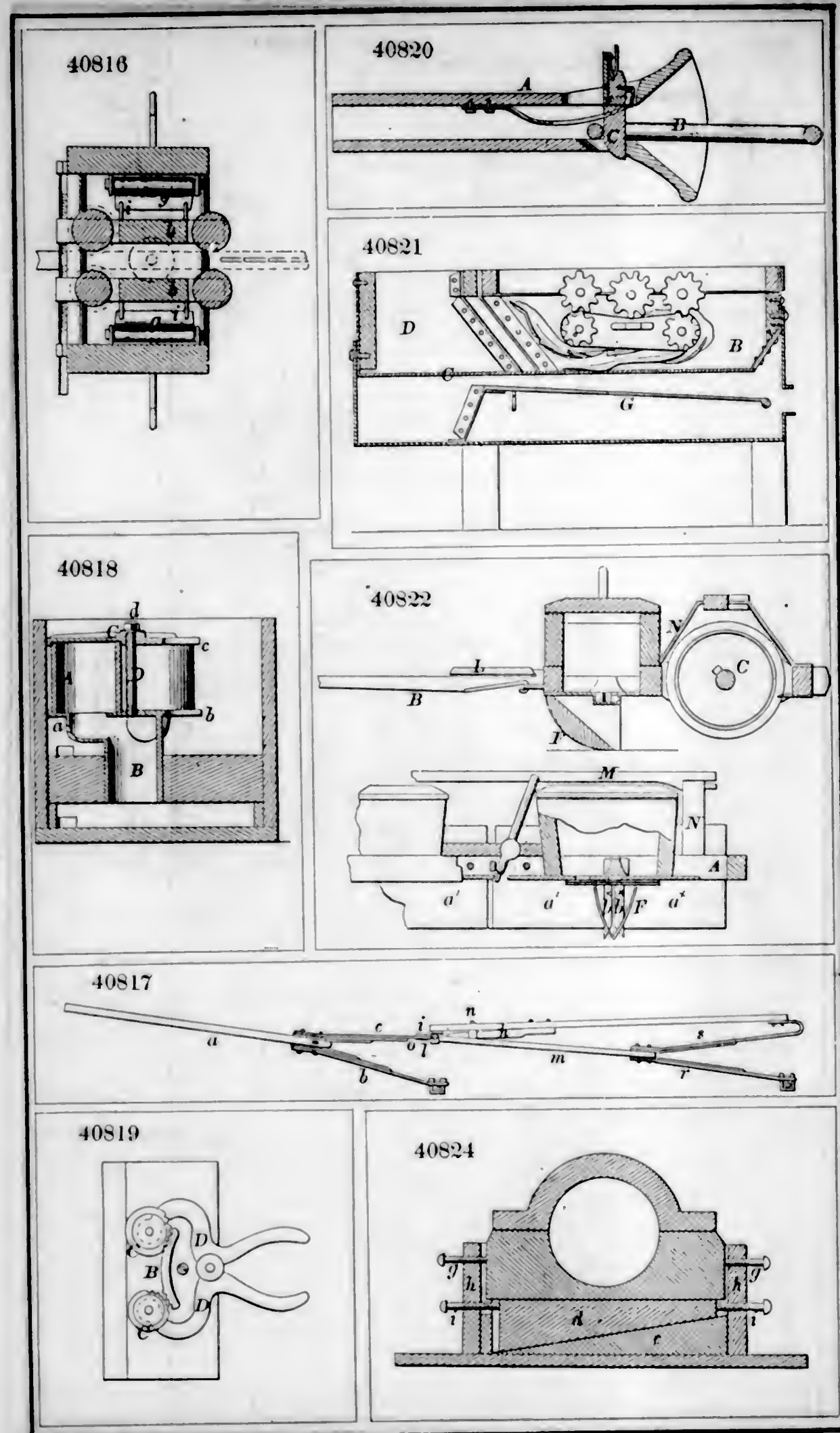
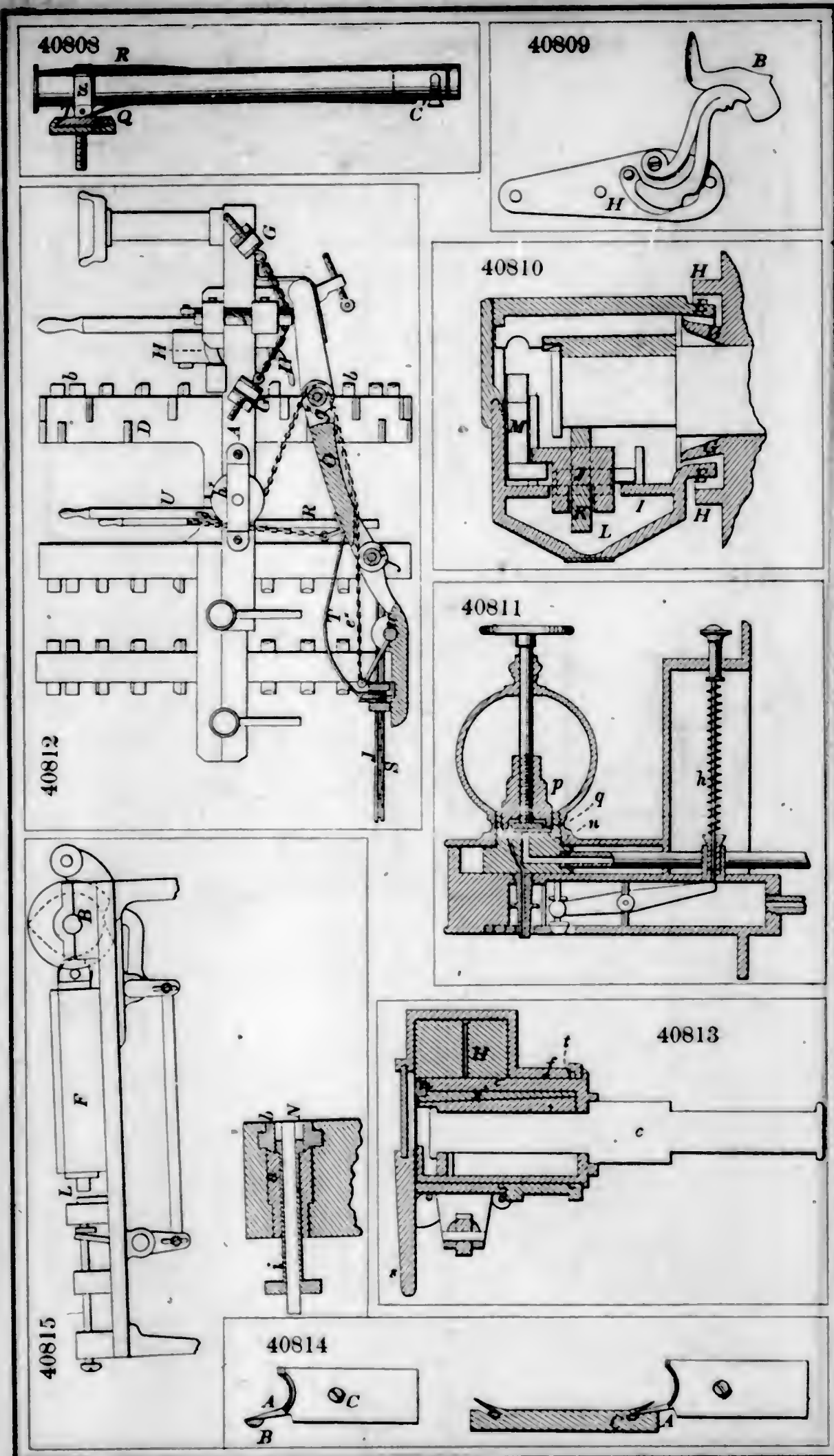


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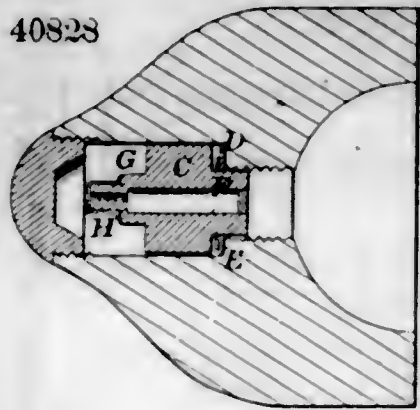




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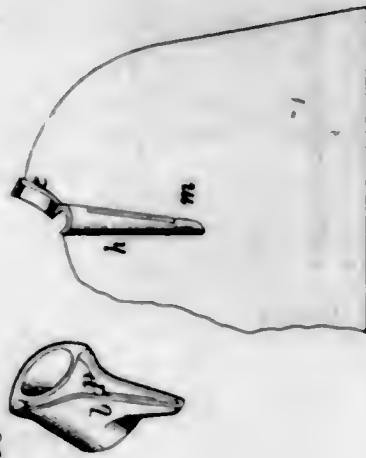
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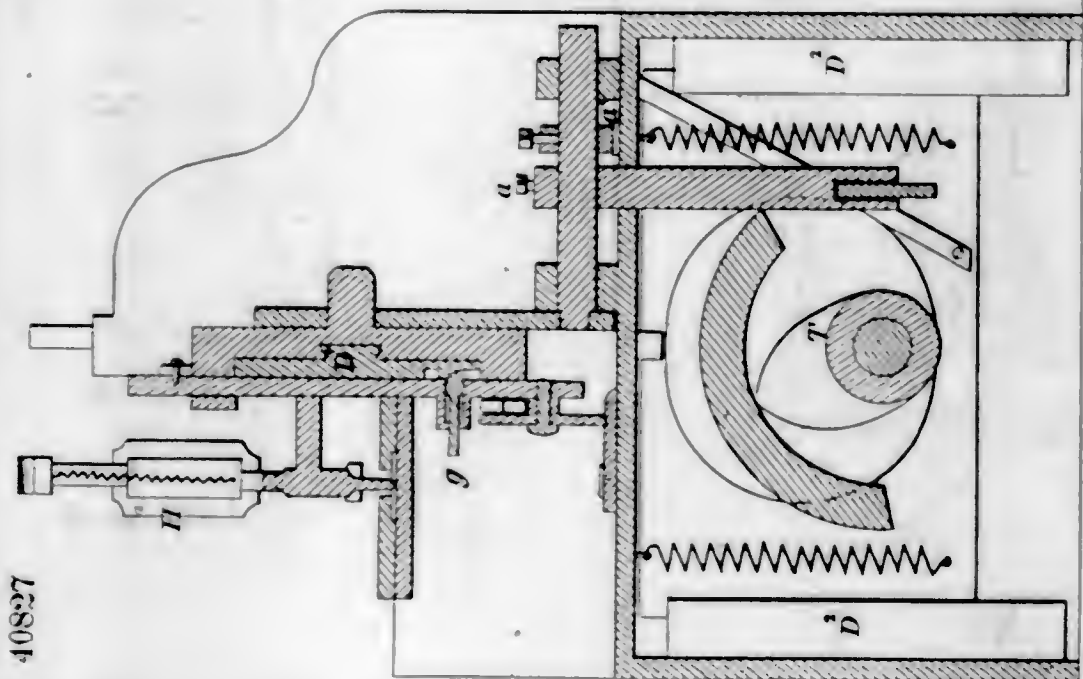
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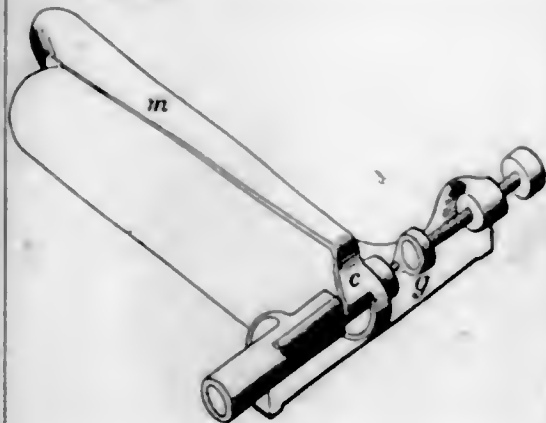
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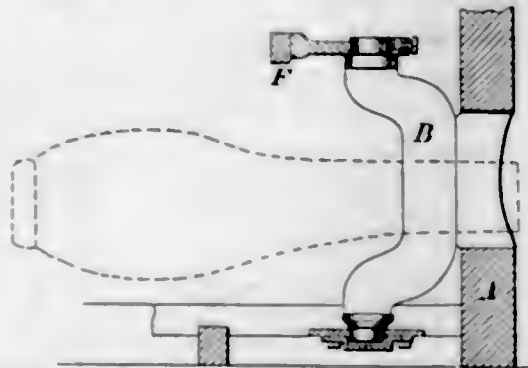
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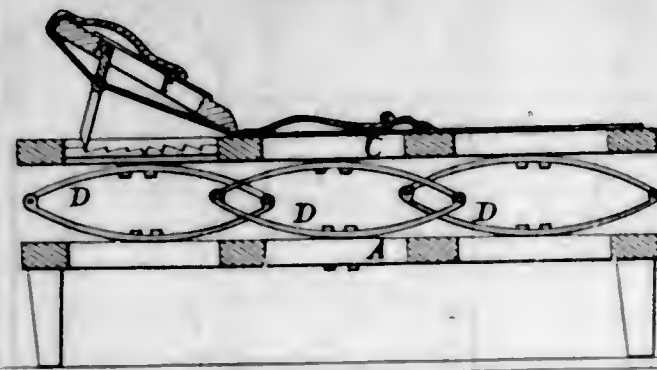
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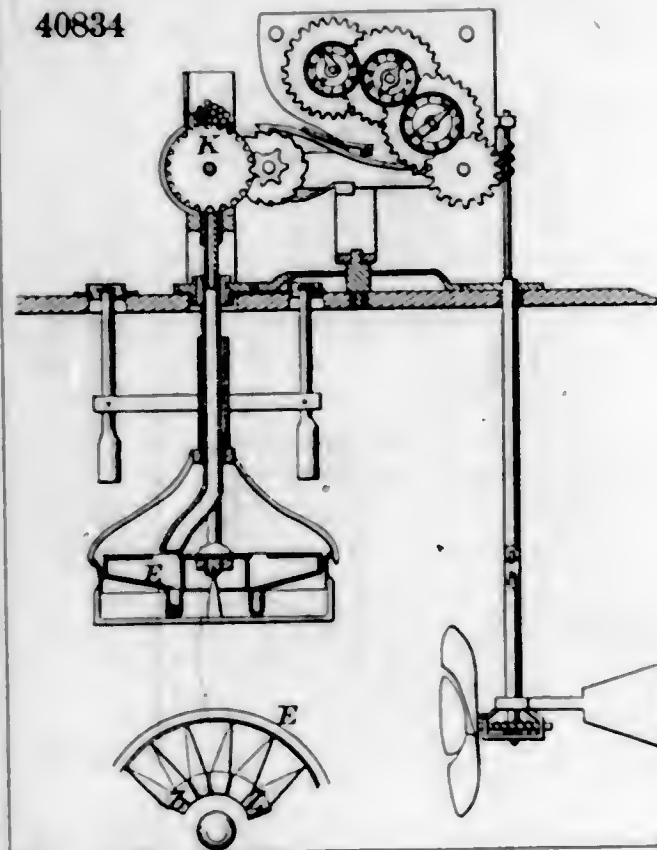
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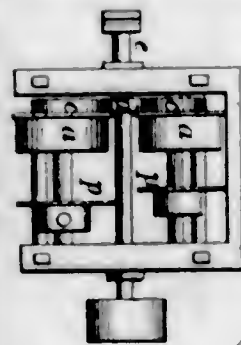
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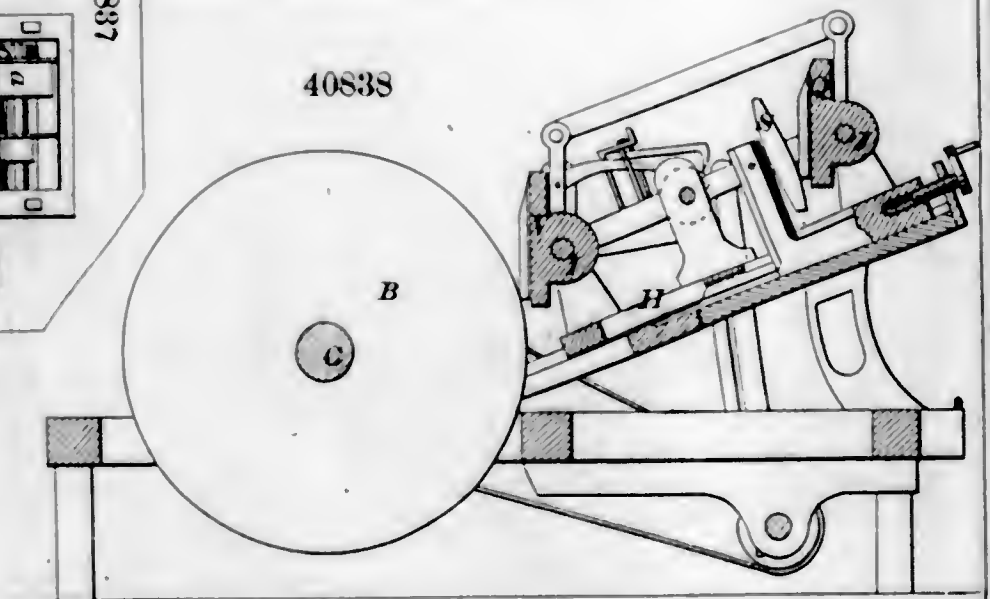
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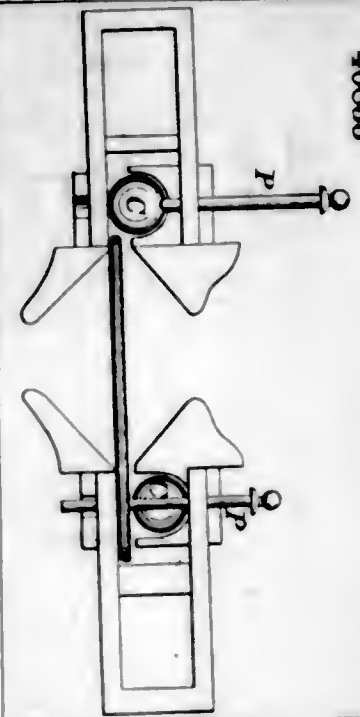
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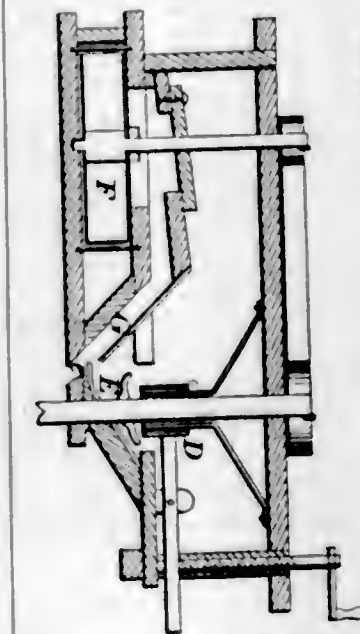
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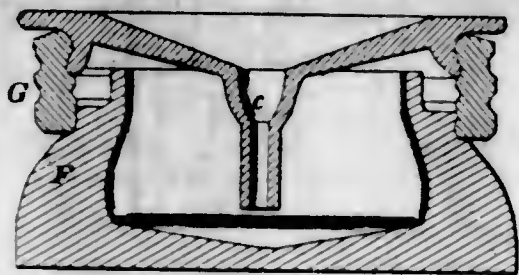
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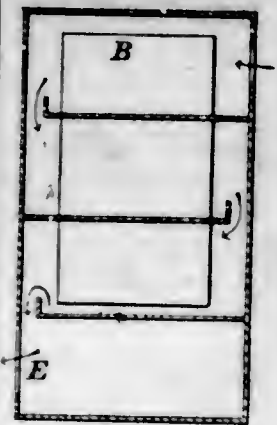
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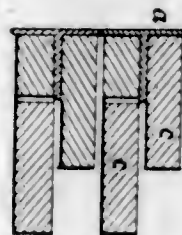
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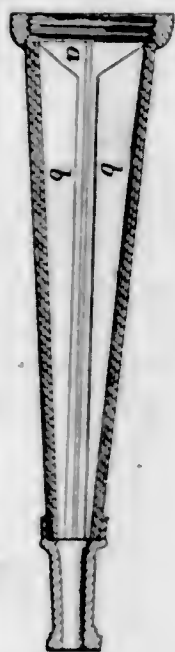
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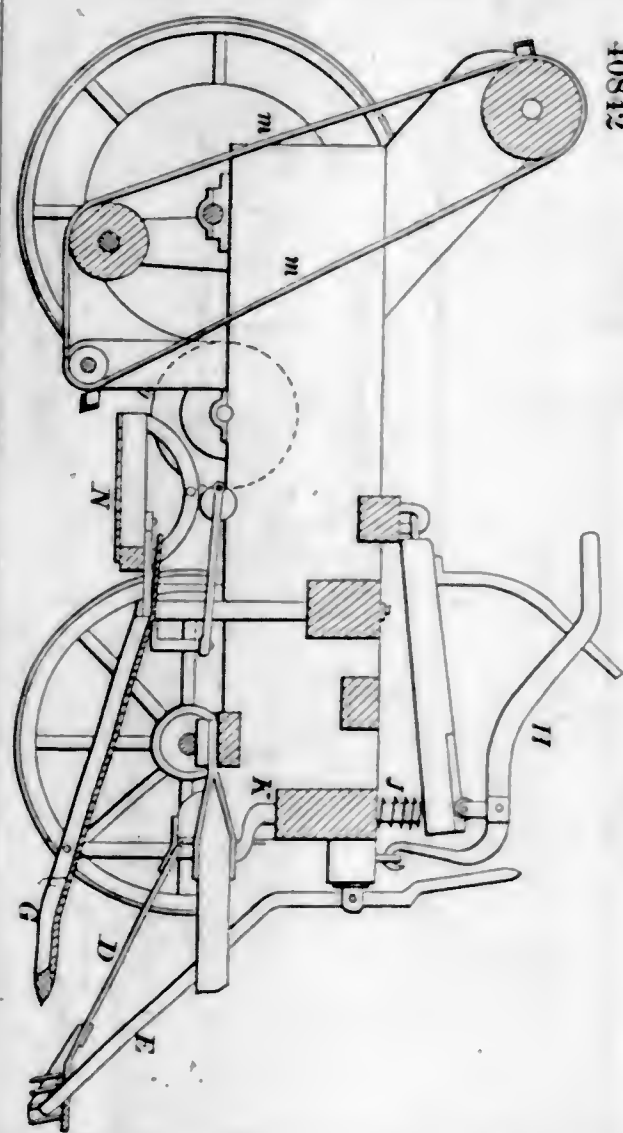
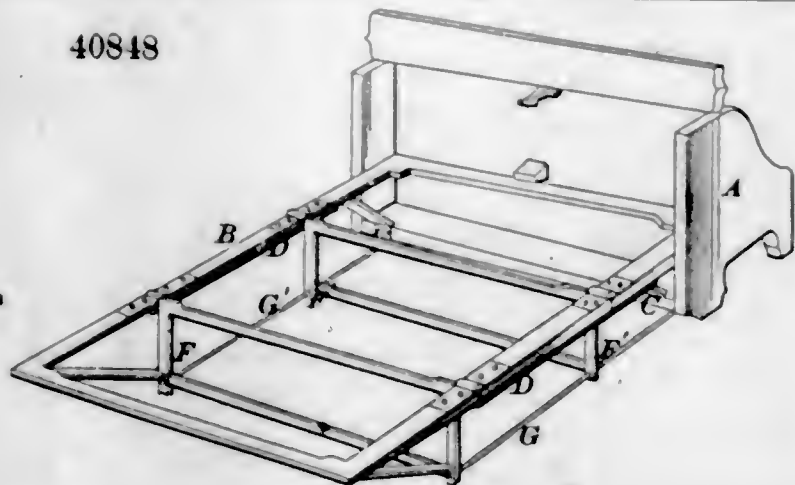
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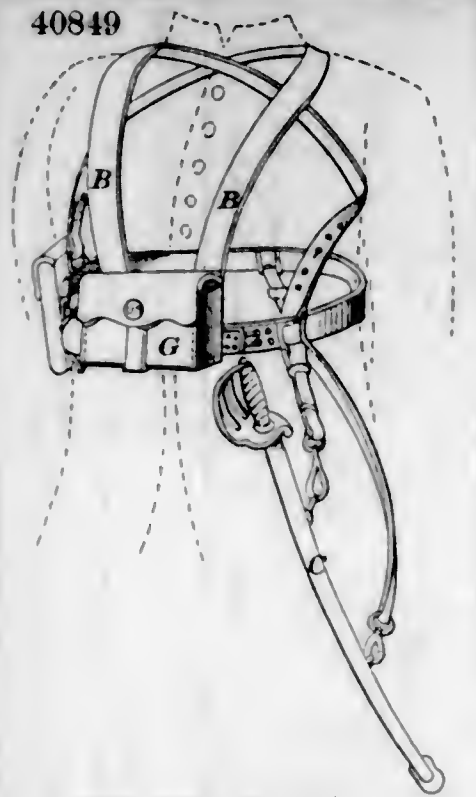


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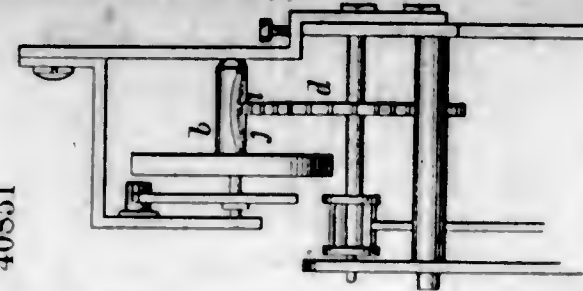


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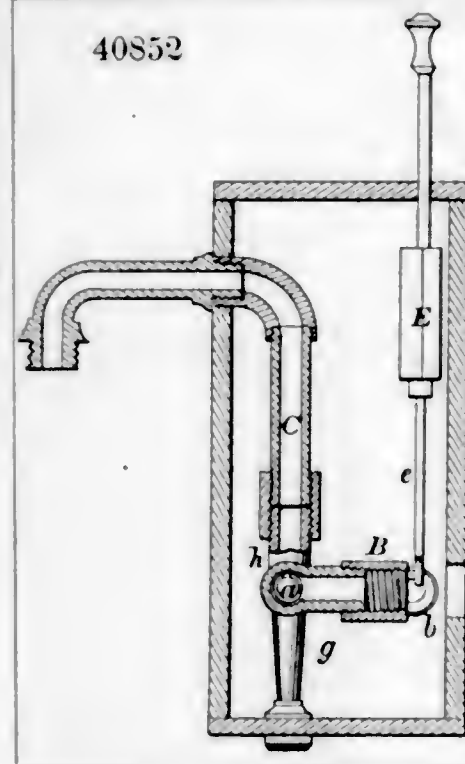
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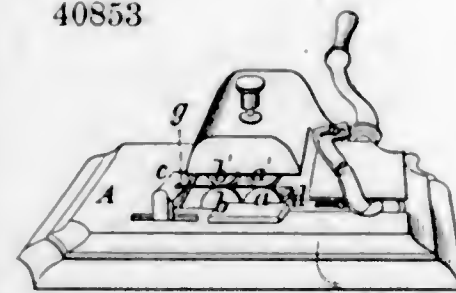
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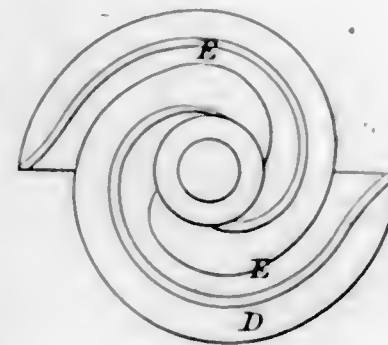
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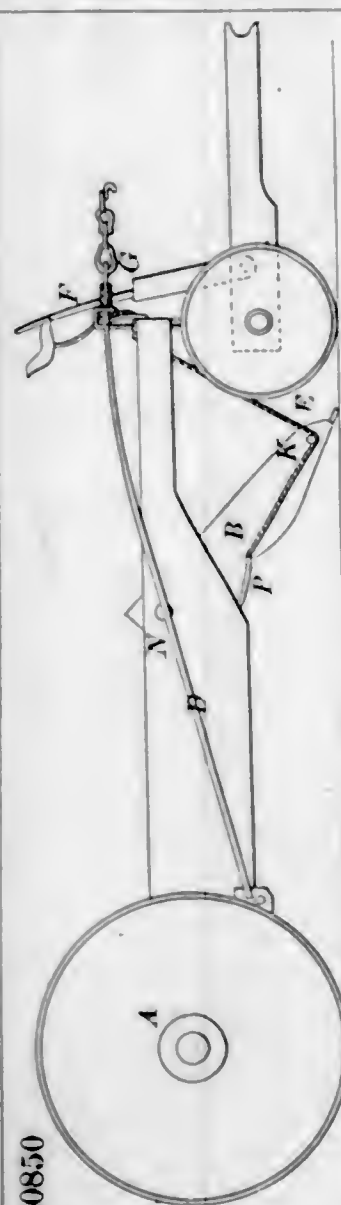
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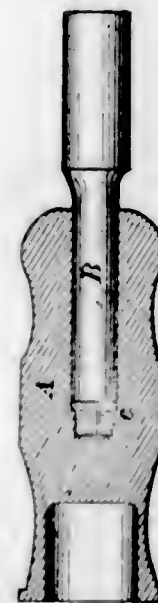
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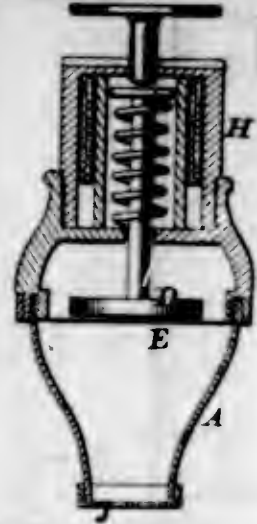
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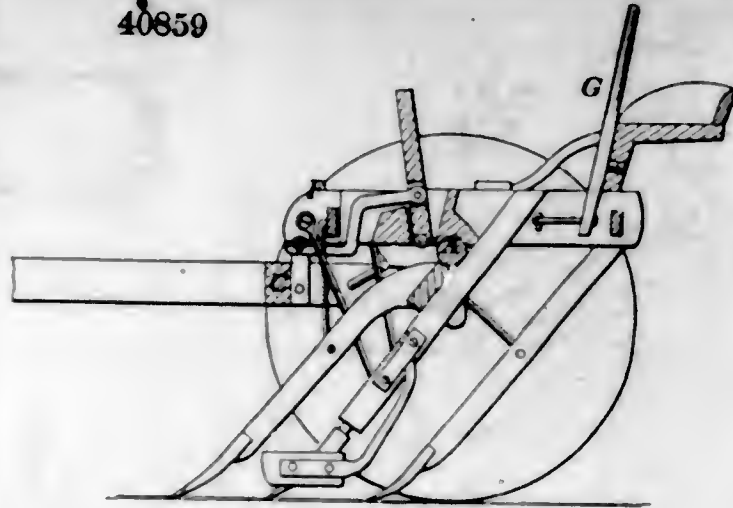
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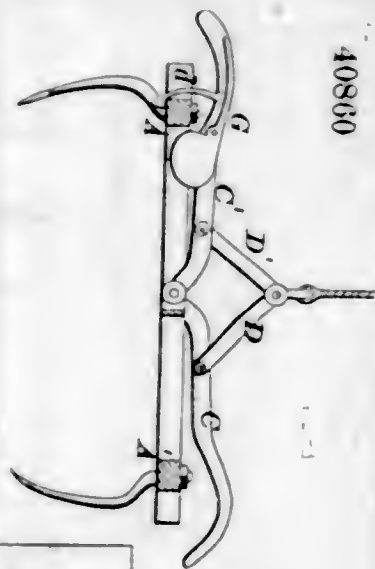
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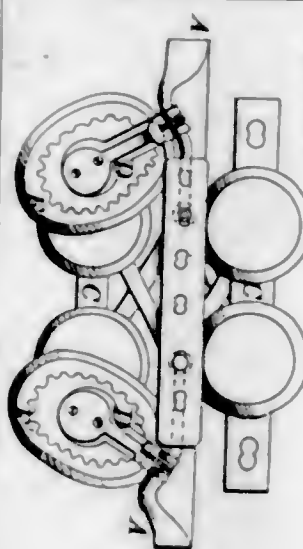
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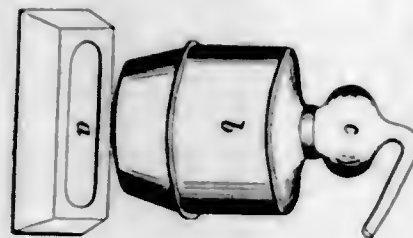
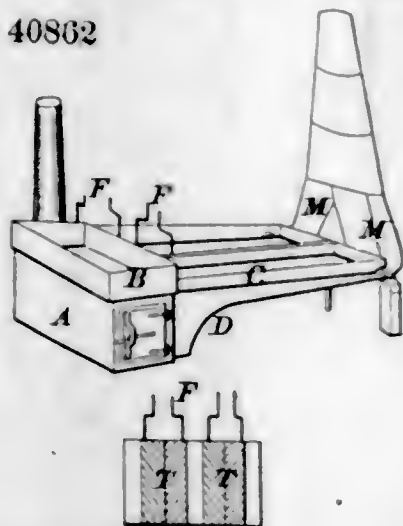


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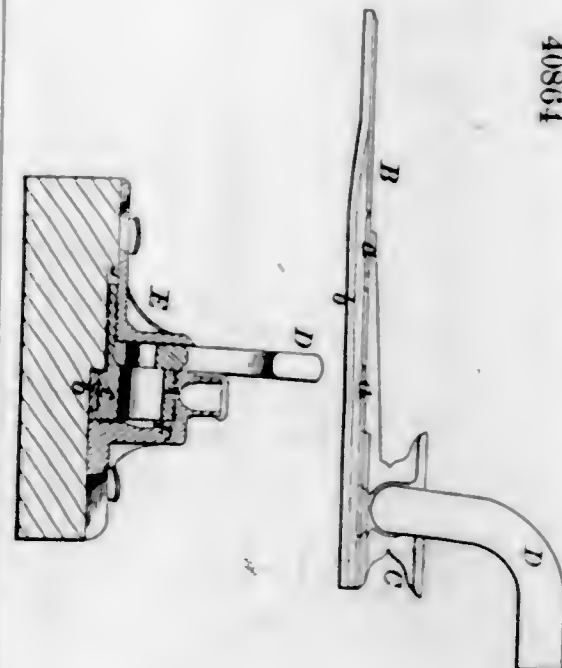


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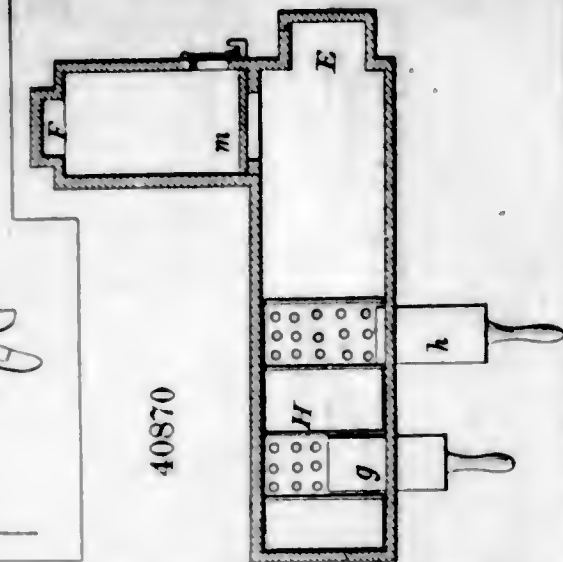
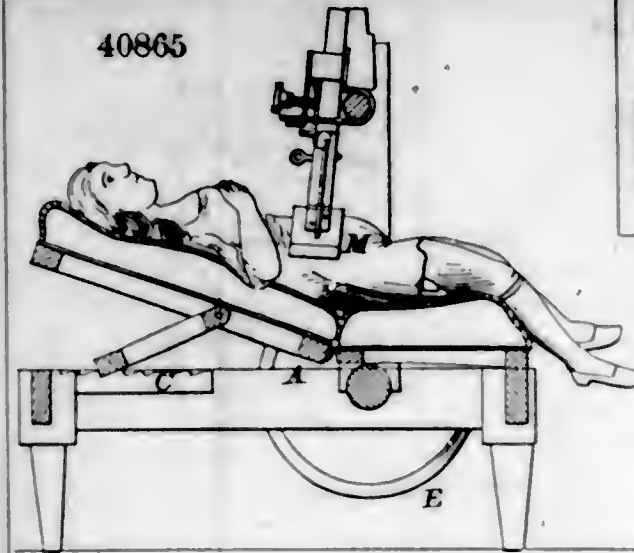


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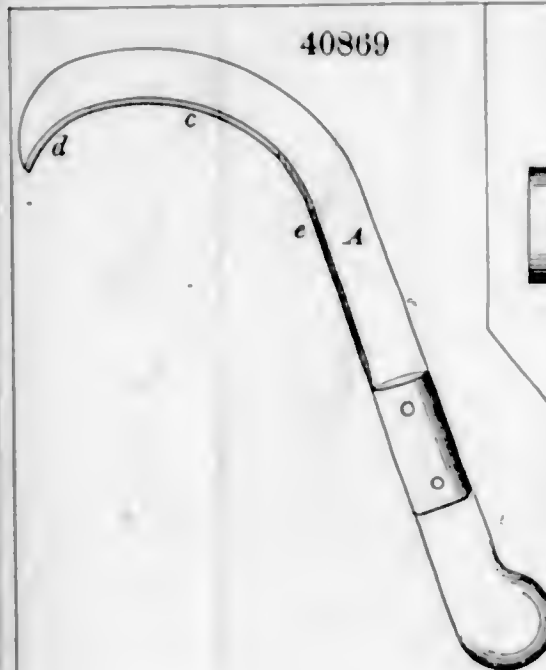


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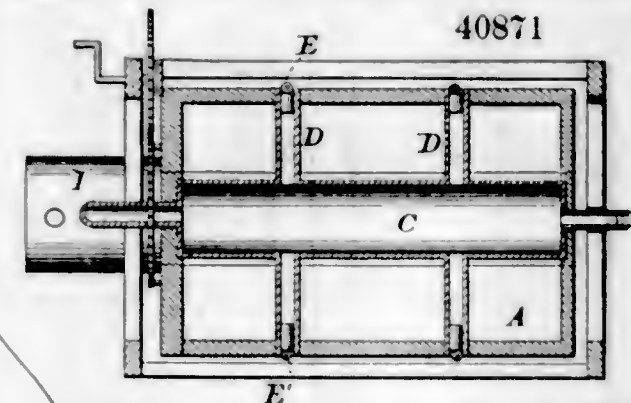
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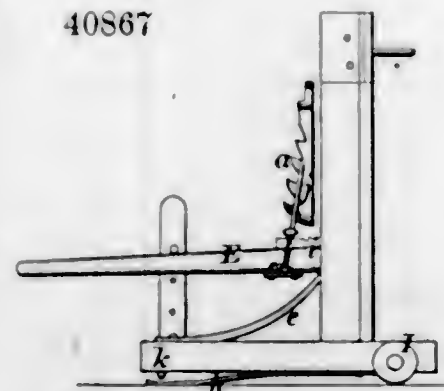


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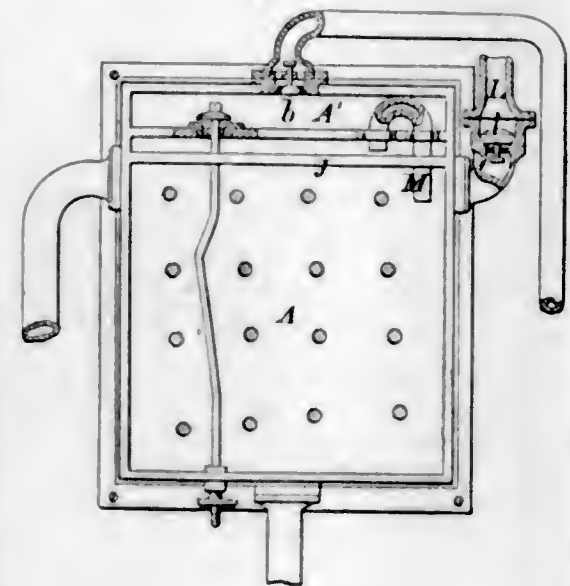


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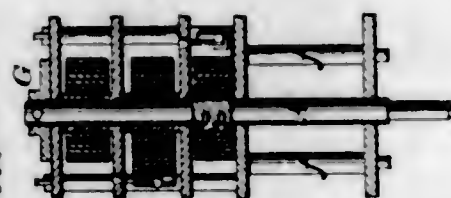
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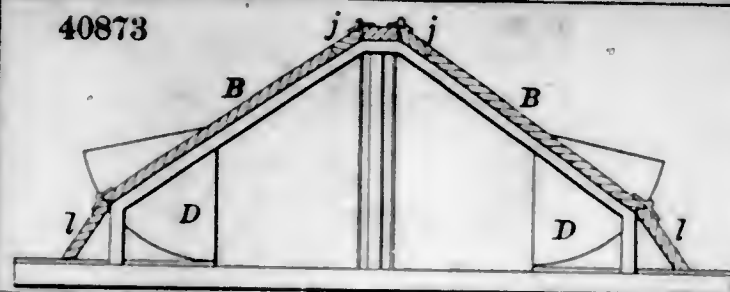
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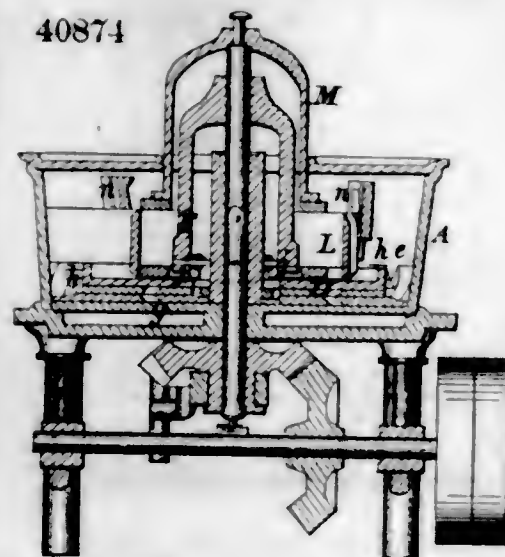
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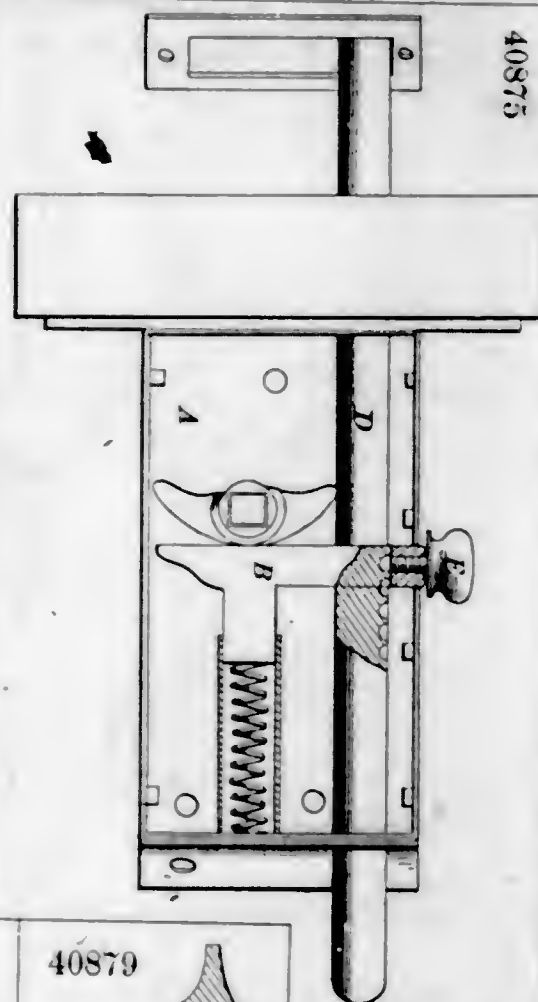
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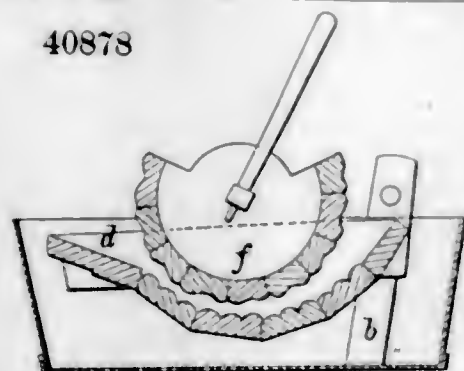
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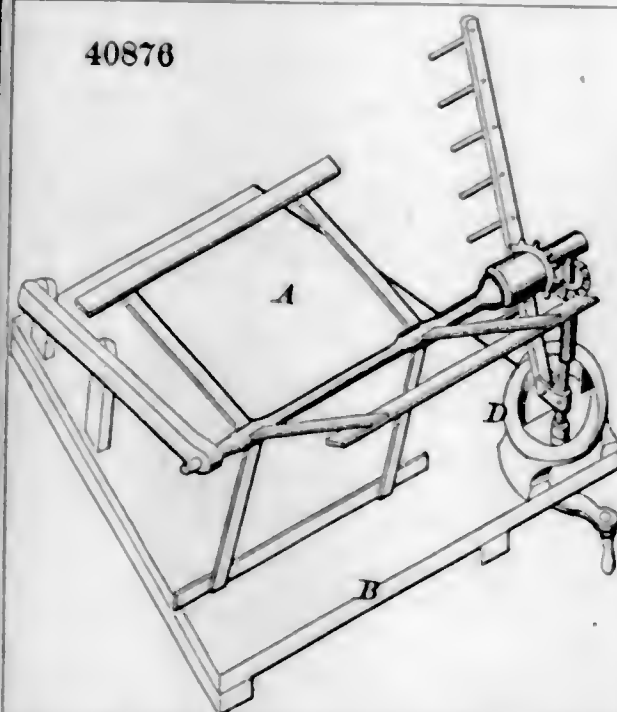
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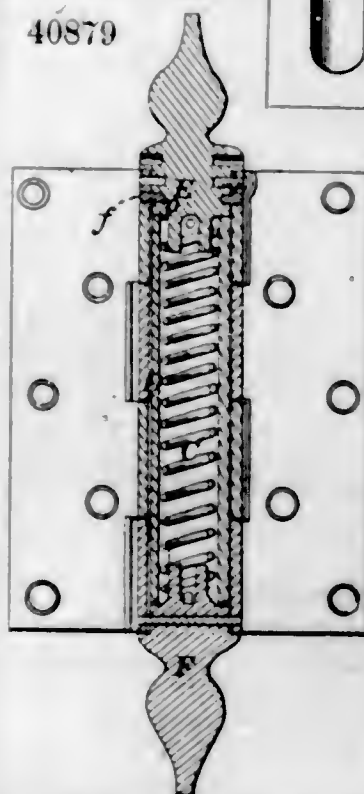
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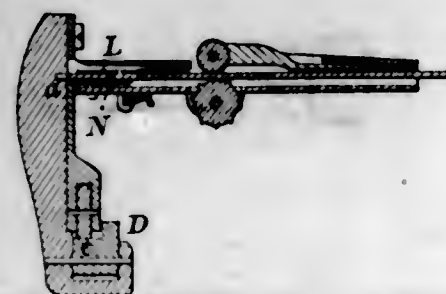
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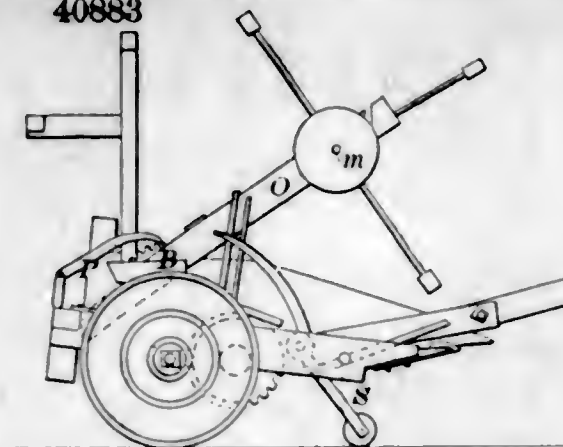
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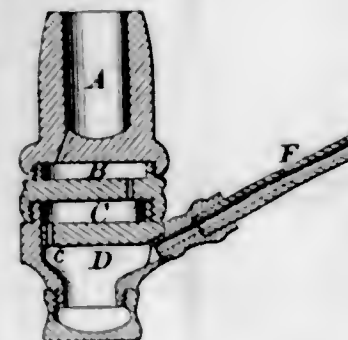
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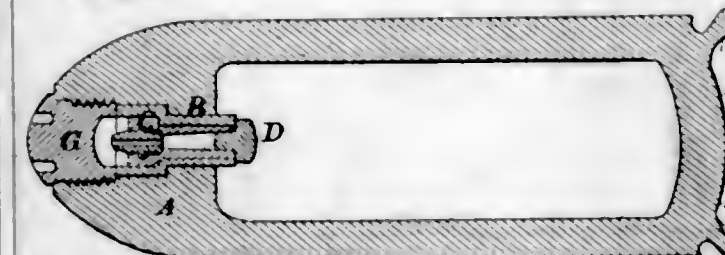
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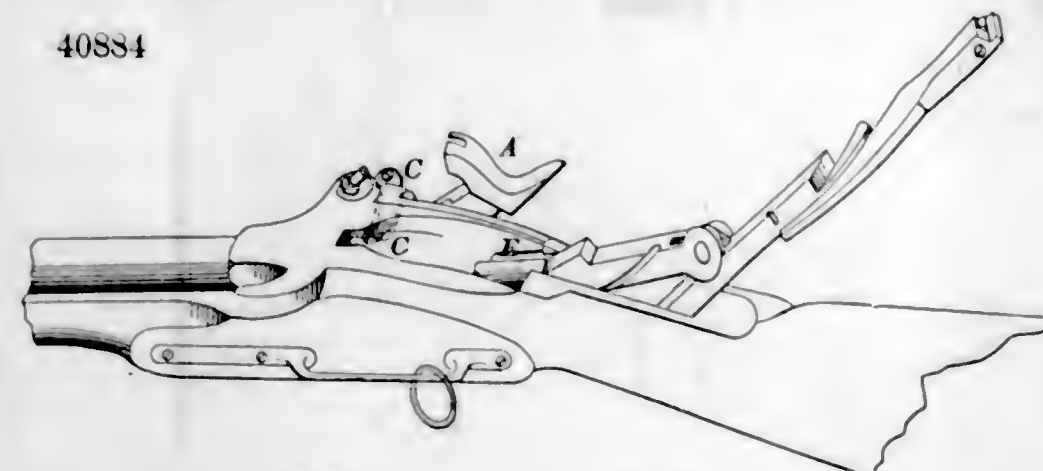
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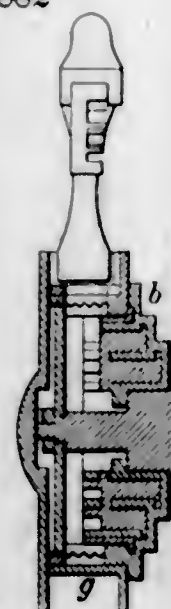
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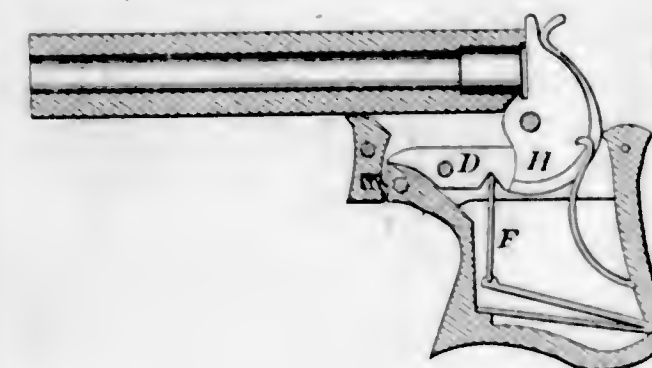
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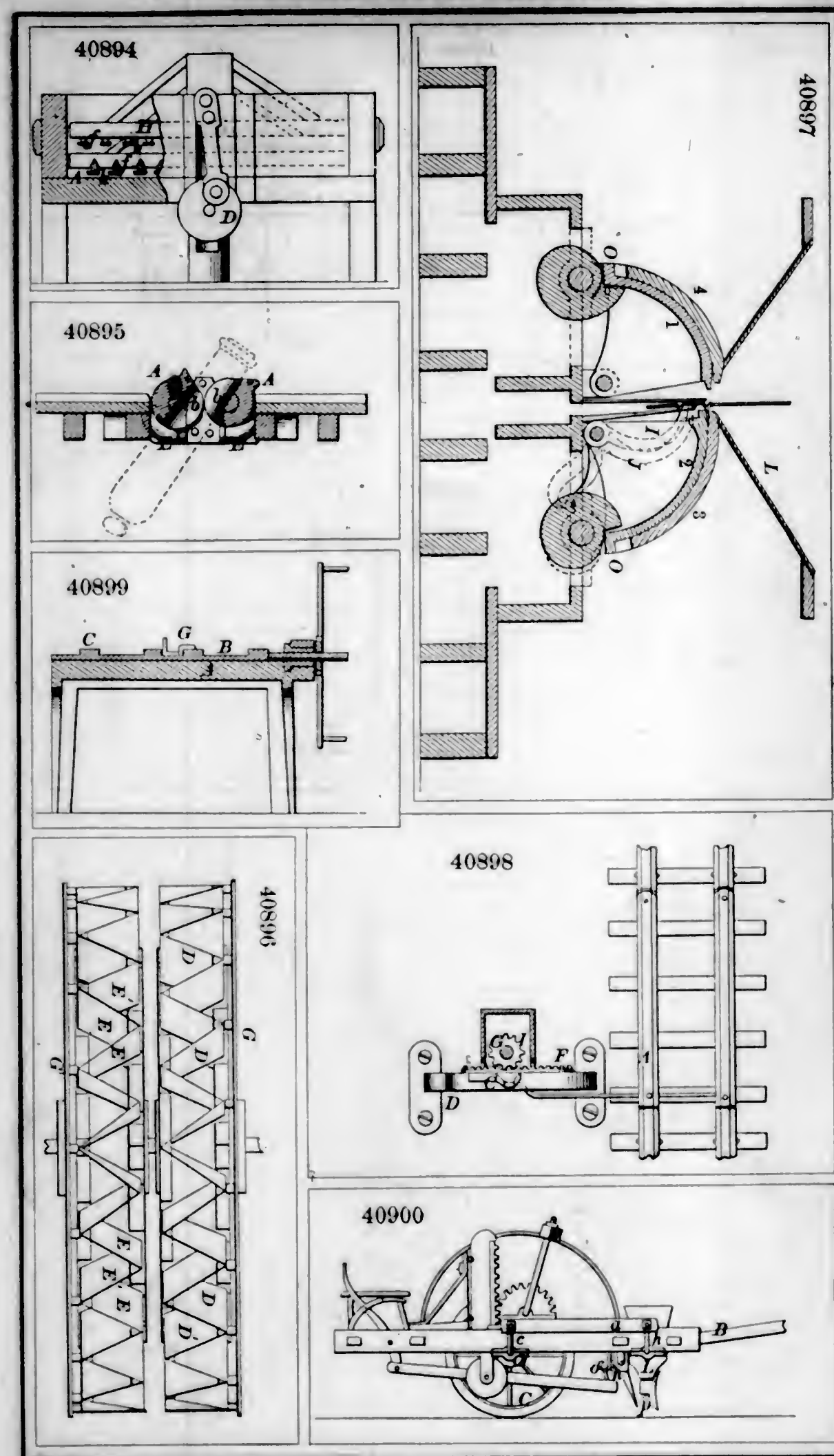
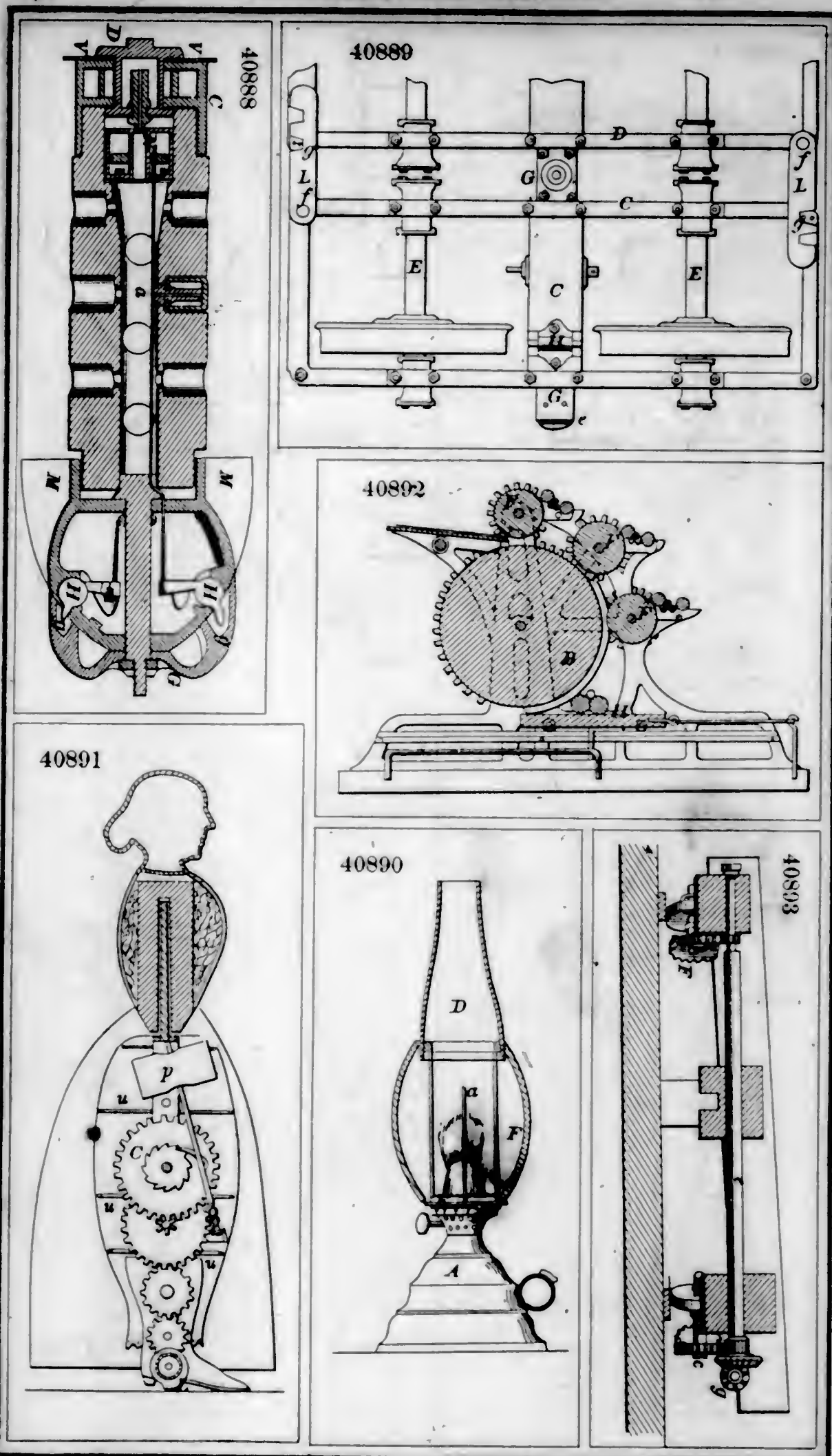


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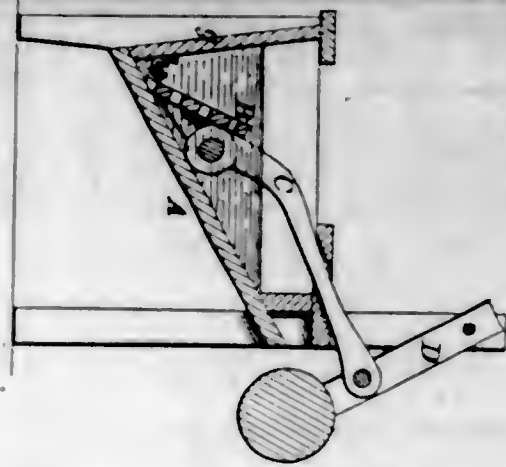




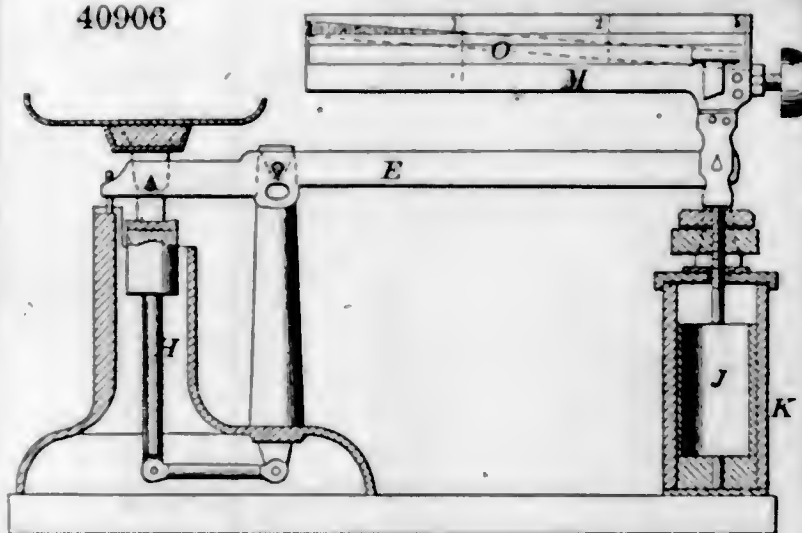
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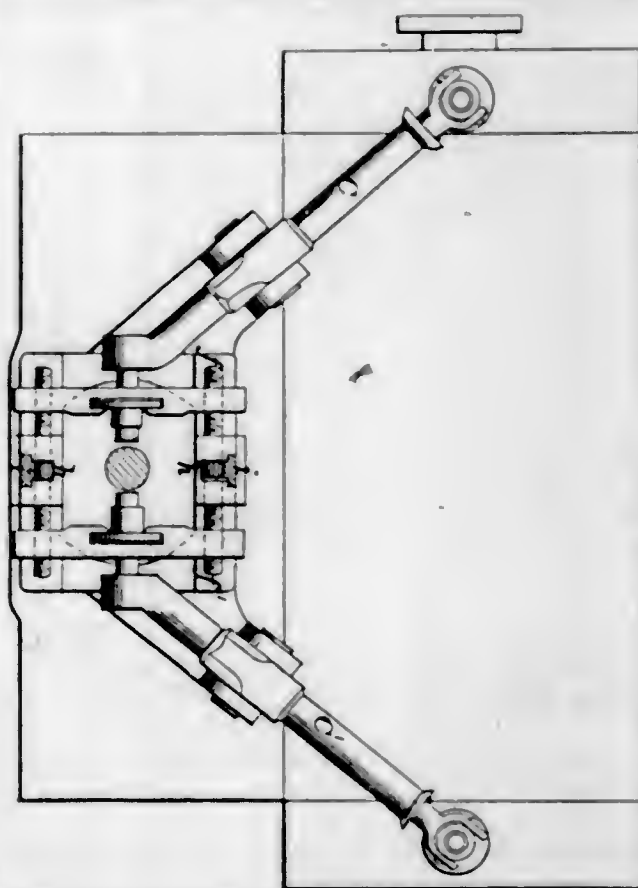
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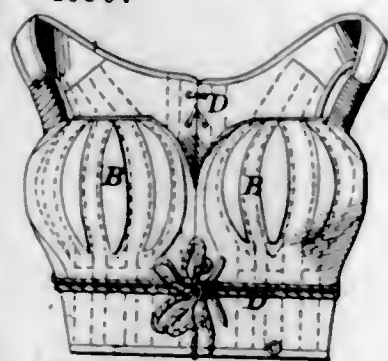
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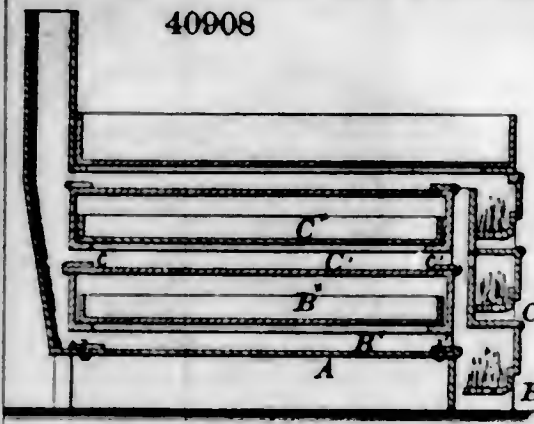
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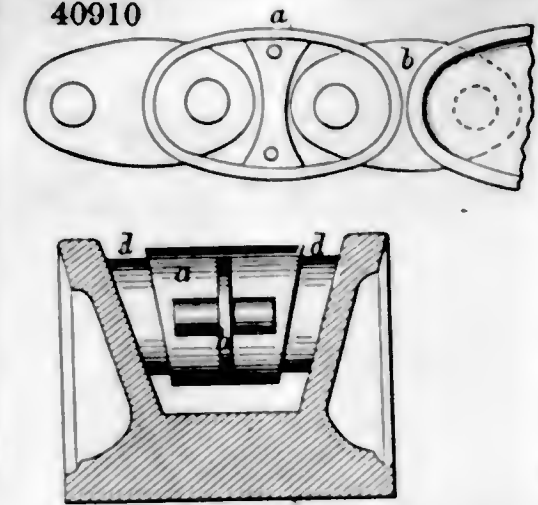
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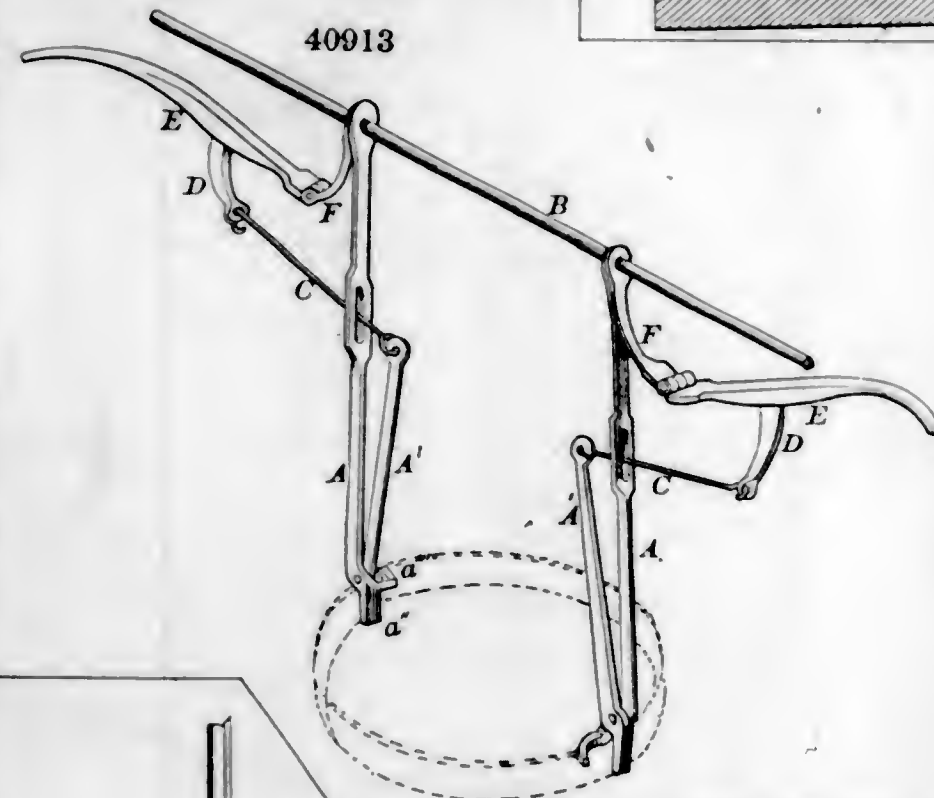
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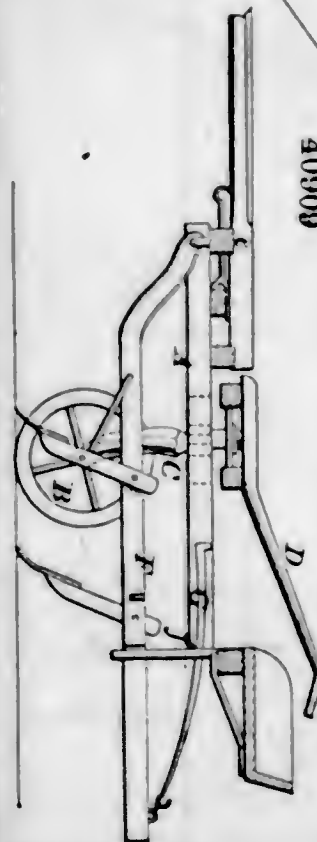
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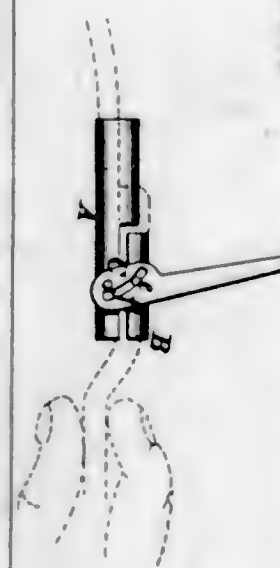
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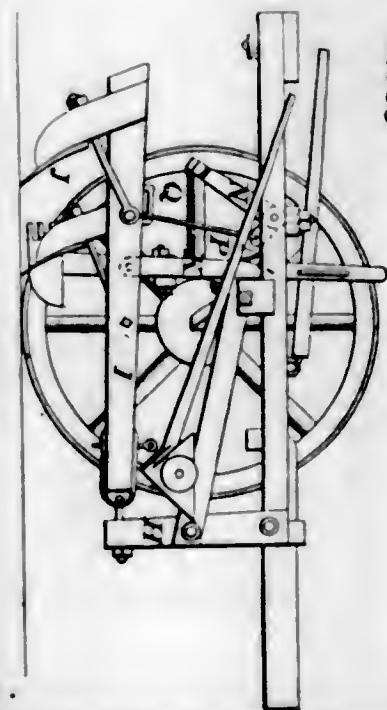
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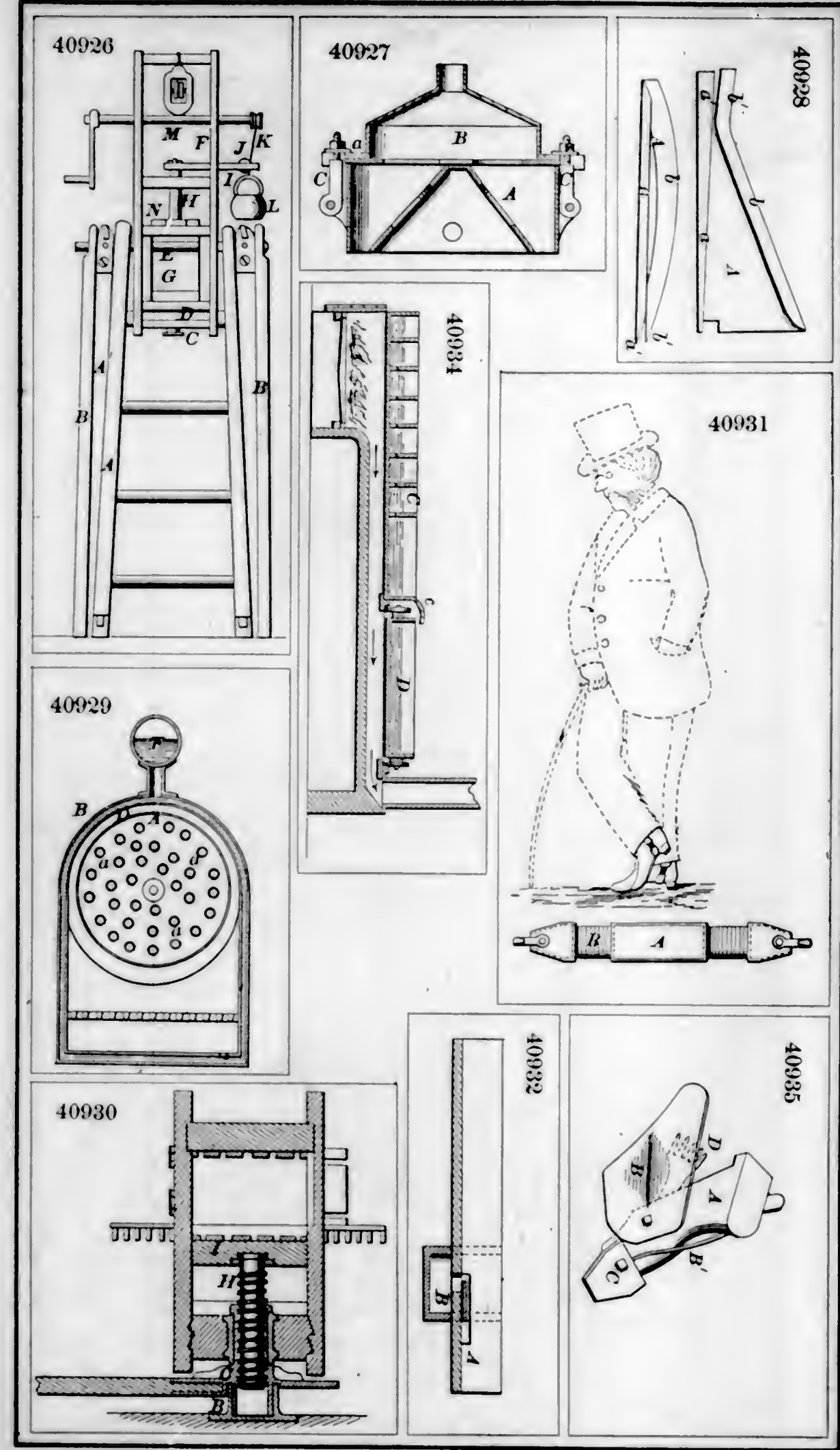
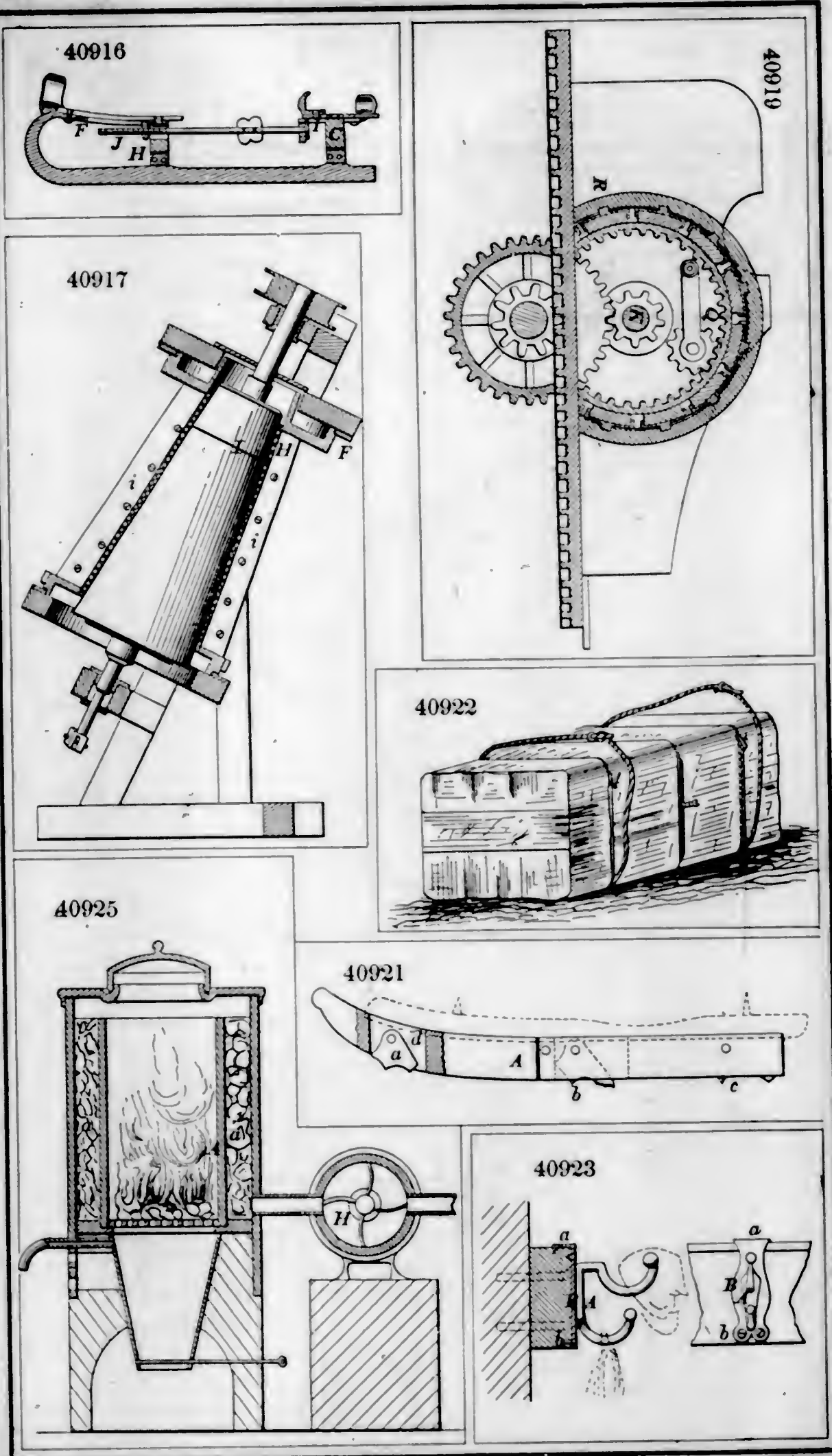


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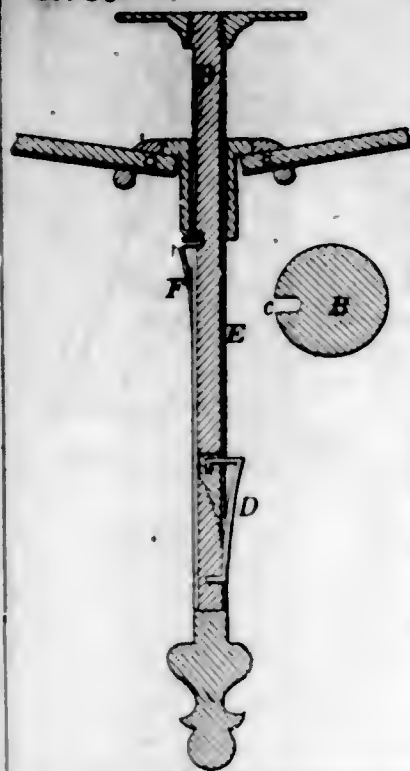


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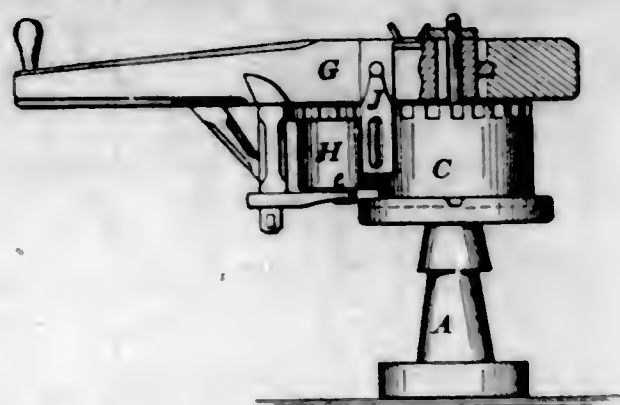




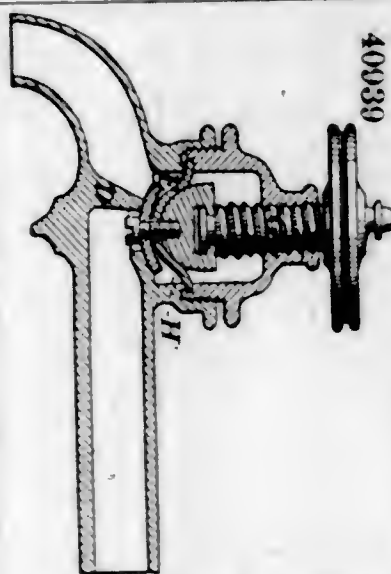
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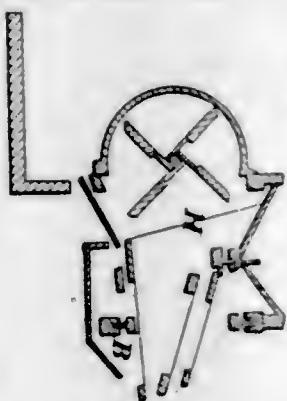
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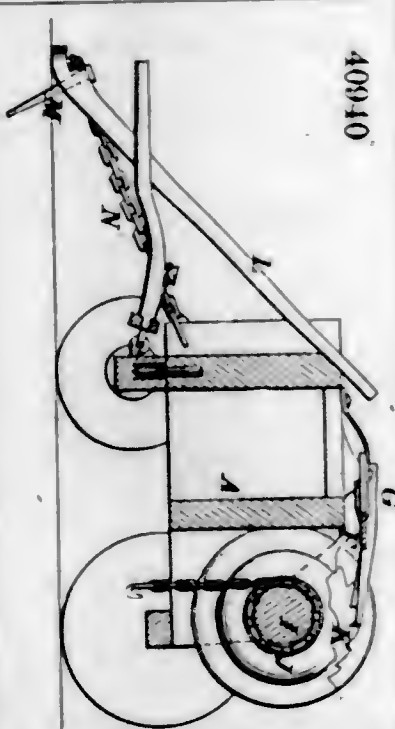
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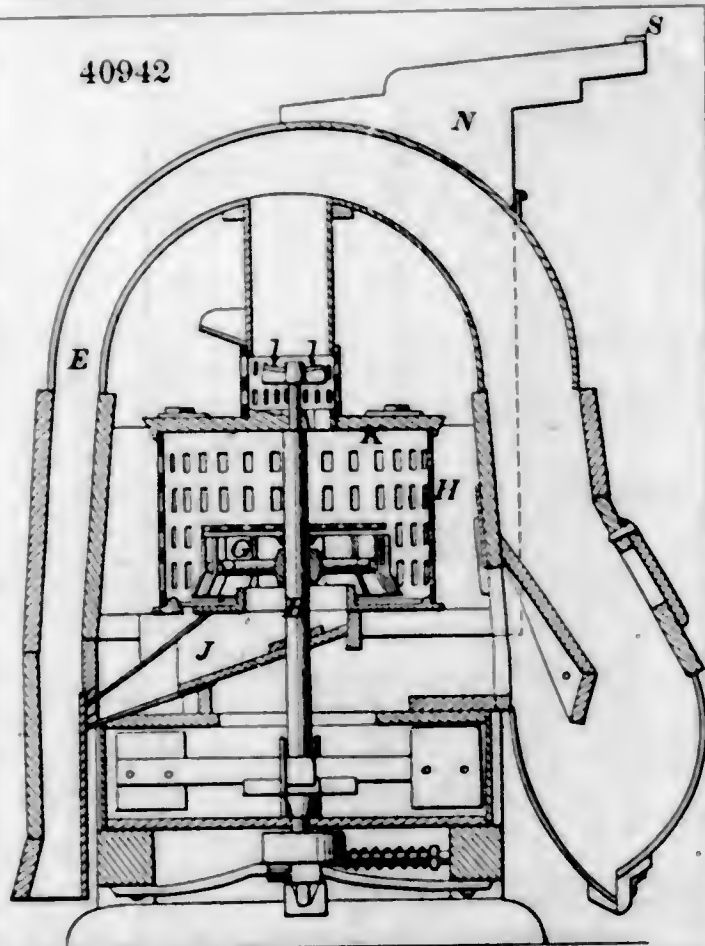
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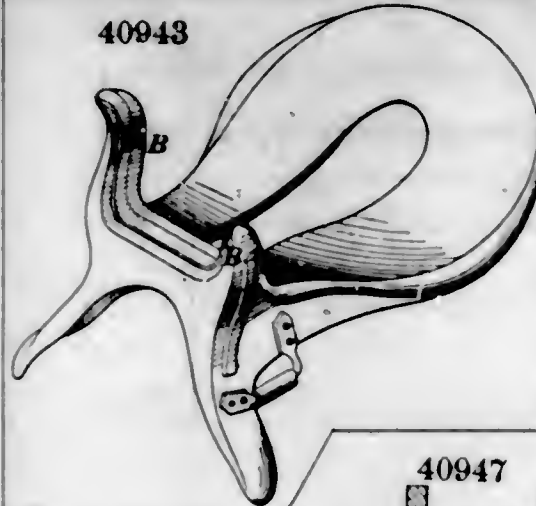
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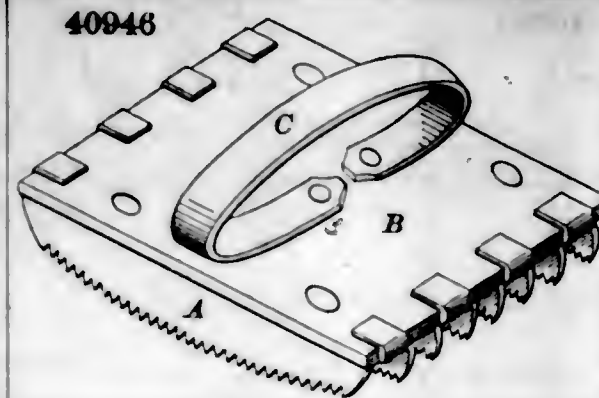
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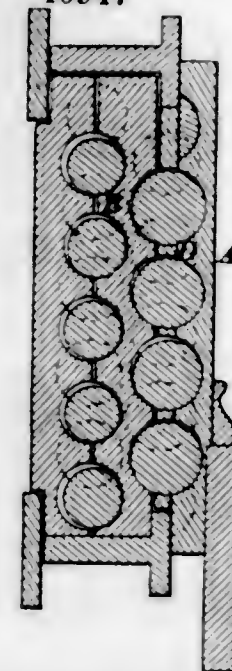
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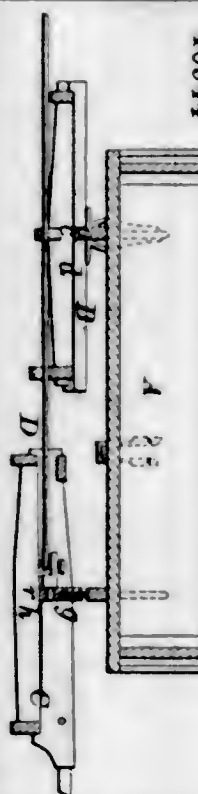
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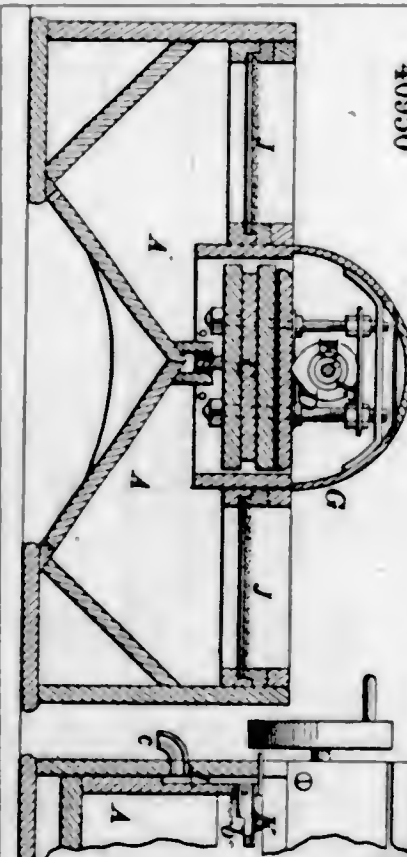
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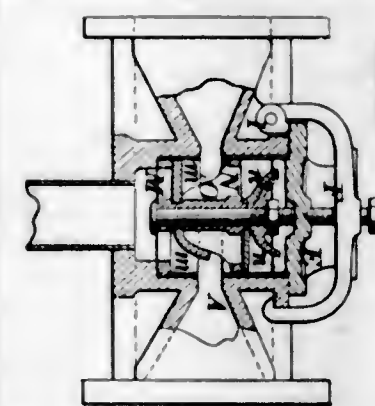
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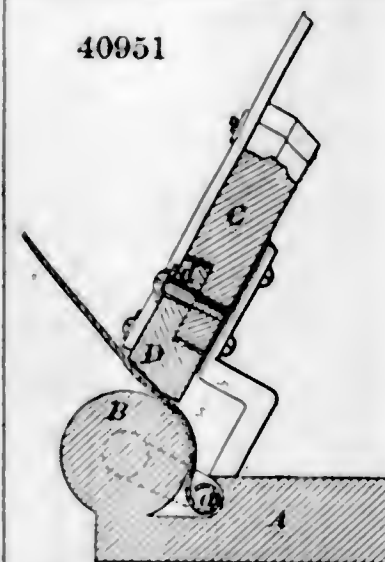
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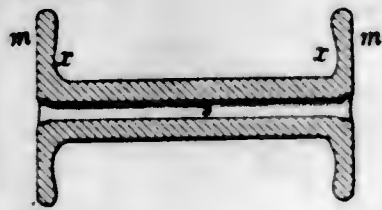
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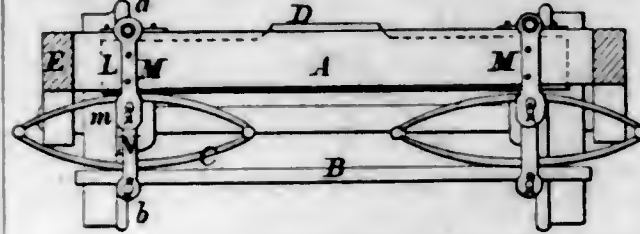
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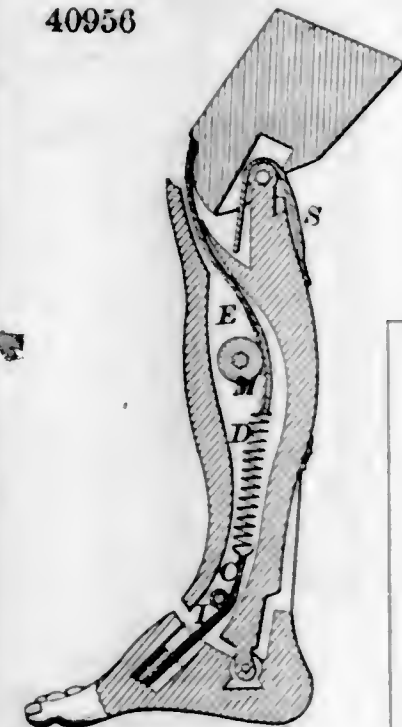
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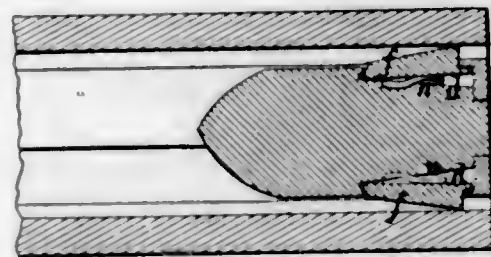
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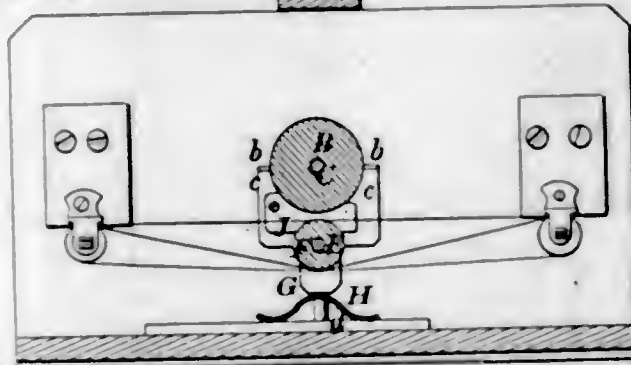
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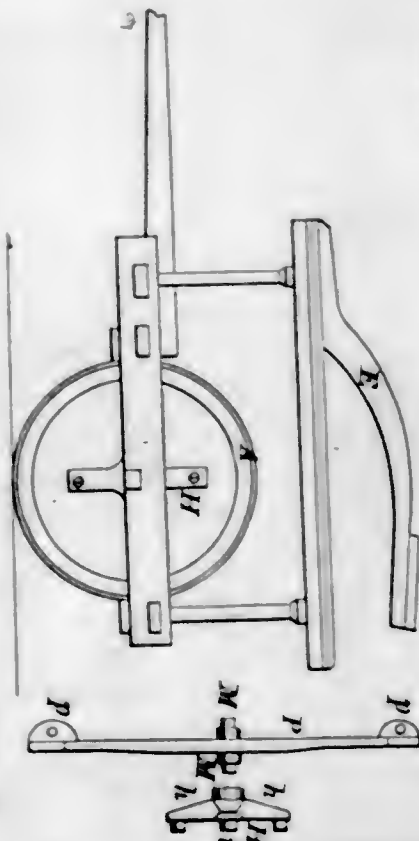
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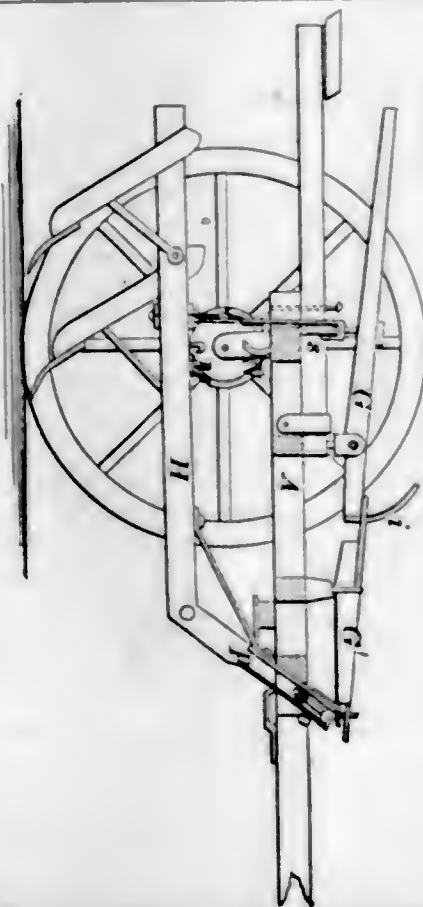
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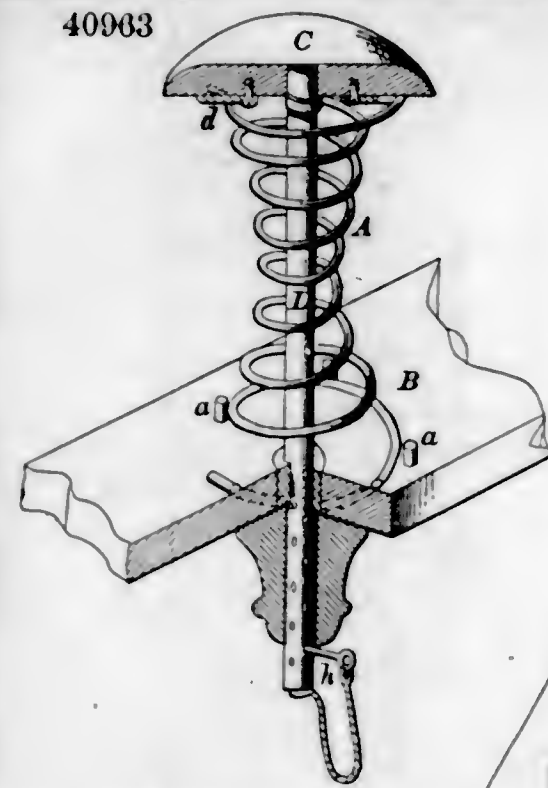
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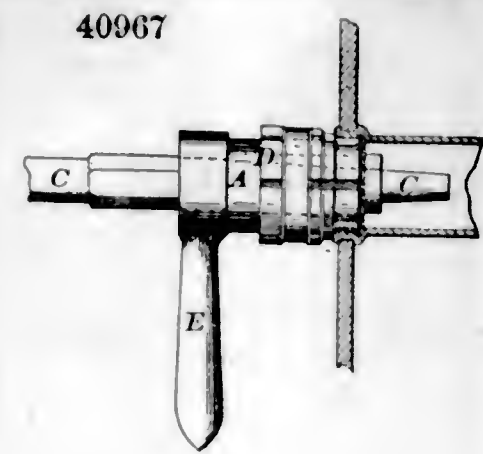
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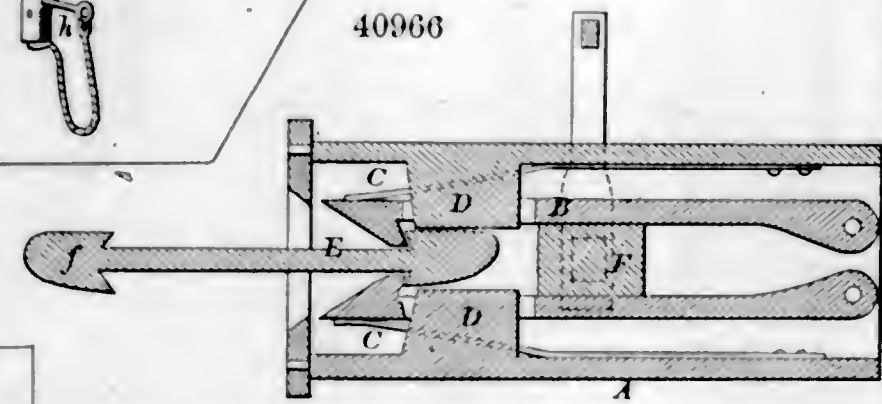
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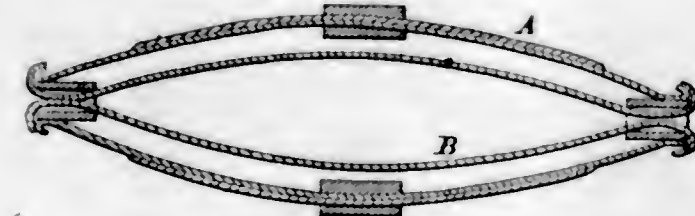
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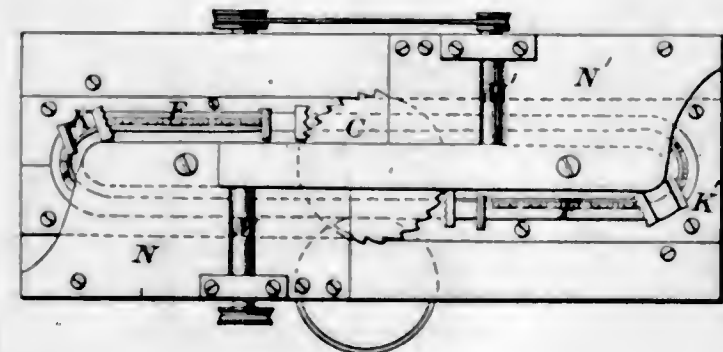
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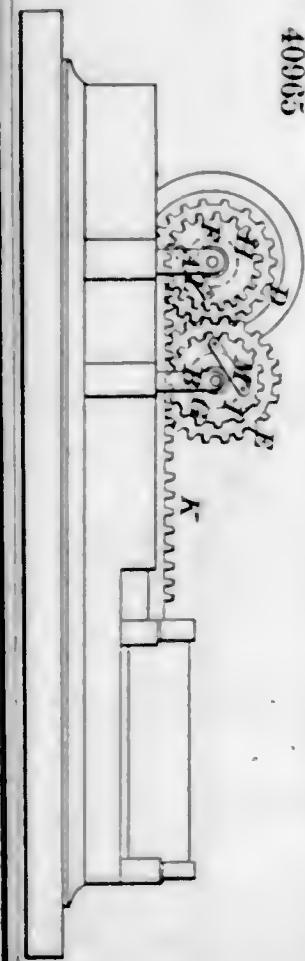
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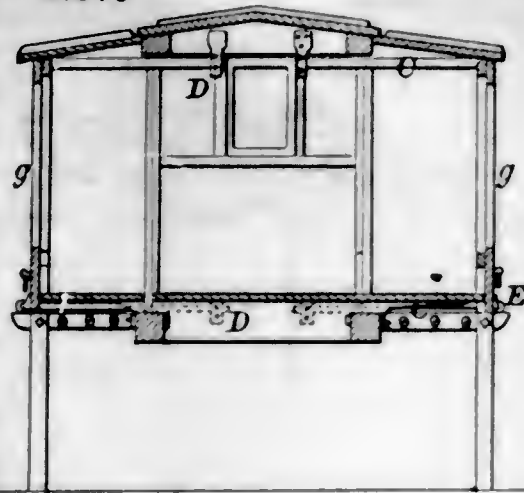
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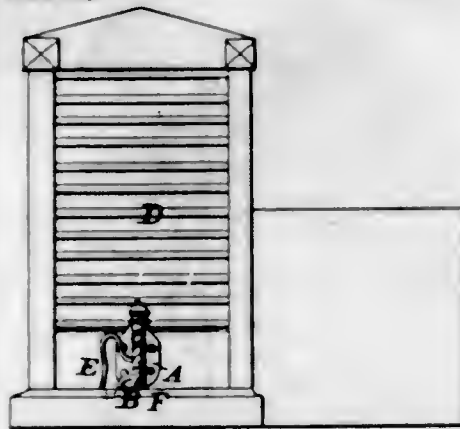
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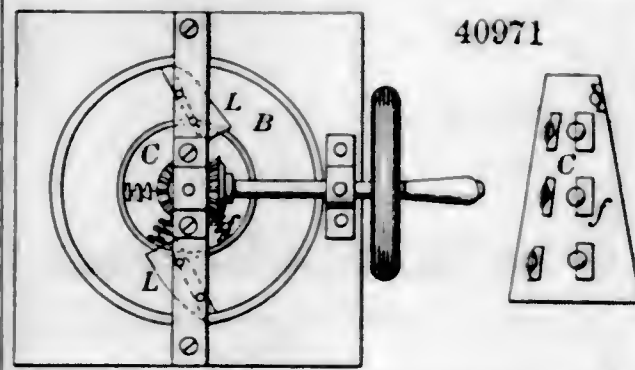
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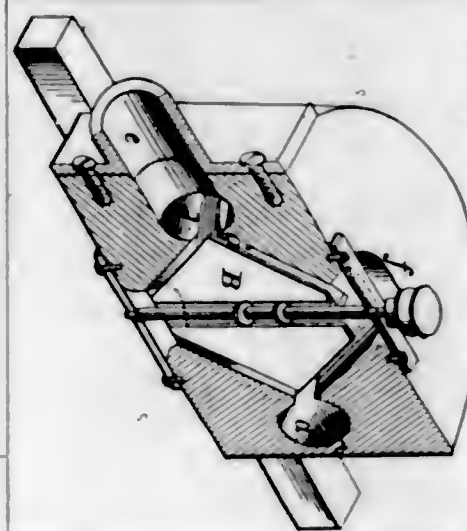
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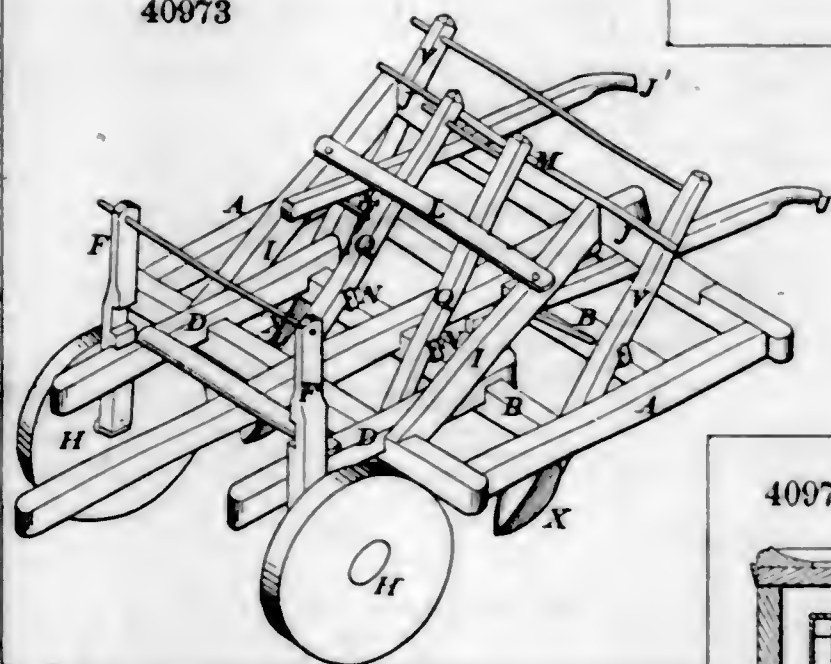
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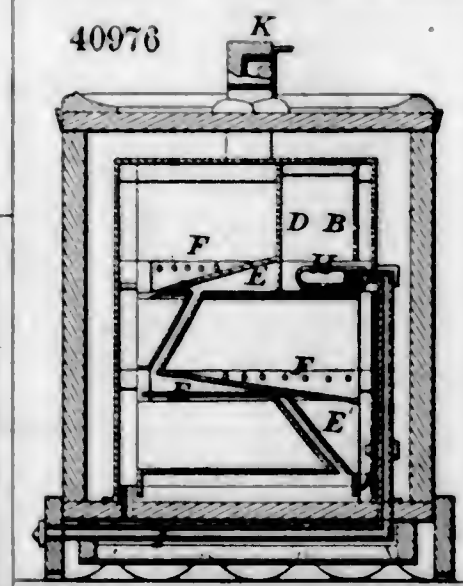
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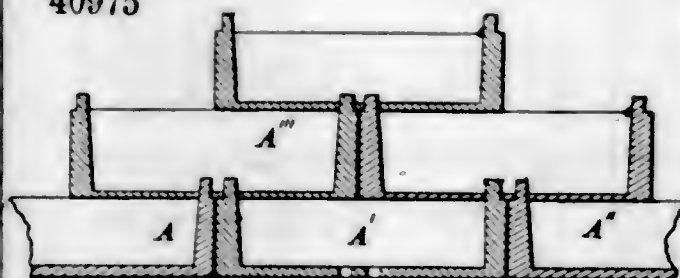
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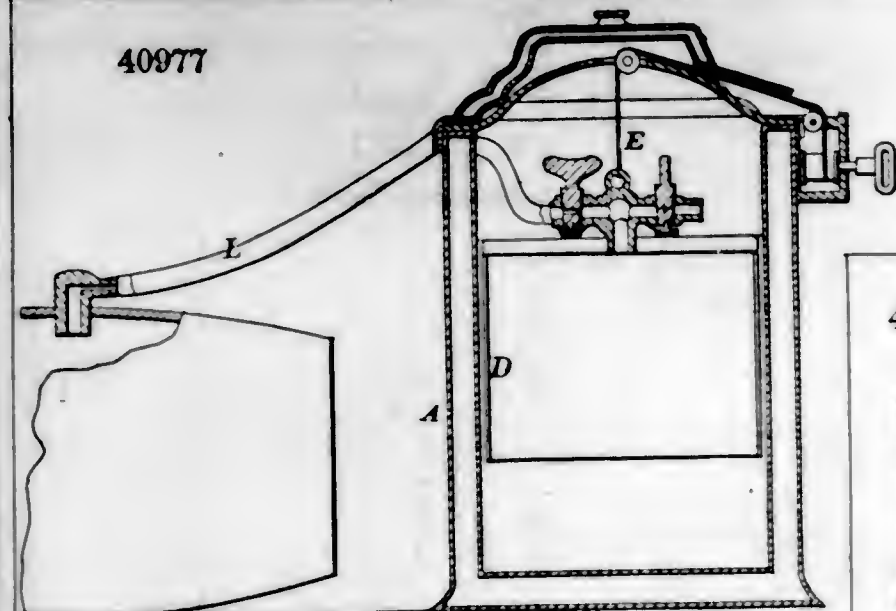
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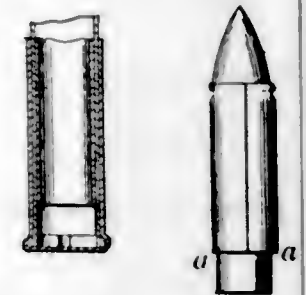
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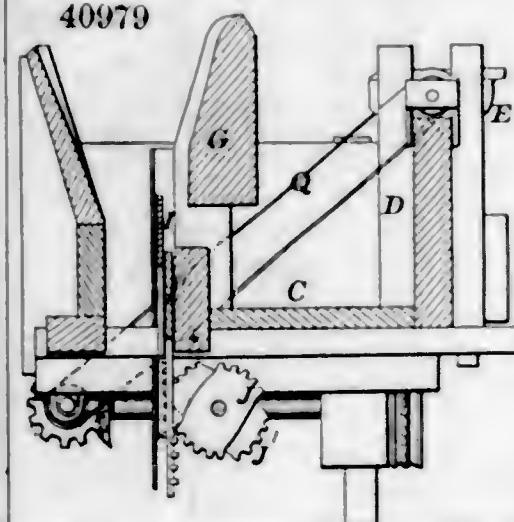
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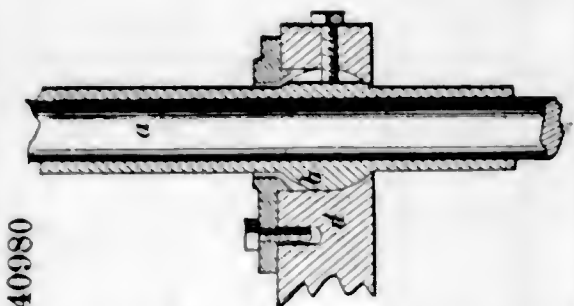
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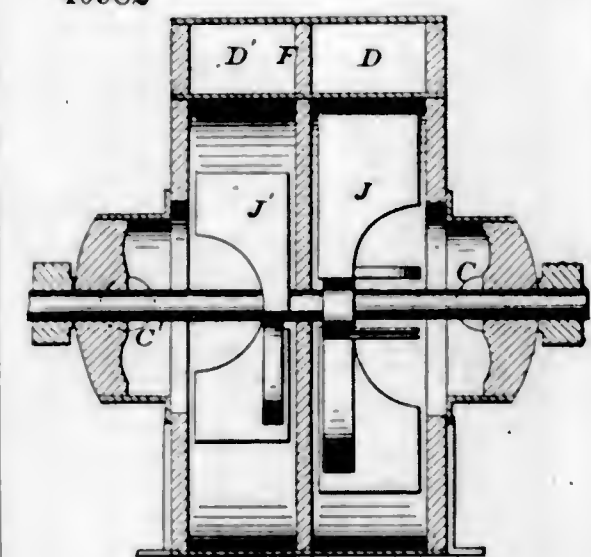
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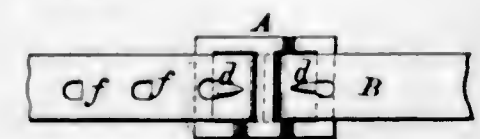
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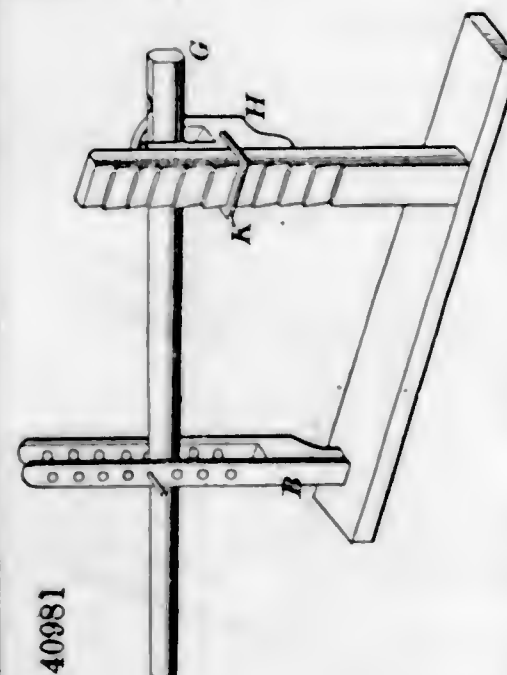
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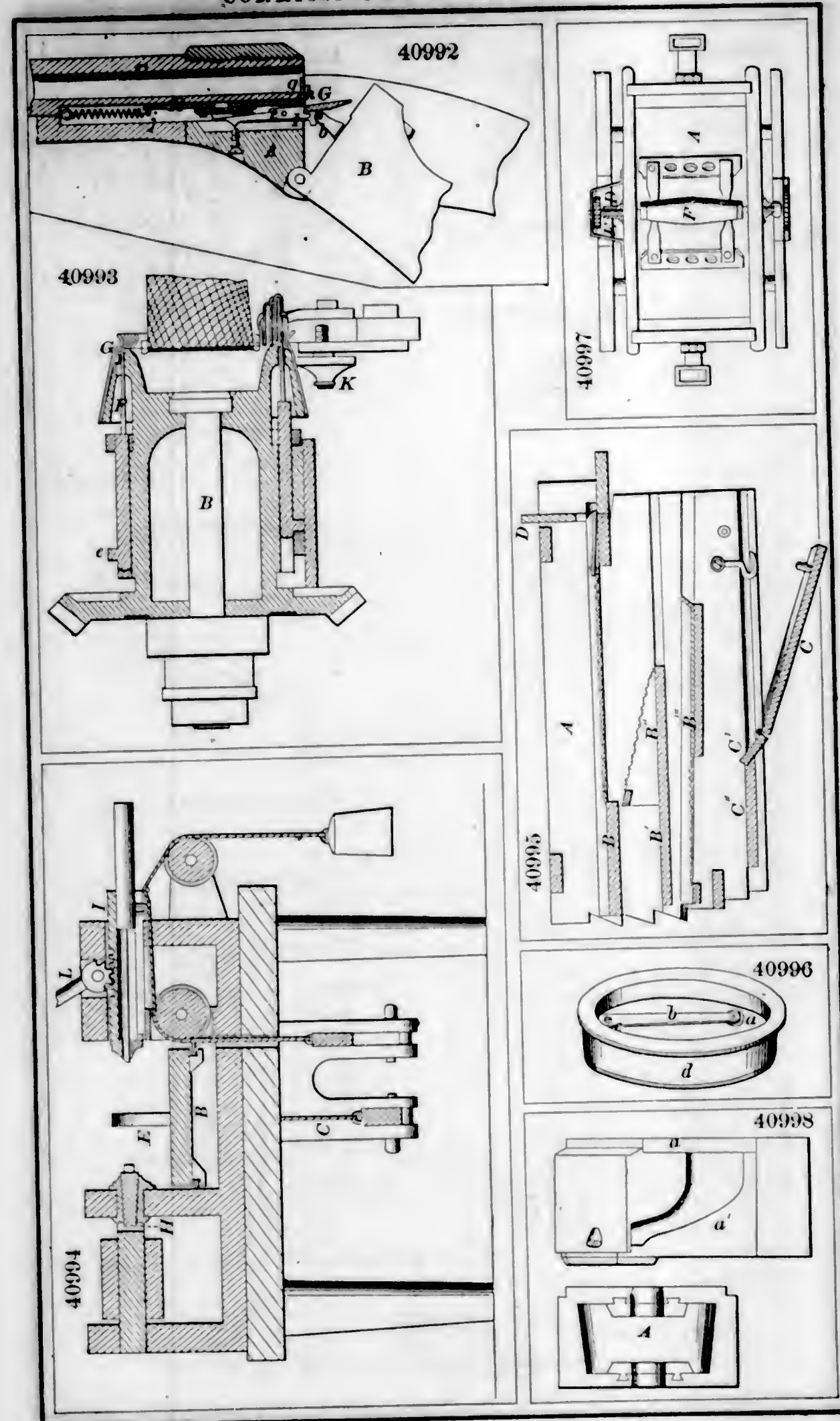
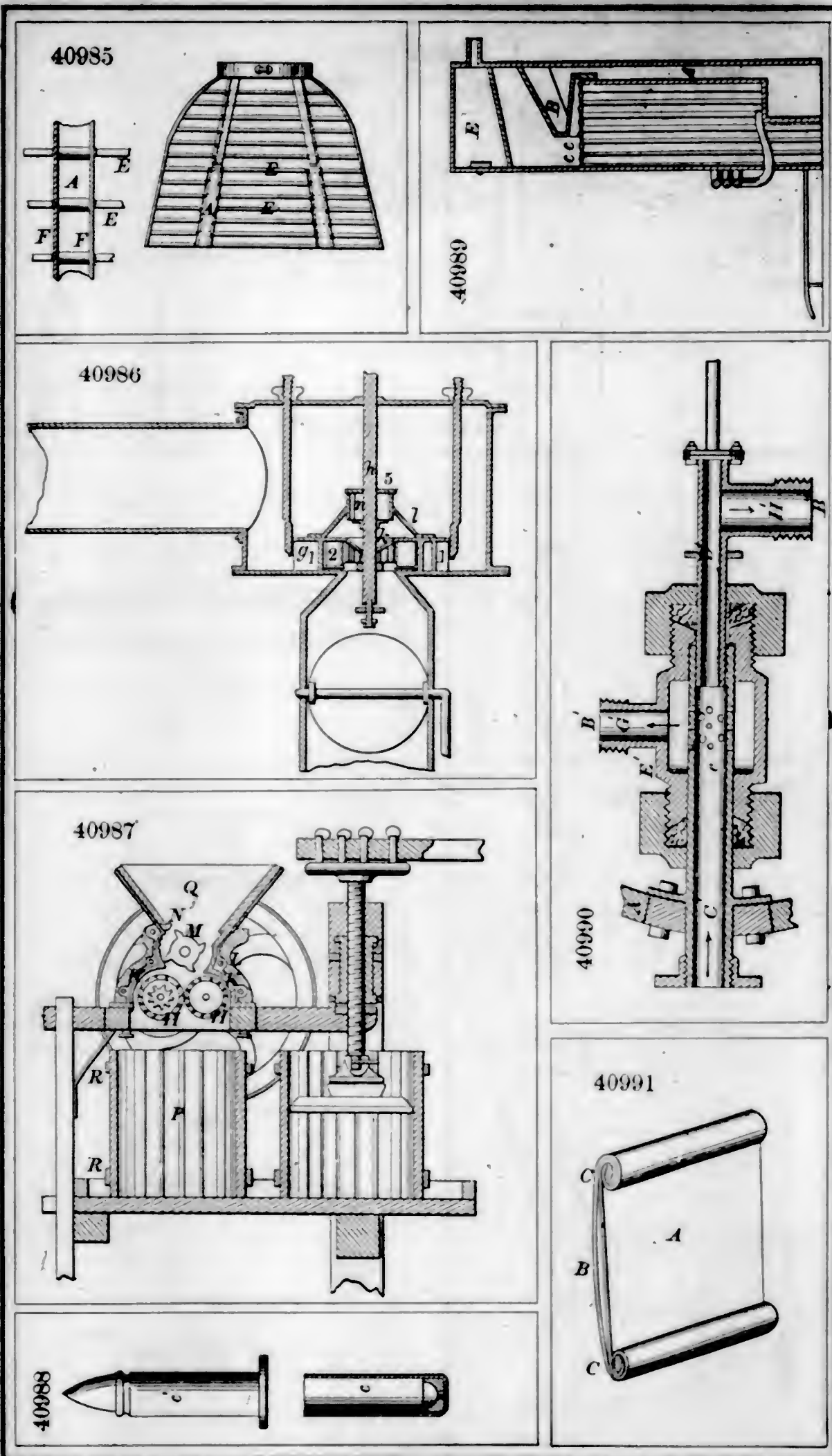


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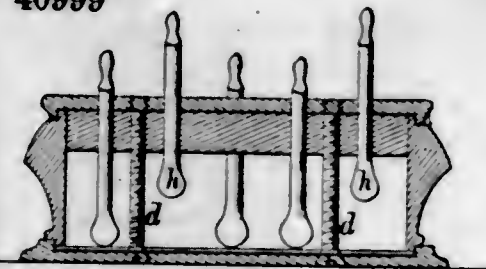


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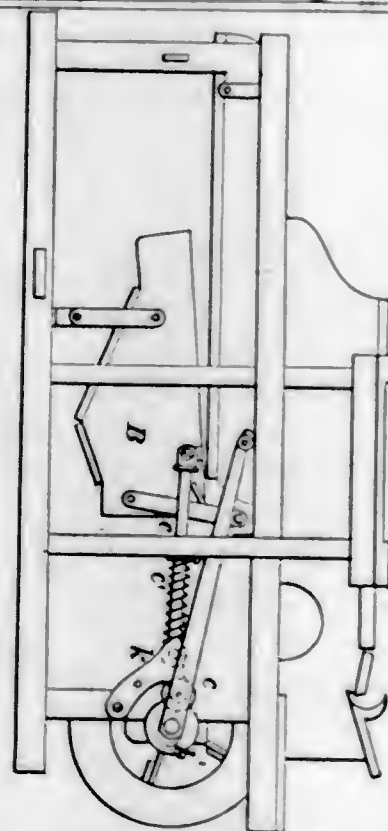
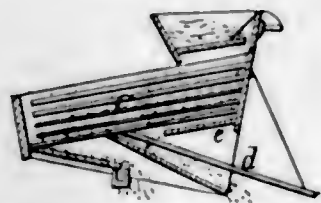
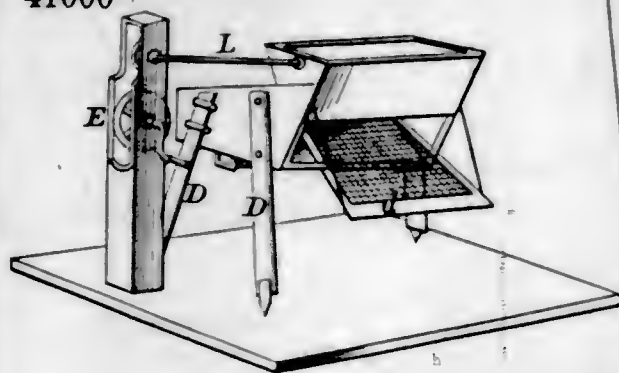




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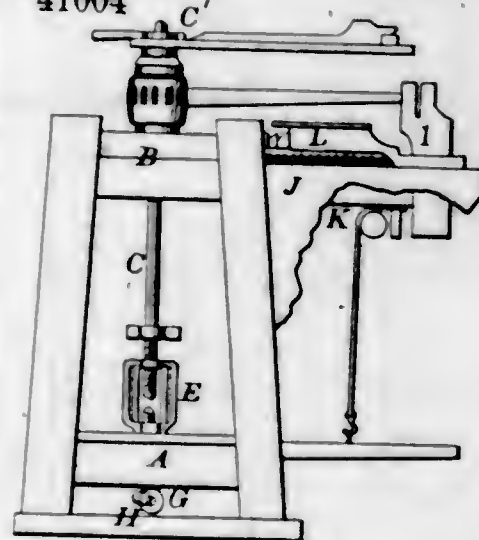


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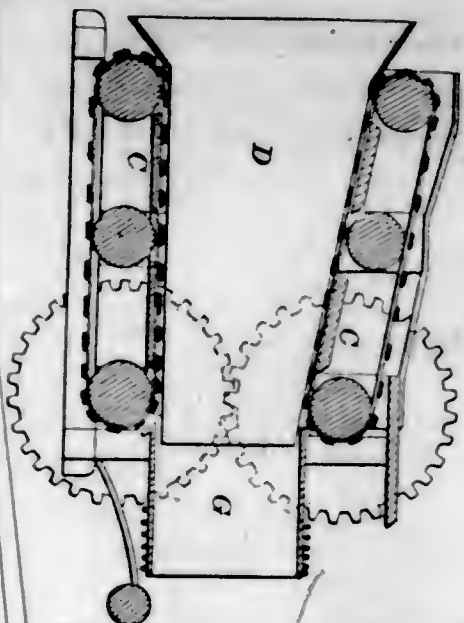


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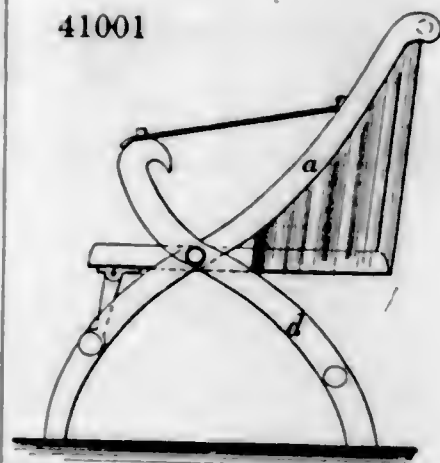


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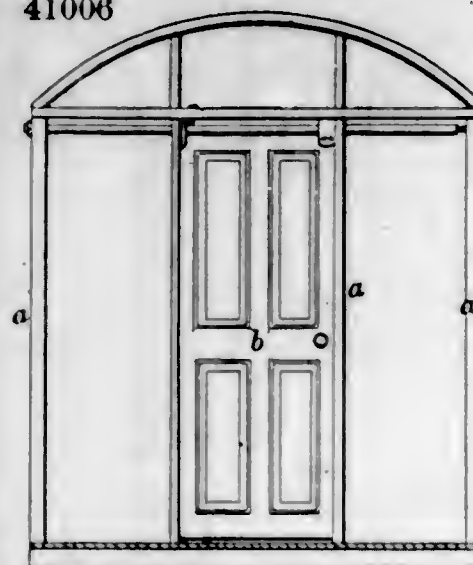


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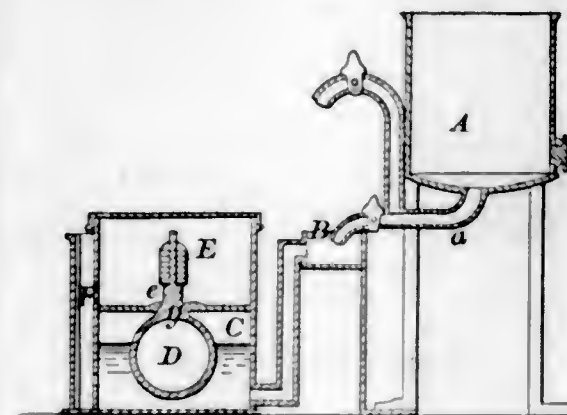
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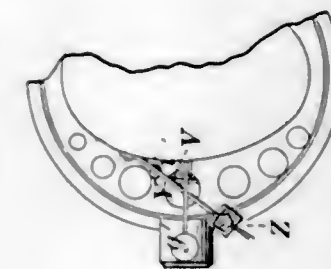
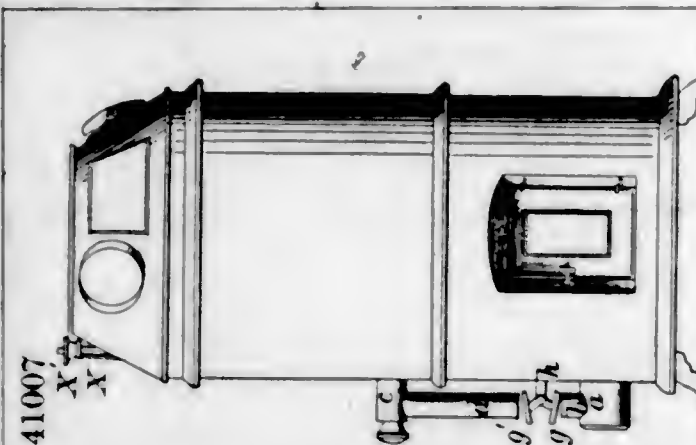
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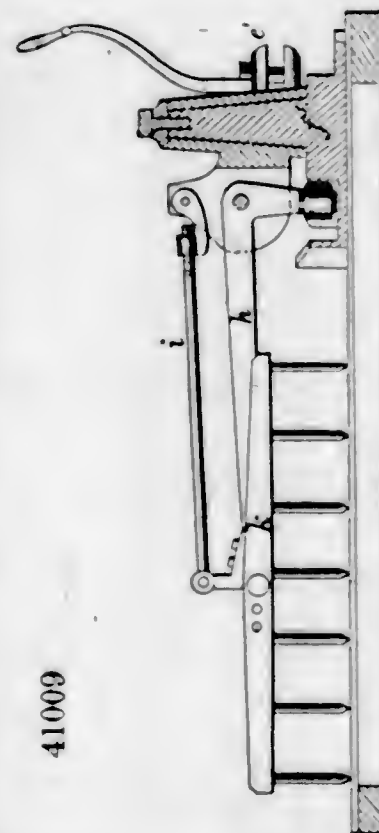
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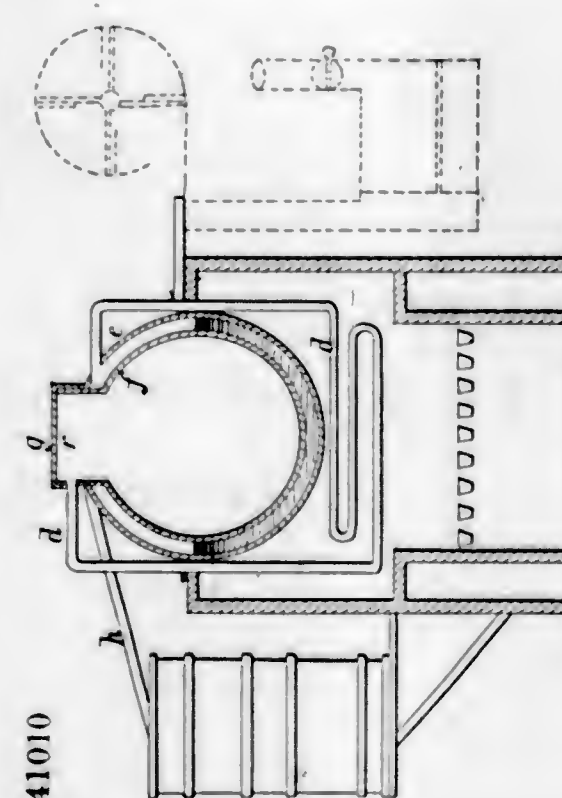
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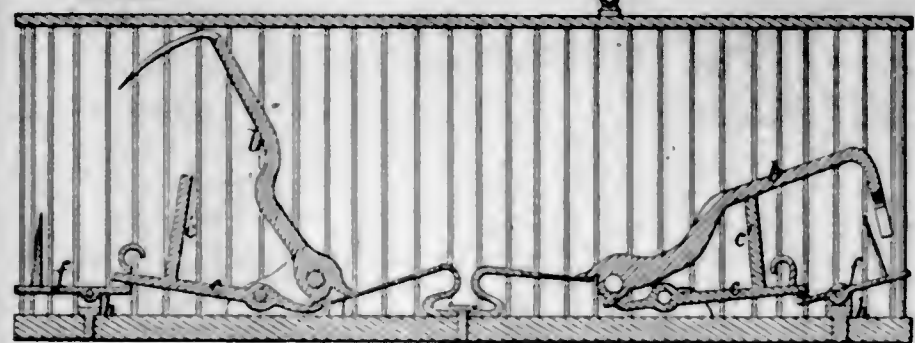
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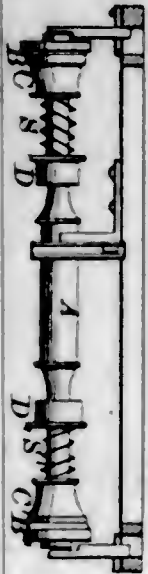
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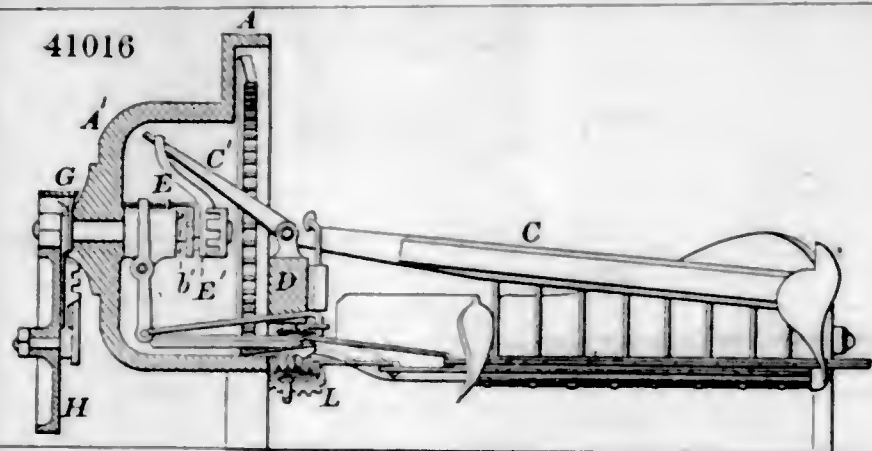
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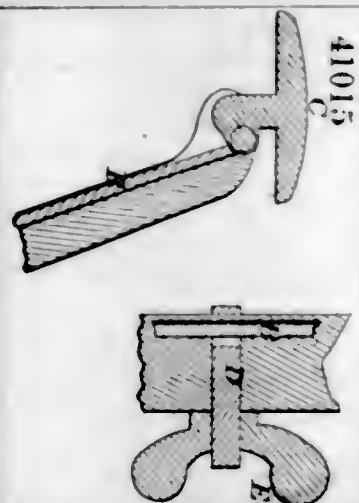
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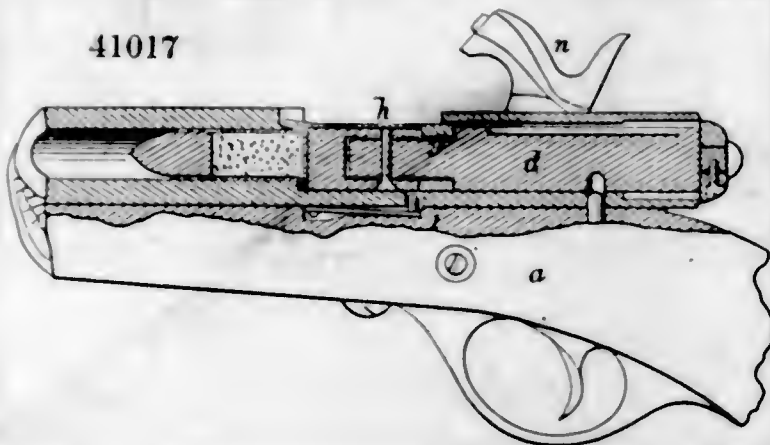
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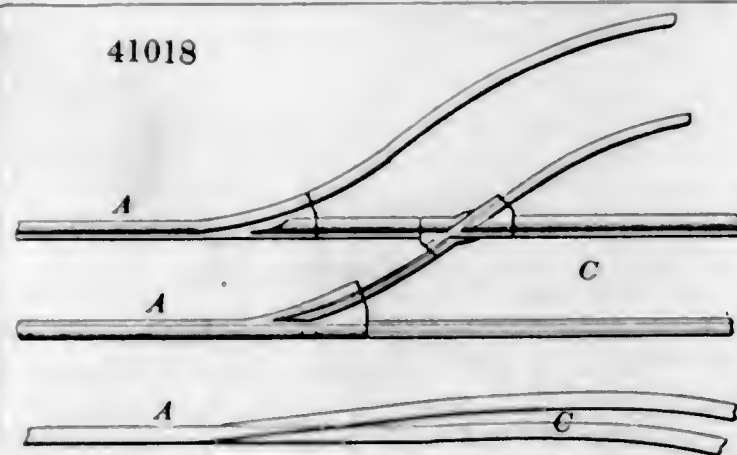
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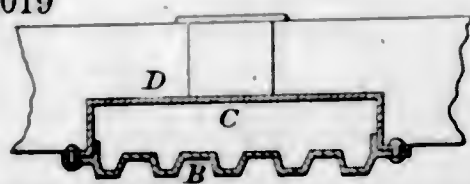
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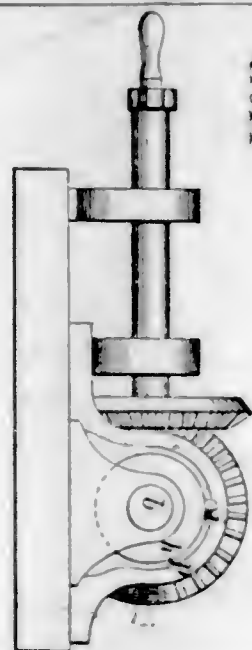
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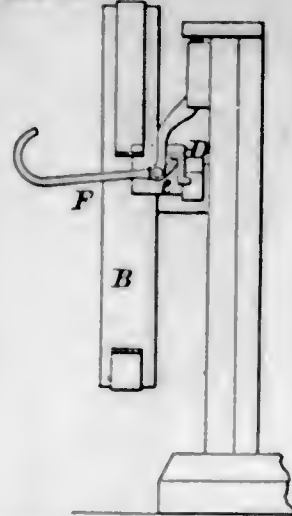
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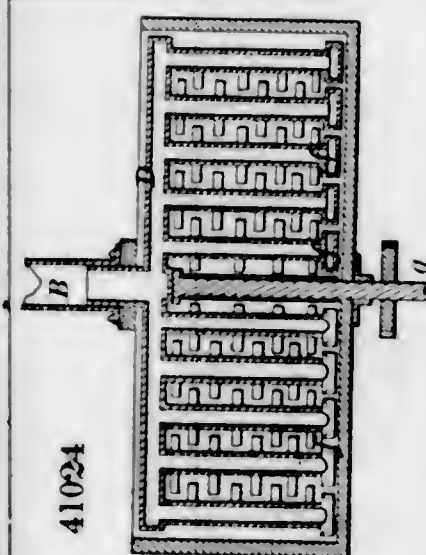


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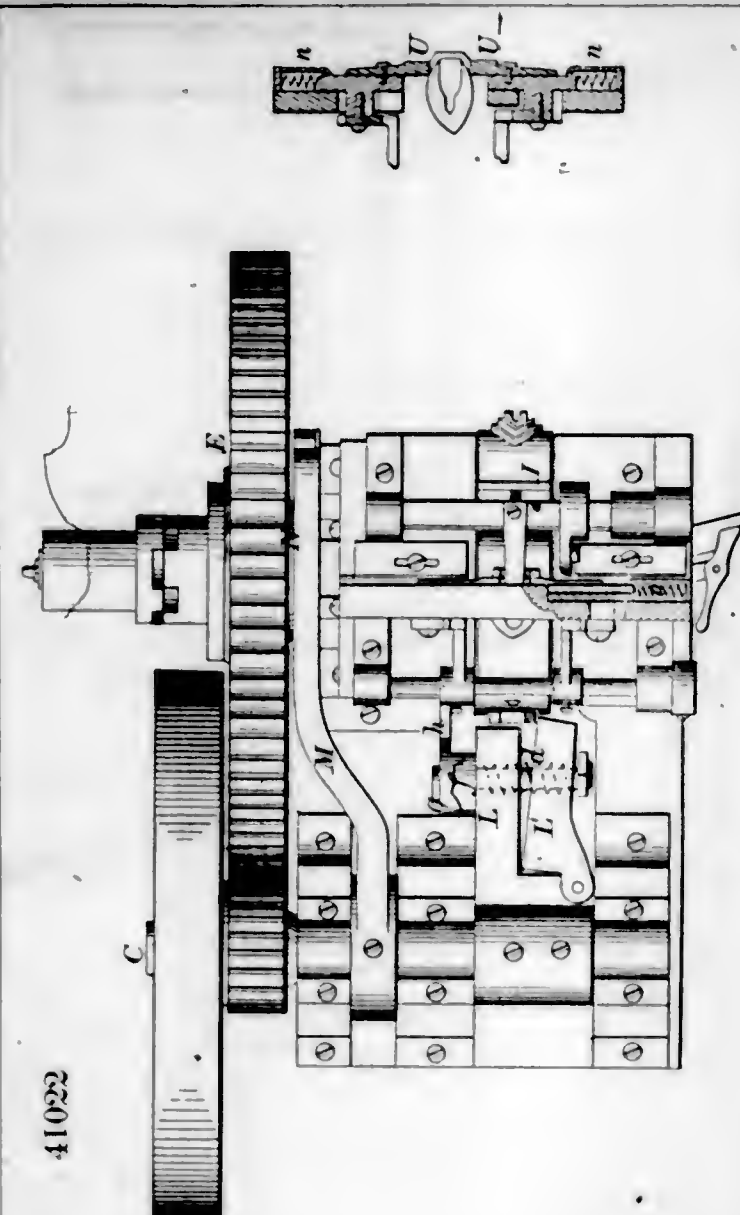


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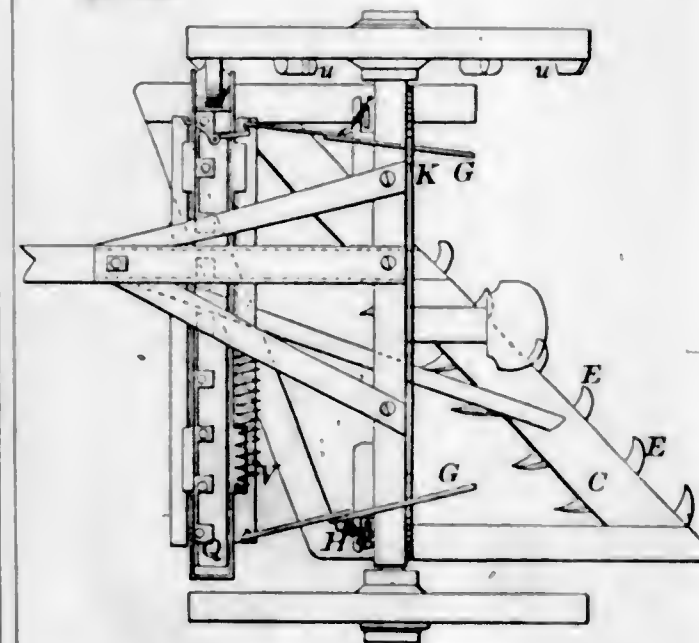
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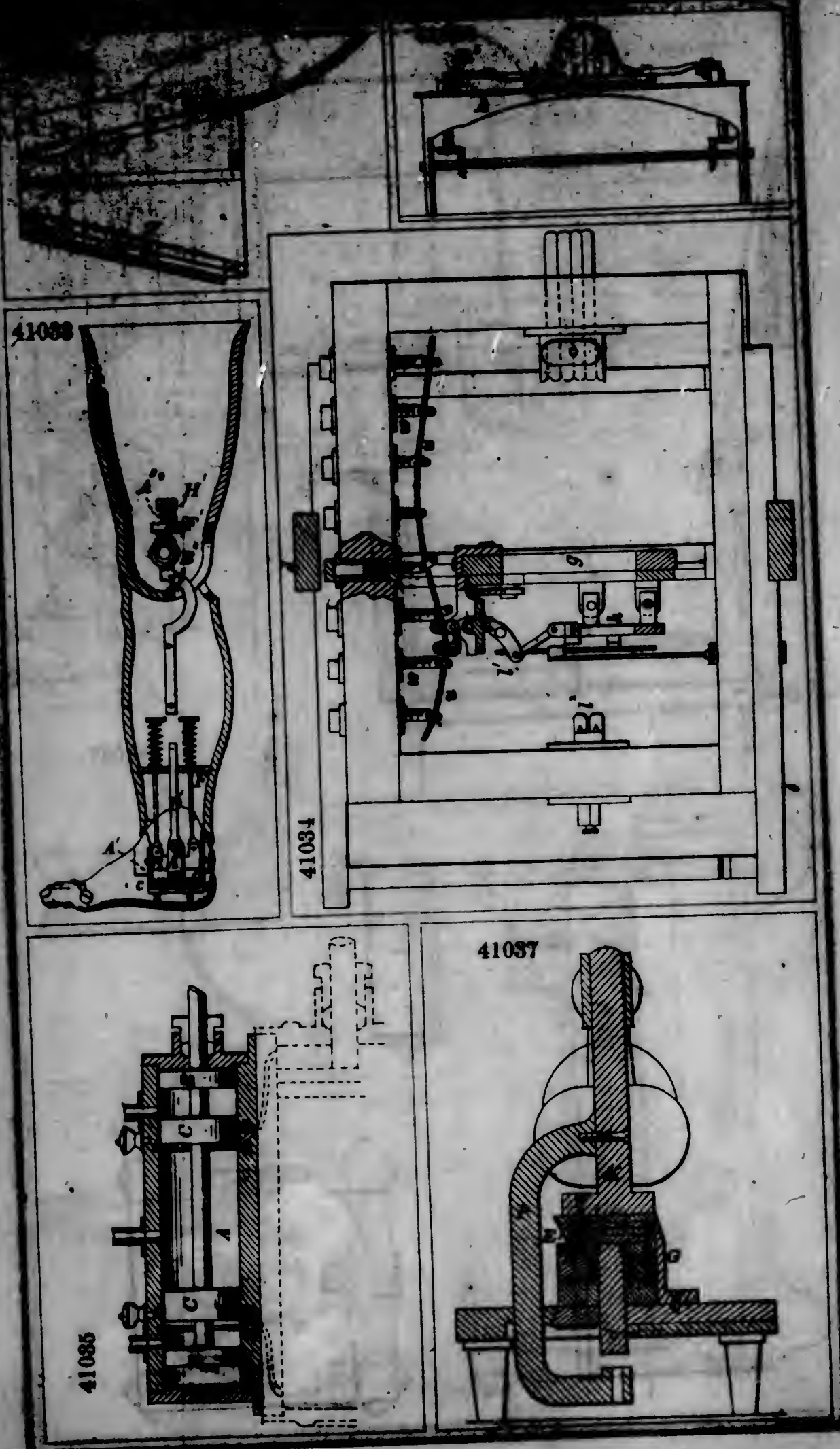
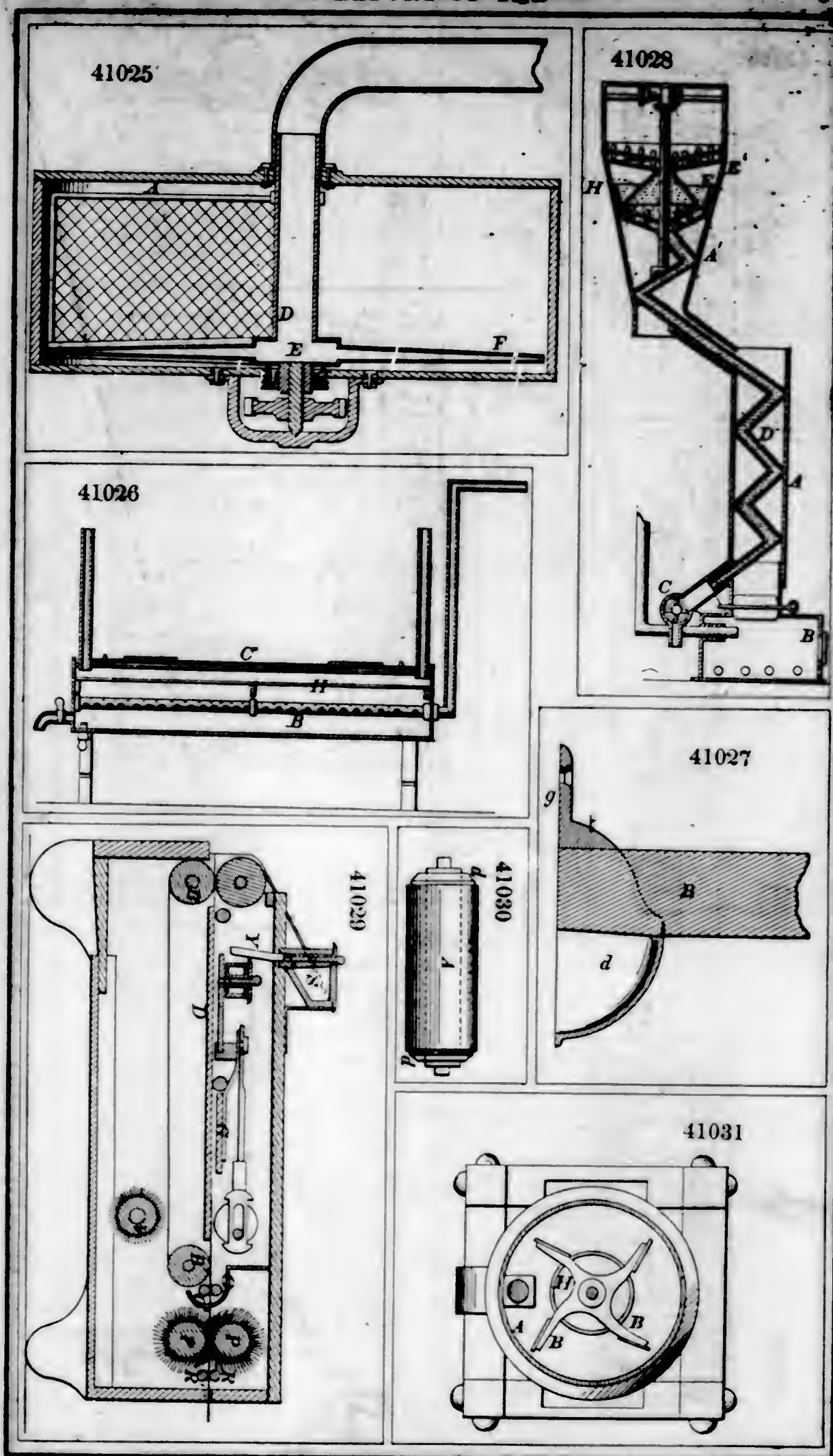


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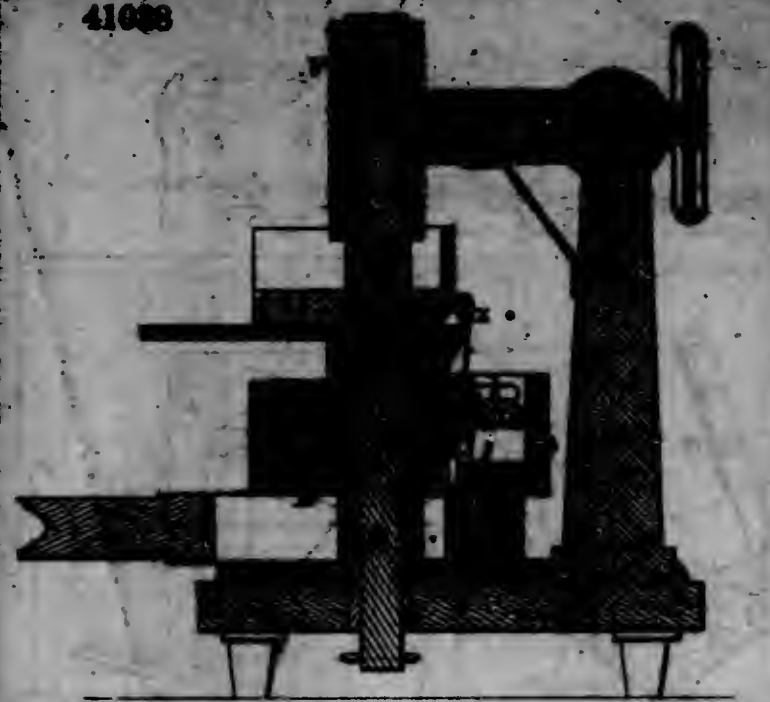


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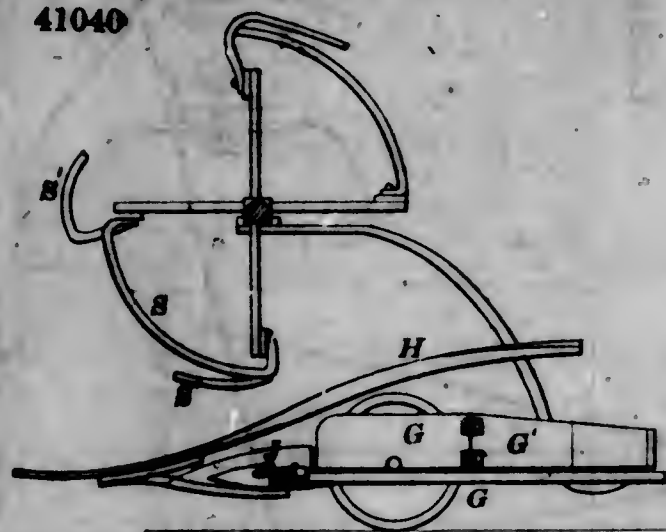


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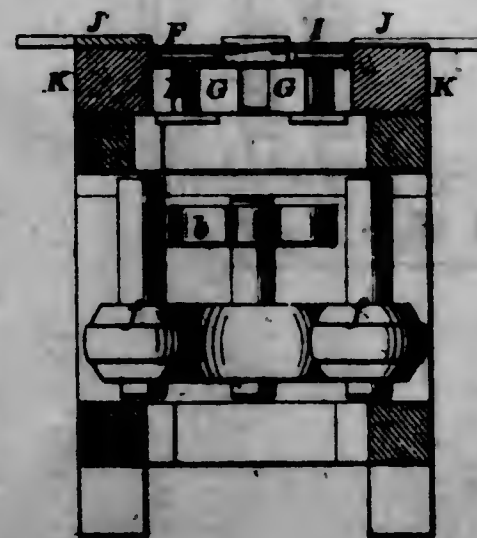
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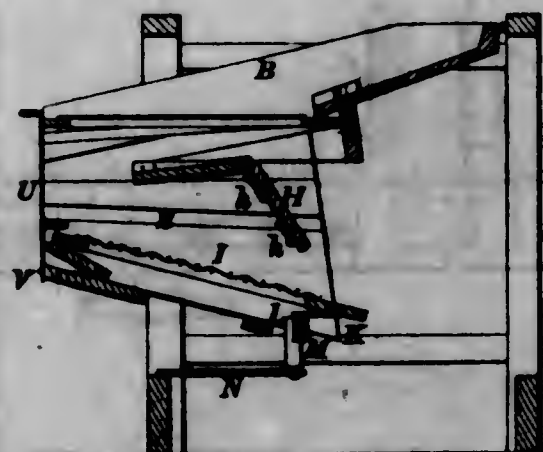
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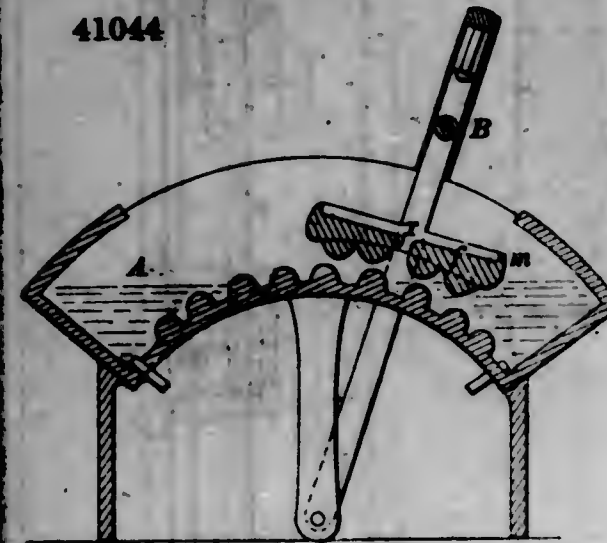
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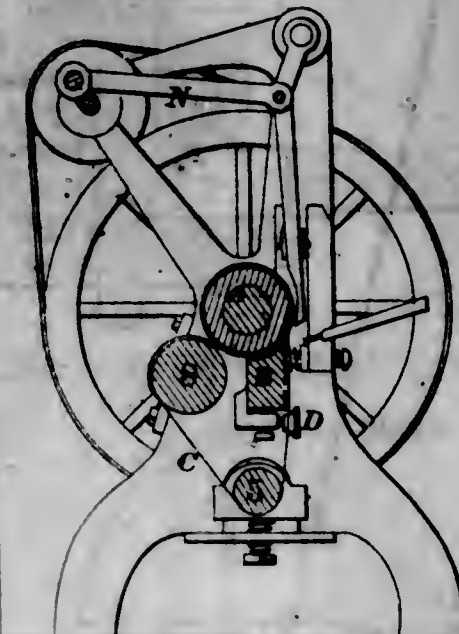
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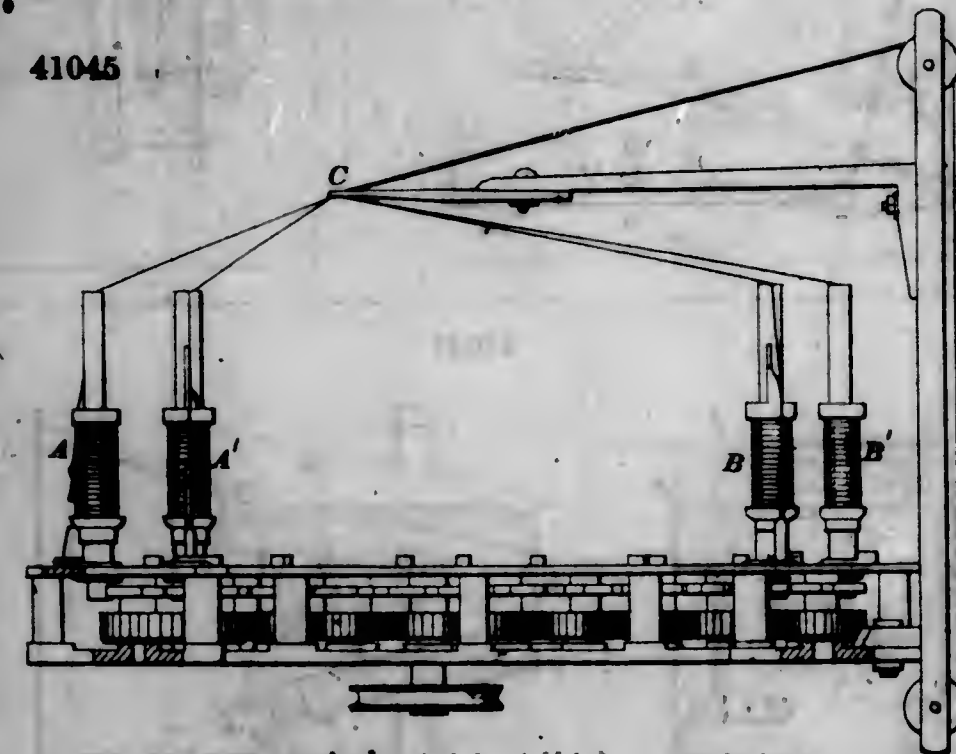
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